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02	Site Plan	
03	Foundations Mews Flat 35	
04	Ground Floor Mews Flat 35	
05	First Floor Mews Flat 35	
06	Roof Mews Flat 35	
07	Foundations Flats 27-33	
08	Ground Floor Flat 27	B
09	First Floor Flat 29	B
10	Second Floor Flat 31	B
11	Third Floor Flat 33	B
12	Penthouse Floor Flat 19	B
13	Roof Flats 19 & 27-33	
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21	Section 2 of 6	
22	Section 3 of 6	
23	Section 4 of 6	
24	Section 5 of 6	
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30	Penthouse Floor Structure	
31	Flats 19 & 27-33 Roof Structure	
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40	Details Sheet 1 of 4	C
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Sheet List		
Sheet Number	Sheet Name	Current Revision
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44	Details Sheet 4 of 4	
50	Drainage Sheet 1 of 3	
51	Drainage Sheet 2 of 3	
52	Drainage Sheet 3 of 3	A
60	Fire Strategy Sheet 1 of 4	A
61	Fire Strategy Sheet 2 of 4	
62	Fire Strategy Sheet 3 of 4	A
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81	Detailed Front (Easterly) Elev'n	
82	Detailed End (Northerly) Elev'n	
83	Detailed Rear (Westerly) Elv'n	
84	Detailed Rd View Elv'n	
85	Detailed Visual 1 of 3	
86	Detailed Visual 2 of 3	
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88	Indicative Render	
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90	Detailed Cycle Parking Plan	
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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Drawing Issue Sheet

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

00

Scale @ A3

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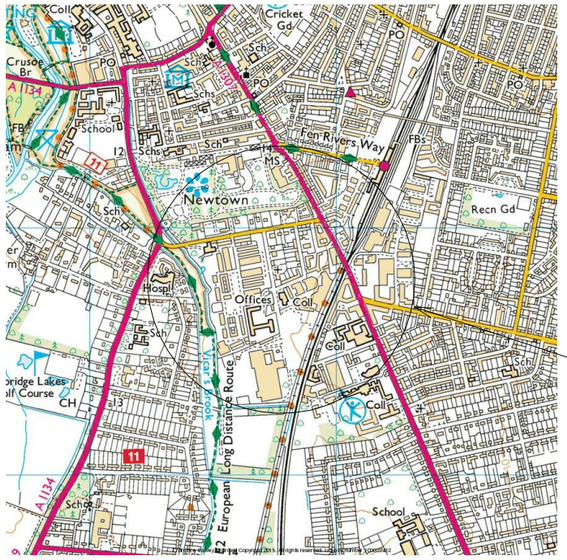

2 Landranger

1 : 25000

North

Site

Proposed bike store

Proposed Mews Flat 35 with bins and bike area

Extension Flats 27 - 33

Existing Block with new penthouse Flat 19

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1 Block Plan

1 : 500

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Site Location Plans

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

01

Scale @ A3 As indicated

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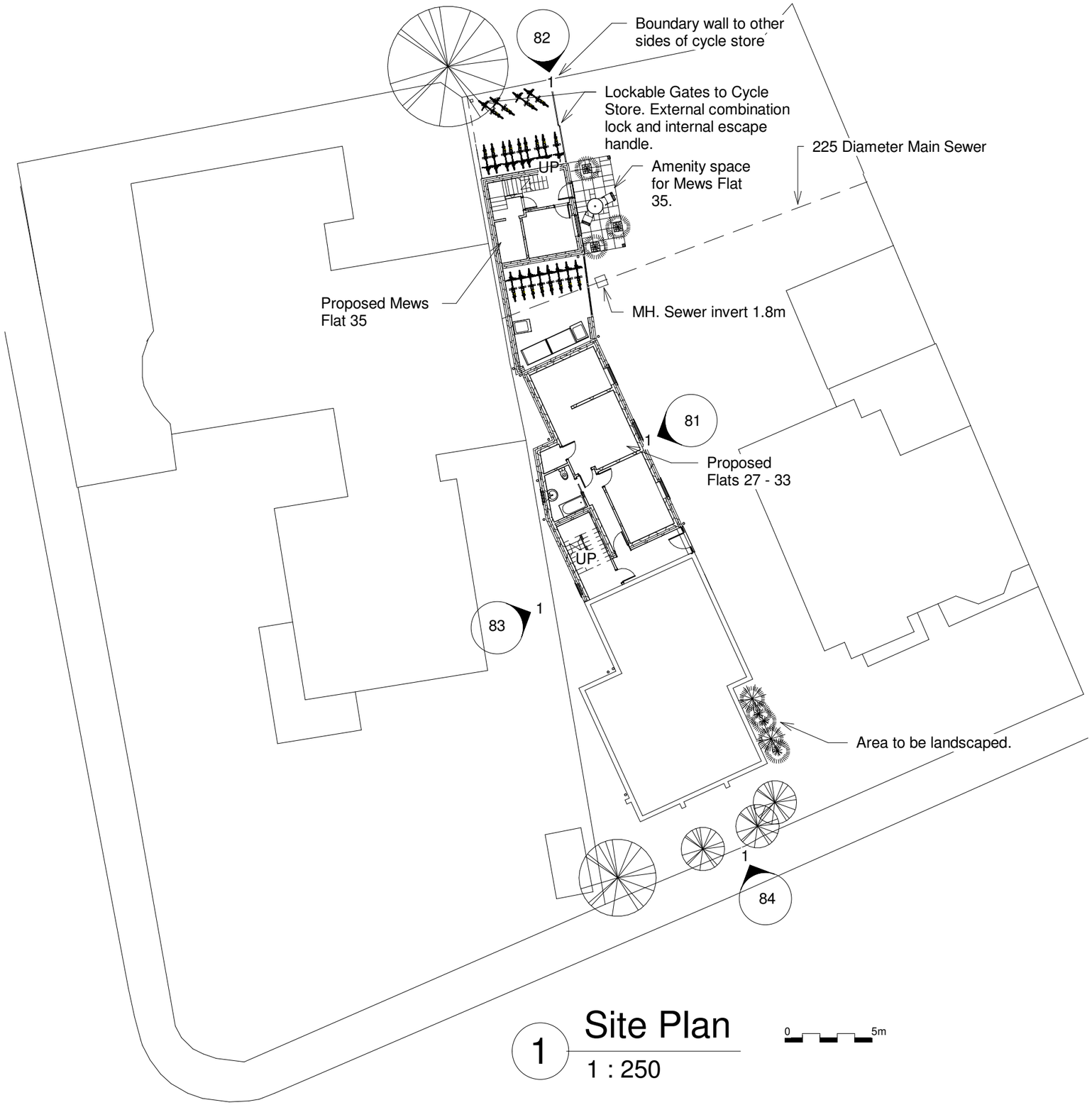

1 Site Plan

1 : 250

0 5m

North

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Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

No.	Description	Date

Site Plan

Project number	CM1967	02	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 250

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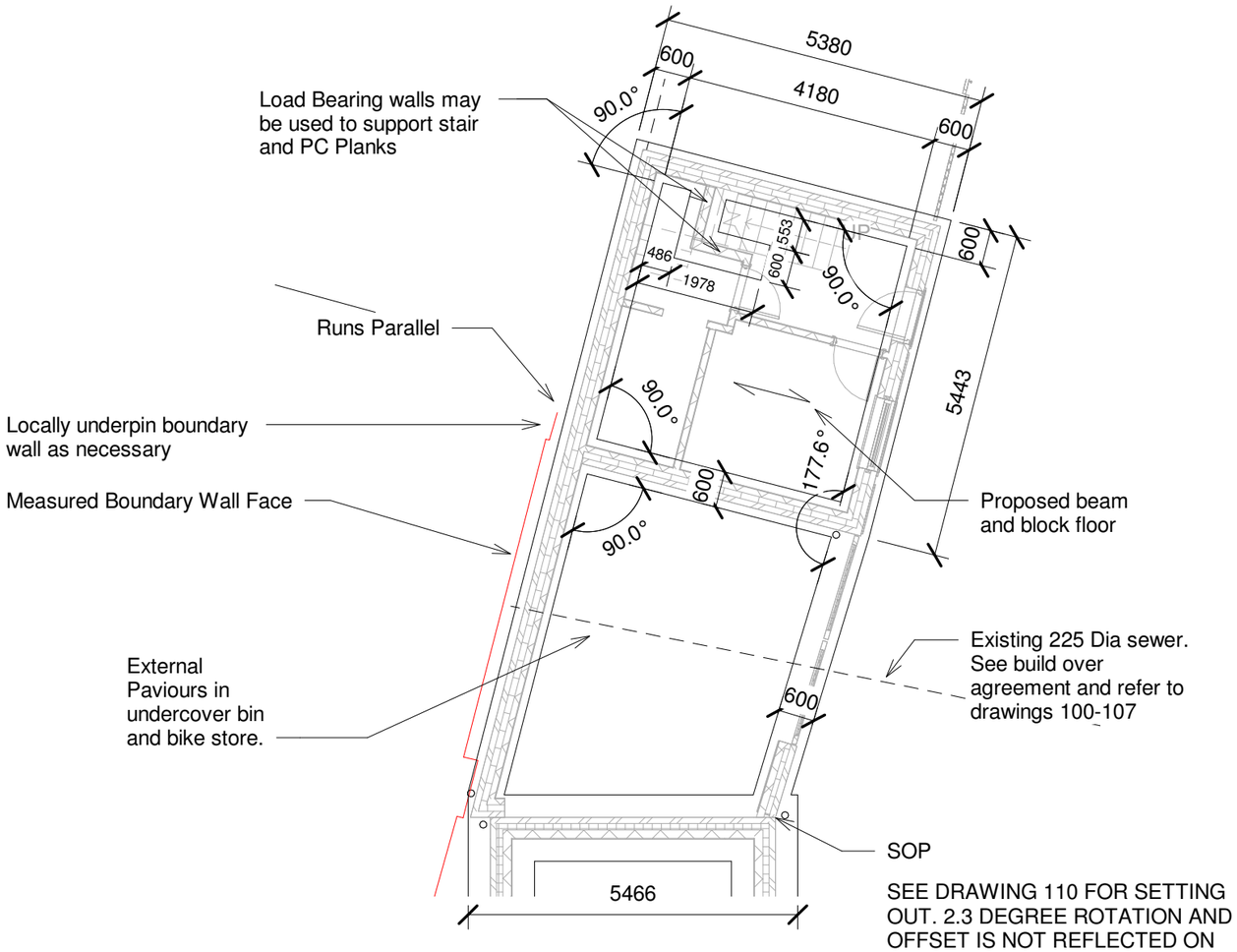

1 Foundations Mews Flat 35

1 : 100

Should UNDERPINNING be required for the boundary wall the following shall be adopted:

- WORKMANSHIP: The work shall be carried out in accordance with the following and to the approval of the Building Control Officer. This specification is intended to be used for mass concrete underpinning.
- CONTRACTORS RESPONSIBILITIES: The Contractor shall be responsible for the safety of the underpinned structure and provide all necessary shoring, strutting and bracing to ensure its safety and stability at all times.
- CONSTRUCTION SEQUENCE: The underpinning is to be undertaken in short sections not exceeding 1000mm in length for boundary wall or 600mm in length for any buildings. The underpinning is to be undertaken on a 'hit and miss' sequence thus 1,3,2,4,1,3,2,4. No adjacent pin is to be excavated until a minimum 48 hours after the adjacent pin has been cast and packed up.
- EXCAVATIONS: Excavation shall be to the depth and width as indicated for new works on the drawings. However, where tree roots are encountered new underpins are to extend 600mm below the last trace of any root activity. The sides of the excavations shall be adequately shored and propped to prevent subsidence or slip of the soil. Soil faces behind the pin and at the formation level shall be undisturbed. Any soil faces behind the underpinning that require to be retained shall be by precast concrete poling boards. The boards are to have holes to enable the void behind the boards to be grouted up. The poling boards are to be measured as left in.
- PREPARATION: The sides of the completed pin are to be thoroughly cleaned and scabbled. The soffit of the existing footings is to be levelled off and cleaned of all loose or detrimental material. No projecting partitions of the existing footings are to be trimmed except as agreed by the Engineer.
- SHEAR KEYS BETWEEN PINS: H12 reinforcement bars are to be pushed into the soil each side of the pin a min of 200mm and cast in. Bars are to be placed at 250mm vertically and horizontally and to be lapped to new bars 200mm. All bars to be clean before pouring concrete.
- ANTI-HEAVE PRECAUTIONS: Before carrying out concreting introduce anti-heave precautions in the form of clay master as directed by the Building control officer and to NHBC requirements to the faces of the excavation.
- PLACING CONCRETE: The concrete for the underpinning is to be mass concrete and poured continuously to 75mm below the soffit of the existing footing. The concrete is to be fully compacted using a mechanical vibrator. The top 75mm of the pin is to be filled to the full depth and width of the void with a well rammed C35 concrete using 5mm – 10mm coarse aggregate and “Conbex 100” expanding admixture by Messrs Fosroc UK Limited in accordance with their instructions. The filling of this void is to be undertaken 24 hours after the mass concrete has been poured.
- CONCRETE GRADE: On works where a full specification has not been provided, a FND2 mix should be used. This has characteristic 28 day strength of 35N/mm² and is suitable for Class 2 sulphate soils.
- OVER-EXCAVATION: Except where noted otherwise on the drawings, areas of over-excavation are to be backfilled with a granular material and compacted in 225mm layers to provide a stable sub-base compatible with the final finishes.

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Foundations Mews Flat 35

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

03

Scale @ A3 1 : 100

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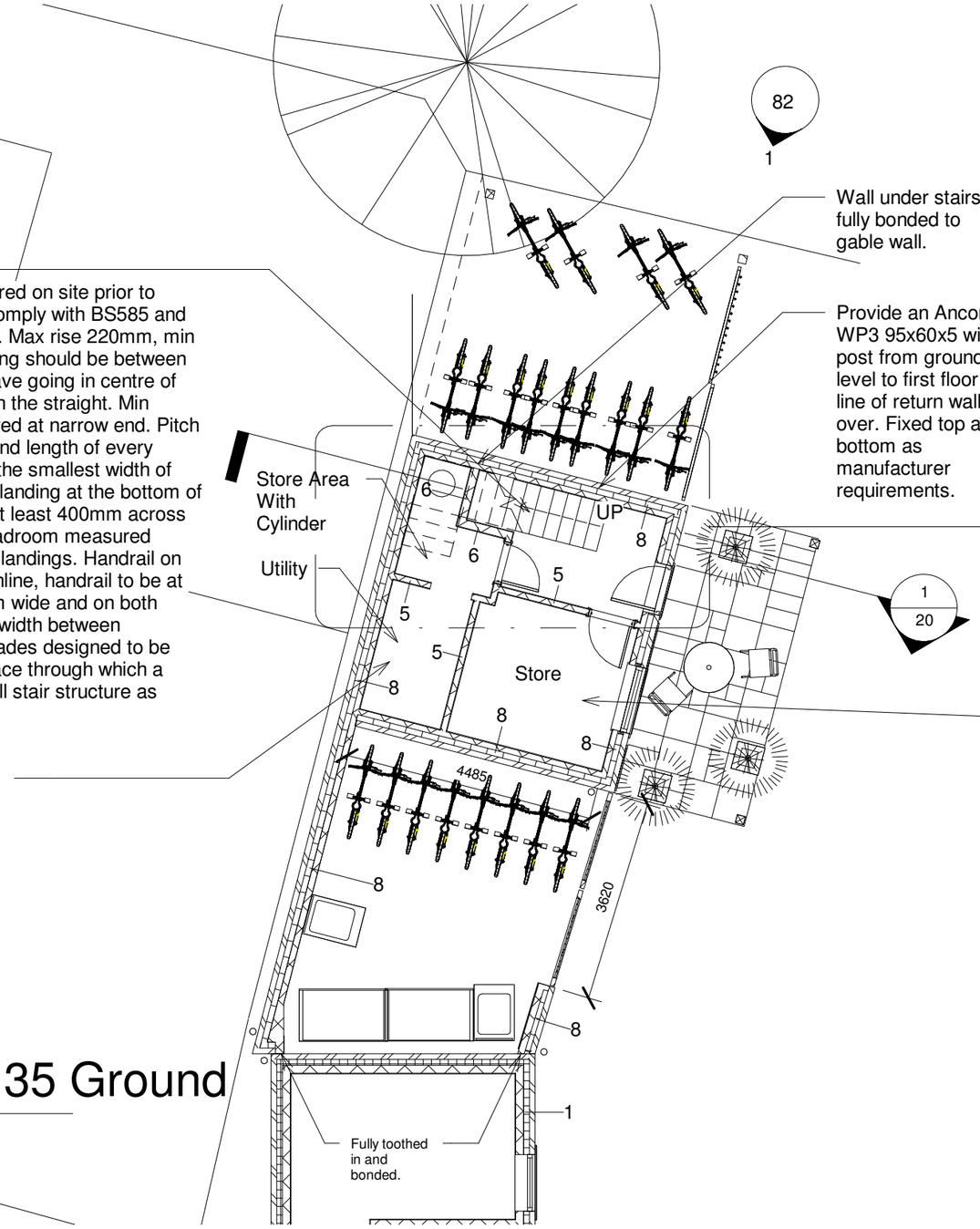

STAIRS
Dimensions to be checked and measured on site prior to fabrication of stairs. Timber stairs to comply with BS585 and with Part K of the Building Regulations. Max rise 220mm, min going 220mm. Two risers plus one going should be between 550 and 700mm. Tapered treads to have going in centre of tread at least the same as the going on the straight. Min 50mm going of tapered treads measured at narrow end. Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight. Min 2.0m headroom measured vertically above pitch line of stairs and landings. Handrail on staircase to be 900mm above the pitchline, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrades designed to be unclimbable and should contain no space through which a 100mm sphere could pass. Allow for all stair structure as designed by specialist stair suppler.

Provide a Mechanical Ventilation Heat Recovery (MVHR) system to ventilate Utility/Store area. To be sized by mechanical engineer/designer.

1 Mews Flat 35 Ground

1 : 100

Wall Schedule	
Type Mark	Description
1	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 140mm 10.4N Aglite Ultima Block Dot and Dab Plaster Finish
2	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 140mm 10.4N Topcrete Solid Block Dot and Dab Plaster Finish
3	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 100mm 7.3N Topcrete Solid Block Dot and Dab Plaster Finish
4	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
5	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
6	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
7	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
8 44	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
9	Plaster Skim on 110 Insulation Dot and Dab to 10.4N Aglite Ultima 140 thick blocks. External Clad with Dark Grey Metal Sheeting to Manufacturers Specifcation
10	100x47mm stud with 12.5 Gyproc SoundBloc either side to provide 30minute fire resistance. Studs at 400c/c with noggins and 100mm sound quilt etc. See note 38

SUSPENDED BLOCK AND BEAM FLOOR - Ground floor Mews Flat 35
Remove top soil and vegetation, apply weed killer –
The underside of beams not less than 150mm above the top of the ground. PCC beams to be supplied and fixed to beam manufacturer's plan, layout and details (details and calculations to be sent to Building Control and approved before works commence).
Minimum bearing 100mm onto DPC and load bearing walls. Provide concrete blocks to BS6073 pt.1, wet and grout all joints with 1:4 cement/sand mix. Provide double beams below non-load bearing partitions. Lay 1200g DPM/radon barrier, with 300mm laps double welted and taped at joints and service entry points using radon gas proof tape, over beam and block floor. Lay floor insulation over DPM, 75mm Celotex GA4000 applied as a rigid material. 25mm insulation to continue around floor perimeters to avoid thermal bridging.
Lay 500g separating layer over insulation and provide 75mm sand/cement screed over and prepare for floor finishes as required. The top surface of the ground cover under the building shall be above the finished level of the adjoining ground.
Ventilation - Provide cross-ventilation of the under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm² per metre run of perimeter wall or 500mm² per square metre of floor area, whichever is the greater. Sleeper walls shall be of honeycombed construction or have provision for distribution of ventilation.

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Ground Floor Mews Flat 35

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

04

Scale @ A3 1 : 100

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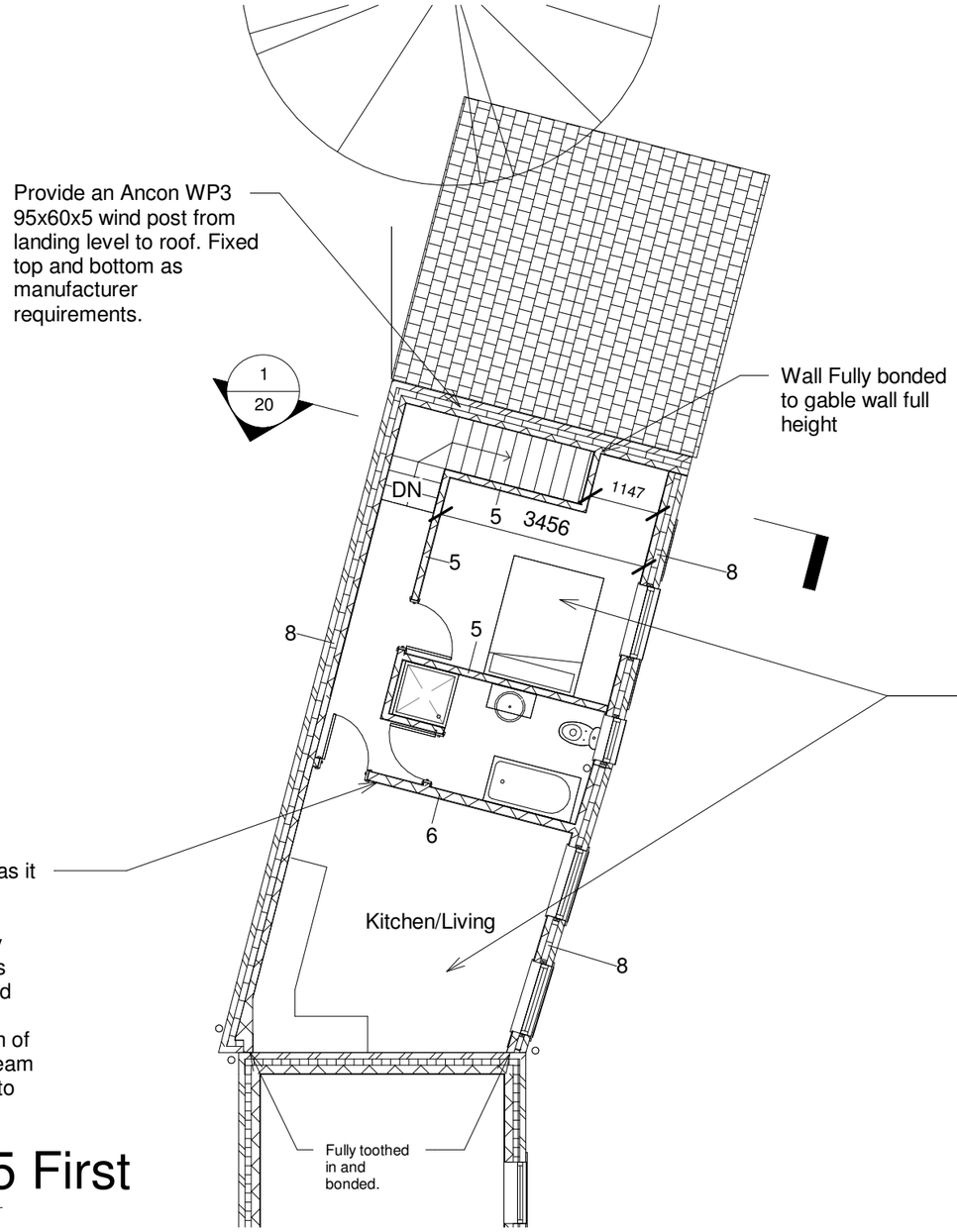

1 Mews Flat 35 First

1 : 100

Wall Schedule	
Type Mark	Description
1	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 140mm 10.4N Aglite Ultima Block Dot and Dab Plaster Finish
2	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 140mm 10.4N Topcrete Solid Block Dot and Dab Plaster Finish
3	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 100mm 7.3N Topcrete Solid Block Dot and Dab Plaster Finish
4	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
5	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
6	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
7	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
8	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
9	Plaster Skim on 110 Insulation Dot and Dab to 10.4N Aglite Ultima 140 thick blocks. External Clad with Dark Grey Metal Sheeting to Manufacturers Specifcation
10	100x47mm stud with 12.5 Gyproc SoundBloc either side to provide 30minute fire resistance. Studs at 400c/c with noggins and 100mm sound quilt etc. See note 38.

Precast Concrete Plank Floors

Robust Detail E-FC-4

40 Screed 80kg/m^2 mass per unit area
6mm IsoRubber
150mm Planks 300kg/m^2 mass per unit area
50-50 timber 20 plasterboard ceiling as robust detail or suitable alternative over bike area.

Floors to be designed and installed by a specialist company.
Ties and Details for Disproportionate collapse to be confirmed by Manufacturer design as adequate for product.

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

First Floor Mews Flat 35

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

05

Scale @ A3 1 : 100

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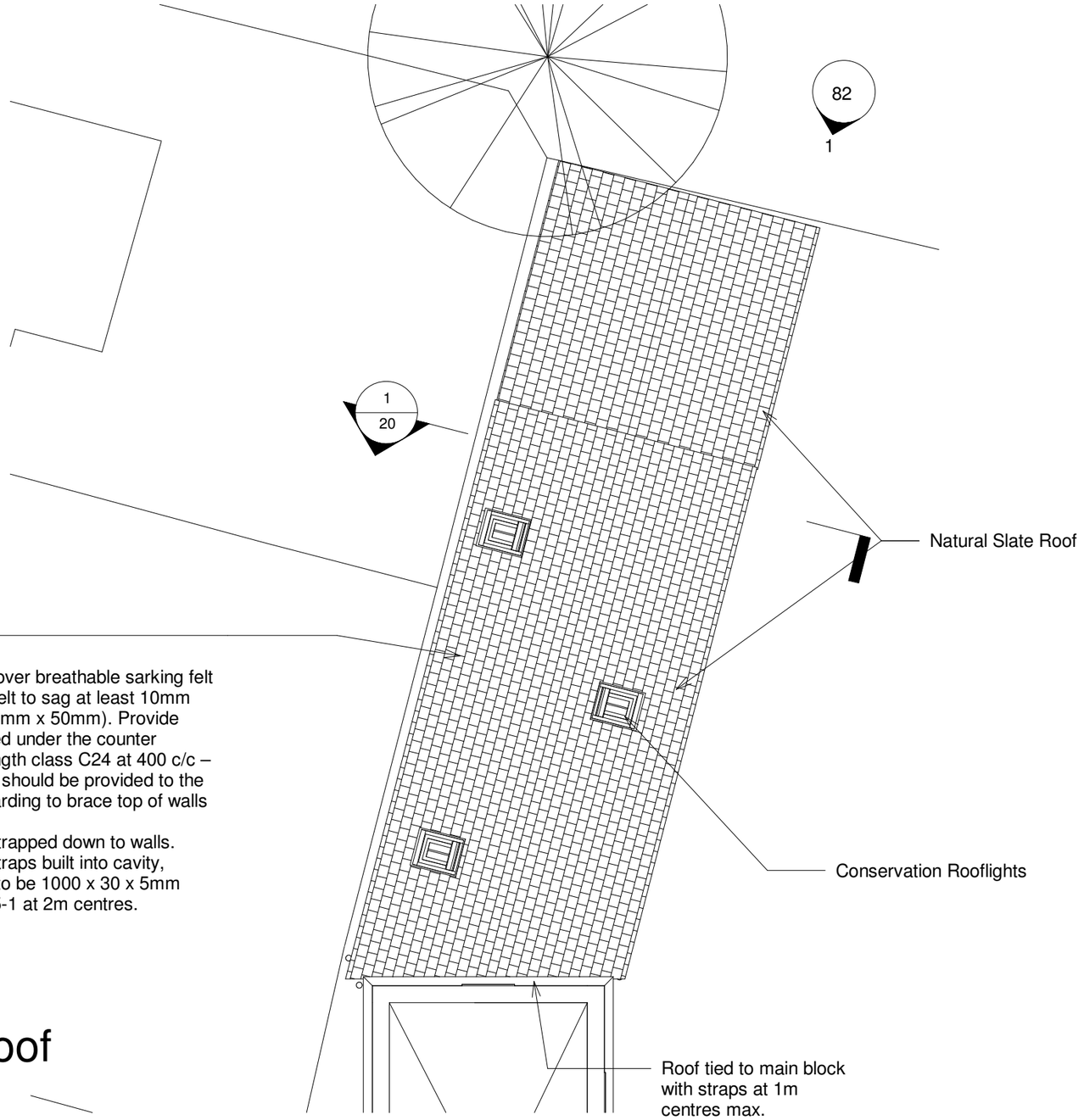

Roof
To achieve min U-value required of 0.18 W/m²K
Suitable roofing tiles fixed to tile battens secured over breathable sarking felt to relevant BBA Certificate allowing the breather felt to sag at least 10mm over preservative-treated counter battens (min 38mm x 50mm). Provide 110mm Celotex XR4000 insulation boards installed under the counter battens and over 47 x 150mm timber rafters strength class C24 at 400 c/c – to give a max 3.47m span. A vapour control layer should be provided to the underside of the rafters. Finish with 12mm ply boarding to brace top of walls and 12.5 plasterboard and skim.
Restraint strapping - 100mm x 50mm wall plate strapped down to walls. Rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.

1 Mews Flat 35 Roof

1 : 100

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Roof Mews Flat 35

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

06

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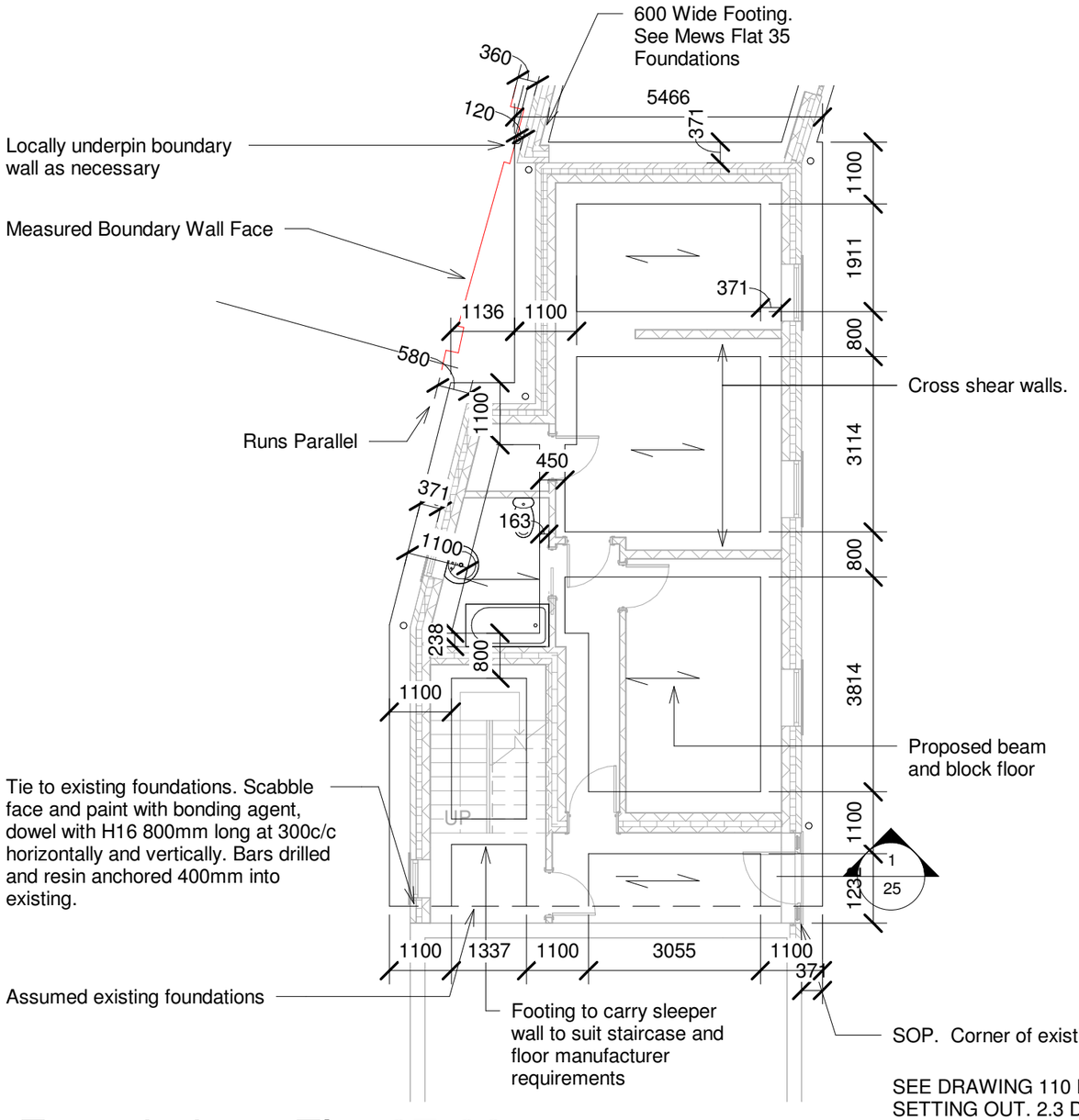

SEE DRAWING 110 FOR SETTING OUT. 2.3 DEGREE ROTATION AND OFFSET IS NOT REFLECTED ON THIS DRAWING.

1 Foundations Flat 27-33

1 : 100

Should UNDERPINNING be required for the boundary wall the following shall be adopted:

- WORKMANSHIP: The work shall be carried out in accordance with the following and to the approval of the Building Control Officer. This specification is intended to be used for mass concrete underpinning.
- CONTRACTORS RESPONSIBILITIES: The Contractor shall be responsible for the safety of the underpinned structure and provide all necessary shoring, strutting and bracing to ensure its safety and stability at all times.
- CONSTRUCTION SEQUENCE: The underpinning is to be undertaken in short sections not exceeding 1000mm in length for boundary wall or 600mm in length for any buildings. The underpinning is to be undertaken on a 'hit and miss' sequence thus 1,3,2,4,1,3,2,4. No adjacent pin is to be excavated until a minimum 48 hours after the adjacent pin has been cast and packed up.
- EXCAVATIONS: Excavation shall be to the depth and width as indicated for new works on the drawings. However, where tree roots are encountered new underpins are to extend 600mm below the last trace of any root activity. The sides of the excavations shall be adequately shored and propped to prevent subsidence or slip of the soil. Soil faces behind the pin and at the formation level shall be undisturbed. Any soil faces behind the underpinning that require to be retained shall be by precast concrete poling boards. The boards are to have holes to enable the void behind the boards to be grouted up. The poling boards are to be measured as left in.
- PREPARATION: The sides of the completed pin are to be thoroughly cleaned and scabbled. The soffit of the existing footings is to be levelled off and cleaned of all loose or detrimental material. No projecting partitions of the existing footings are to be trimmed except as agreed by the Engineer.
- SHEAR KEYS BETWEEN PINS: H12 reinforcement bars are to be pushed into the soil each side of the pin a min of 200mm and cast in. Bars are to be placed at 250mm vertically and horizontally and to be lapped to new bars 200mm. All bars to be clean before pouring concrete.
- ANTI-HEAVE PRECAUTIONS: Before carrying out concreting introduce anti-heave precautions in the form of clay master as directed by the Building control officer and to NHBC requirements to the faces of the excavation.
- PLACING CONCRETE: The concrete for the underpinning is to be mass concrete and poured continuously to 75mm below the soffit of the existing footing. The concrete is to be fully compacted using a mechanical vibrator. The top 75mm of the pin is to be filled to the full depth and width of the void with a well rammed C35 concrete using 5mm – 10mm coarse aggregate and “Conbex 100” expanding admixture by Messrs Fosroc UK Limited in accordance with their instructions. The filling of this void is to be undertaken 24 hours after the mass concrete has been poured.
- CONCRETE GRADE: On works where a full specification has not been provided, a FND2 mix should be used. This has characteristic 28 day strength of 35N/mm² and is suitable for Class 2 sulphate soils.
- OVER-EXCAVATION: Except where noted otherwise on the drawings, areas of over-excavation are to be backfilled with a granular material and compacted in 225mm layers to provide a stable sub-base compatible with the final finishes.

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Foundations Flats 27-33

Project number	CM1967	07	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 100

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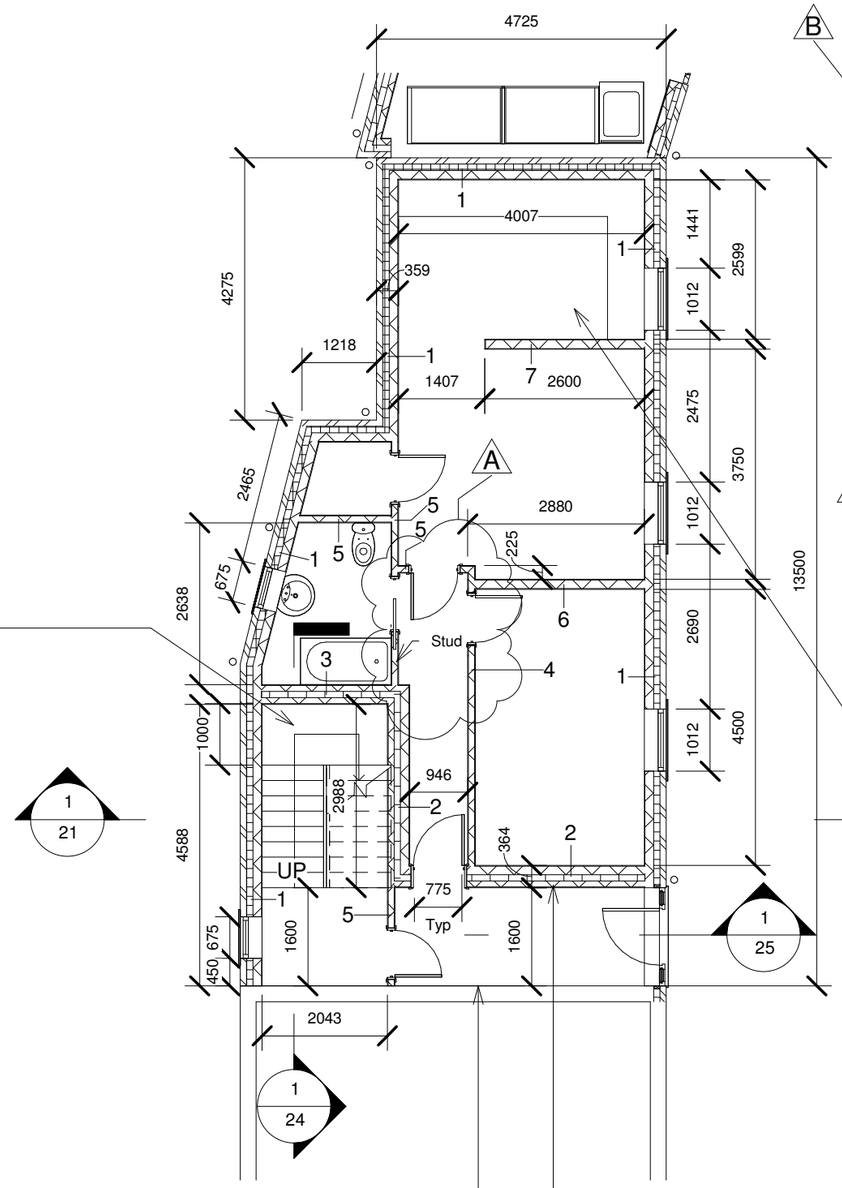

Precast concrete stairs by specialist. Dimensions to be checked and measured on site prior to manufacture of stairs. Stairs to comply with Part K of the Building Regulations. Max rise 170mm, min going 250mm. Two risers plus one going should be between 550 and 700mm. Setting out as drawings Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight. Min 2.0m headroom measured vertically above pitch line of stairs and landings. Handrail on staircase to be 900mm above the pitchline, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrading designed to be unclimbable and should contain no space through which a 100mm sphere could pass. Nosings and details in accordance with latest building regulations.

Sound Proofing to be applied to face of existing wall to comply with requirements as stated in the notes for sound testing.

Robust Wall Detail E-WM-3
Between all flats and Access/Stairs Wall types 2 and 3
100/140 Inner Block
100 Cavity Insulated
100 Outer Block
Dense Blocks - 1850-2300kg/m^3
Dot & Dab 8kg/m^3 Board and Skim

Wall Schedule	
Type Mark	Description
1	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 140mm 10.4N Aglite Ultima Block Dot and Dab Plaster Finish
2	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 140mm 10.4N Topcrete Solid Block Dot and Dab Plaster Finish
3	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 100mm 7.3N Topcrete Solid Block Dot and Dab Plaster Finish
4	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
5	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
6	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
7	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
8	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
9	Plaster Skim on 110 Insulation Dot and Dab to 10.4N Aglite Ultima 140 thick blocks. External Clad with Dark Grey Metal Sheeting to Manufacturers Specifcation
10	100x47mm stud with 12.5 Gyproc SoundBloc either side to provide 30minute fire resistance. Studs at 400c/c with noggins and 100mm sound quilt etc. See note 38.

SUSPENDED BLOCK AND BEAM FLOOR - Ground floor Flat 27
Remove top soil and vegetation, apply weed killer –
The underside of beams not less than 150mm above the top of the ground. PCC beams to be supplied and fixed to beam manufacturer's plan, layout and details (details and calculations to be sent to Building Control and approved before works commence). Minimum bearing 100mm onto DPC and load bearing walls. Provide concrete blocks to BS6073 pt.1, wet and grout all joints with 1:4 cement/sand mix. Provide double beams below non-load bearing partitions. Lay 1200g DPM/radon barrier, with 300mm laps double welted and taped at joints and service entry points using radon gas proof tape, over beam and block floor. Lay floor insulation over DPM, 75mm Celotex GA4000 applied as a rigid material. 25mm insulation to continue around floor perimeters to avoid thermal bridging.
Lay 500g separating layer over insulation and provide 75mm sand/cement screed over and prepare for floor finishes as required. The top surface of the ground cover under the building shall be above the finished level of the adjoining ground.
Ventilation - Provide cross-ventilation of the under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm² per metre run of perimeter wall or 500mm² per square metre of floor area, whichever is the greater. Sleeper walls shall be of honeycombed construction or have provision for distribution of ventilation.

1 Ground Floor Flat 27

1 : 100

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No.	Description	Date
A	Revised layout of Hall and Bedroom Door	04/12/2020
B	Beams over lobby amended and block type changed	24/02/2021

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

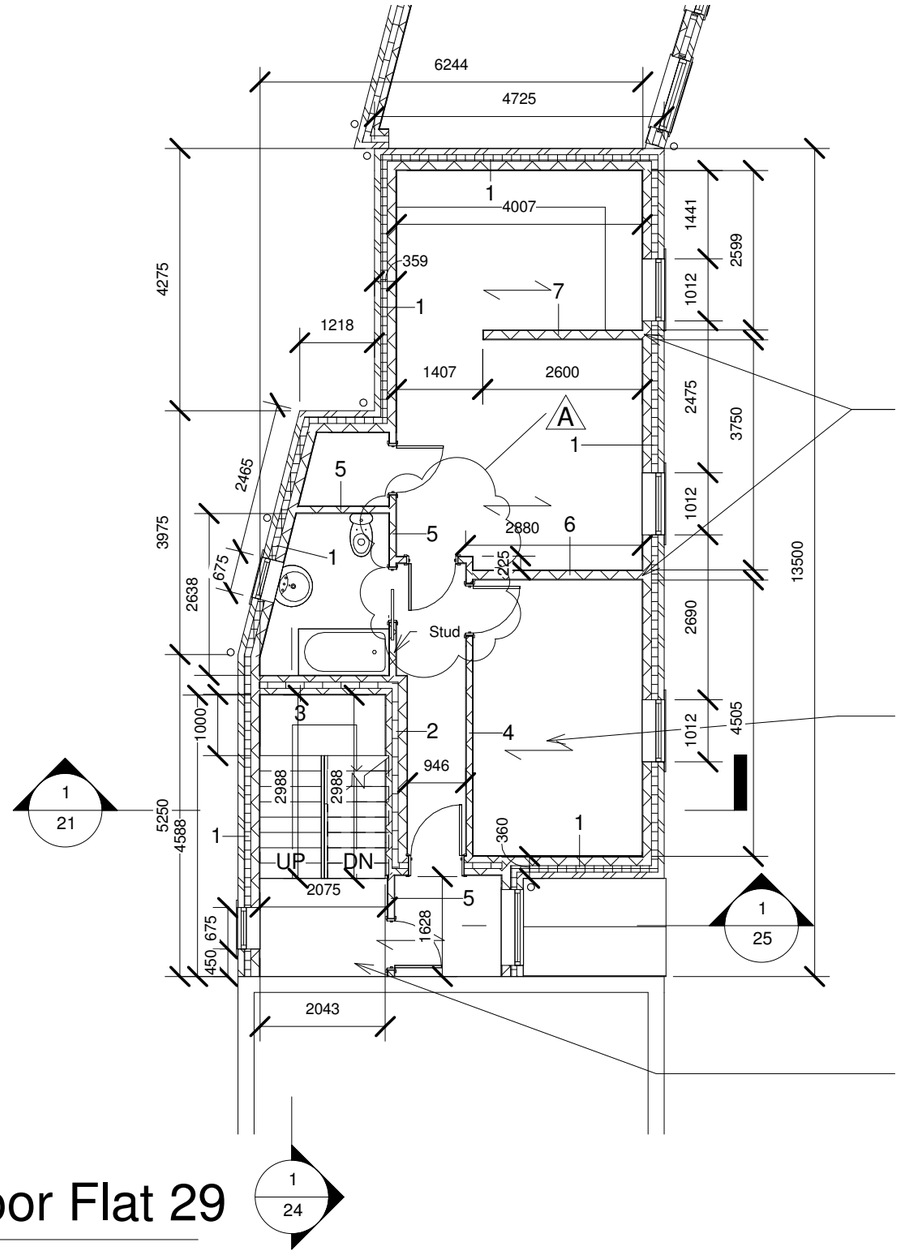
Ground Floor Flat 27

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

08

Scale @ A3 1 : 100

12/03/2021 12:35:48



First Floor Flat 29

1 : 100

Wall Schedule	
Type Mark	Description
1	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 140mm 10.4N Aglite Ultima Block Dot and Dab Plaster Finish
2	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 140mm 10.4N Topcrete Solid Block Dot and Dab Plaster Finish
3	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 100mm 7.3N Topcrete Solid Block Dot and Dab Plaster Finish
4	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
5	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
6	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
7	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
8	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
9	Plaster Skim on 110 Insulation Dot and Dab to 10.4N Aglite Ultima 140 thick blocks. External Clad with Dark Grey Metal Sheeting to Manufacturers Specifcation
10	100x47mm stud with 12.5 Gyproc SoundBloc either side to provide 30minute fire resistance. Studs at 400c/c with noggins and 100mm sound quilt etc. See note 38.

Fully toothed at all levels

Precast Concrete Plank Floors

Robust Detail E-FC-4

40 Screed 80kg/m^2 mass per unit area
6mm IsoRubber
150mm Planks 300kg/m^2 mass per unit area
50-50 timber 20 plasterboard ceiling as robust detail

Floors to be designed and installed by a specialist company.
Ties and Details for Disproportionate collapse to be confirmed by Manufacturer design as adequate for product.

Ensure finishing materials (floor wall and ceiling finishes) create a space in common areas that complies with reverberation requirements of approved document E section 7 - Reverberation in the common internal parts of buildings containing flats or rooms for residential purposes. Precast stairs and landings must be detailed to receive suitable floor finishings behind the nosings and the like. Typical all levels.

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No.	Description	Date
A	Revised layout of Hall and Bedroom Door	04/12/2020
B	Beams over lobby amended and block type changed	24/02/2021

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

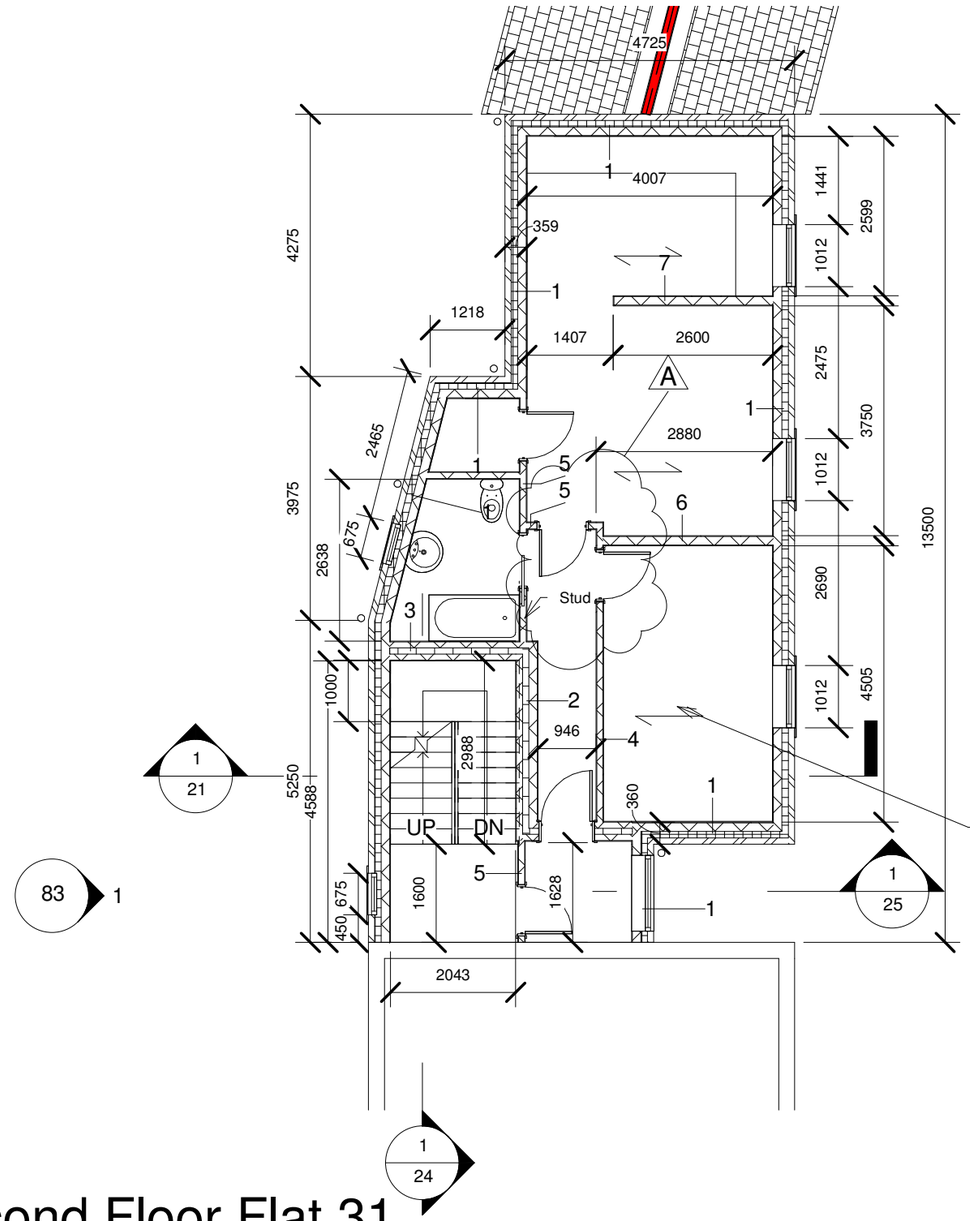
First Floor Flat 29

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

09

Scale @ A3 1 : 100

12/03/2021 12:35:49



1 Second Floor Flat 31

1 : 100

Wall Schedule	
Type Mark	Description
1	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 140mm 10.4N Aglite Ultima Block Dot and Dab Plaster Finish
2	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 140mm 10.4N Topcrete Solid Block Dot and Dab Plaster Finish
3	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 100mm 7.3N Topcrete Solid Block Dot and Dab Plaster Finish
4	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
5	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
6	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
7	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
8	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
9	Plaster Skim on 110 Insulation Dot and Dab to 10.4N Aglite Ultima 140 thick blocks. External Clad with Dark Grey Metal Sheeting to Manufacturers Specifcation
10	100x47mm stud with 12.5 Gyproc SoundBloc either side to provide 30minute fire resistance. Studs at 400c/c with noggins and 100mm sound quilt etc. See note 38.

Precast Concrete Plank Floors

Robust Detail E-FC-4

40 Screed 80kg/m^2 mass per unit area
6mm IsoRubber
150mm Planks 300kg/m^2 mass per unit area
50-50 timber 20 plasterboard ceiling as robust detail

Floors to be designed and installed by a specialist company.
Ties and Details for Disproportionate collapse to be confirmed by Manufacturer design as adequate for product.

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No.	Description	Date
A	Revised layout of Hall and Bedroom Door	04/12/2020
B	Beams over lobby amended and block type changed	24/02/2021

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

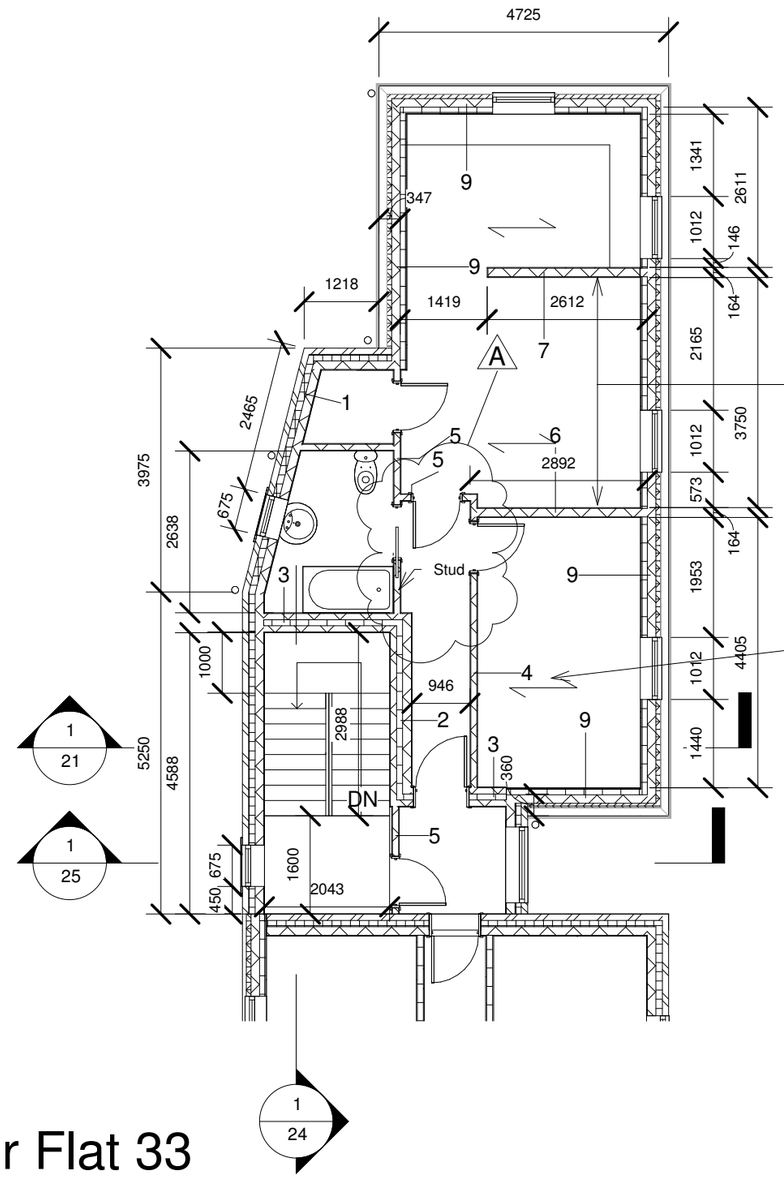
Second Floor Flat 31

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

10

Scale @ A3 1 : 100

12/03/2021 12:35:50



1 Third Floor Flat 33

1 : 100

Roof timbers to sit onto these walls as well as supported by steels. Walls to be fixed to roof timbers with masonry ties at each perp.

Precast Concrete Plank Floors

Robust Detail E-FC-4

40 Screed 80kg/m^2 mass per unit area
6mm IsoRubber
150mm Planks 300kg/m^2 mass per unit area
50-50 timber 20 plasterboard ceiling as robust detail

Floors to be designed and installed by a specialist company.
Ties and Details for Disproportionate collapse to be confirmed by Manufacturer design as adequate for product.

B

B

Wall Schedule	
Type Mark	Description
1	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 140mm 10.4N Aglite Ultima Block Dot and Dab Plaster Finish
2	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 140mm 10.4N Topcrete Solid Block Dot and Dab Plaster Finish
3	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 100mm 7.3N Topcrete Solid Block Dot and Dab Plaster Finish
4	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
5	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
6	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
7	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
8	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
9	Plaster Skim on 110 Insulation Dot and Dab to 10.4N Aglite Ultima 140 thick blocks. External Clad with Dark Grey Metal Sheeting to Manufacturers Specifcation
10	100x47mm stud with 12.5 Gyproc SoundBloc either side to provide 30minute fire resistance. Studs at 400c/c with noggins and 100mm sound quilt etc. See note 38.

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No.	Description	Date
A	Revised layout of Hall and Bedroom Door	04/12/2020
B	Beams over lobby amended and block type changed	24/02/2021

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

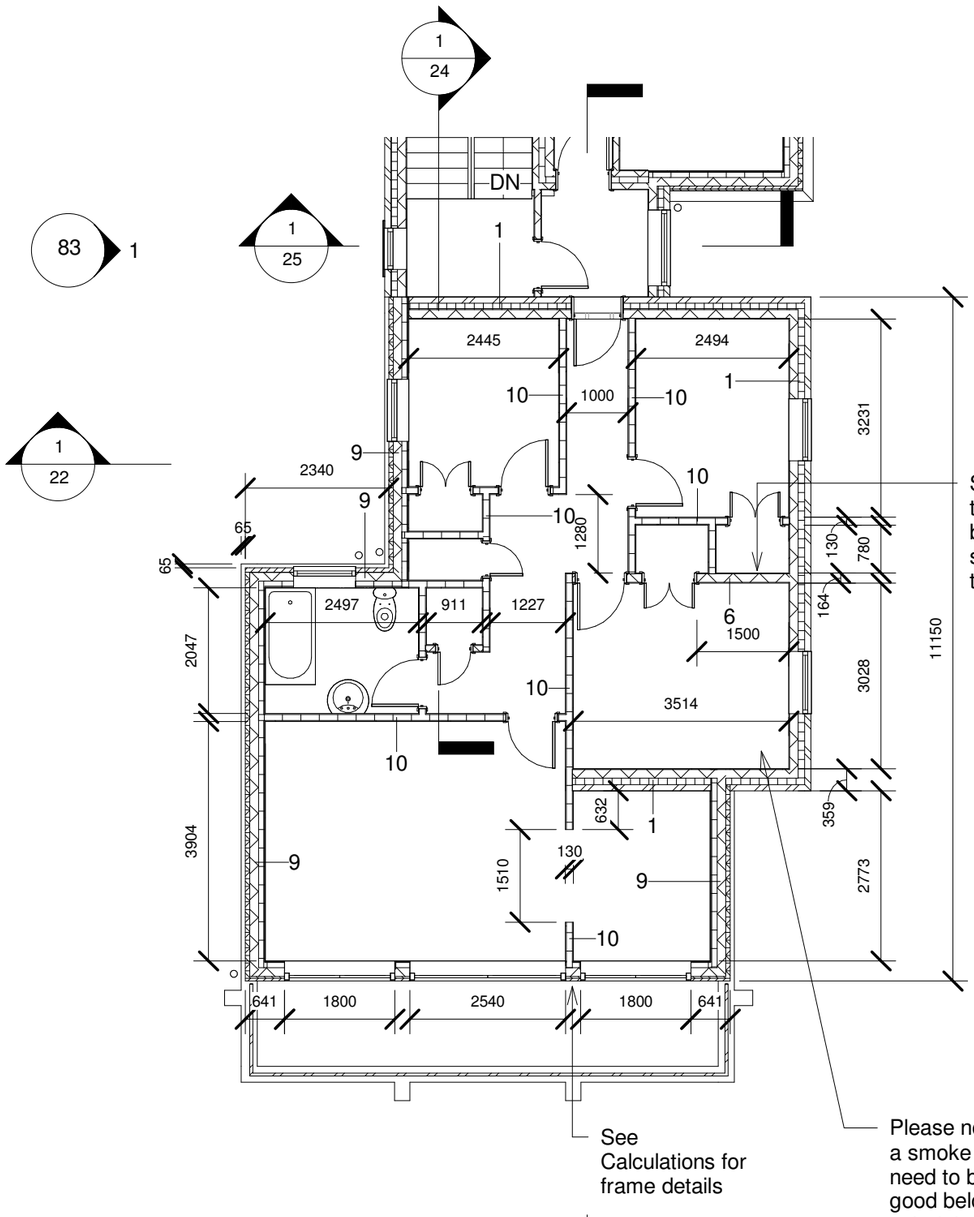
Third Floor Flat 33

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

11

Scale @ A3 1 : 100

12/03/2021 12:35:51



Shear wall. Build tight to u/s of steel beam and fix to same with shot fired ties at each perp.

Please note the existing roof below the penthouse flat has a smoke refuge (projection above roof) area which will need to be removed and the roof will need to be made good below the flat. In its place provide a mechanical extratct system in accordance with Clause 2.27 of approved document B Vol 2 designed by a specialist which is interlinked with the smoke detection system. This must as a minimum be shown to improve the existing situation in relation to fire safety.

See Calculations for frame details

1 / 23

1 Penthouse Floor Flat 19

1 : 100

Wall Schedule

B

Type Mark	Description
1	102mm 20N Facing Brick - 105mm Insulated Full Fill Cavity - 140mm 10.4N Aglite Ultima Block Dot and Dab Plaster Finish
2	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 140mm 10.4N Topcrete Solid Block Dot and Dab Plaster Finish
3	Dot and Dab Plaster Finish - 100mm 7.3N Topcrete Solid Block - 100mm Insulated Full Fill Cavity - 100mm 7.3N Topcrete Solid Block Dot and Dab Plaster Finish
4	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
5	Dot and Dab Plaster Finish - 100mm 3.6N Toplite Standard Block Dot and Dab Plaster Finish
6	Dot and Dab Plaster Finish - 140mm 7.3N Toplite Standard Block Dot and Dab Plaster Finish. Mortar Designation 2 (1:3 to 4)
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9	Plaster Skim on 110 Insulation Dot and Dab to 10.4N Aglite Ultima 140 thick blocks. External Clad with Dark Grey Metal Sheeting to Manufacturers Specifcation
10	100x47mm stud with 12.5 Gyproc SoundBloc either side to provide 30minute fire resistance. Studs at 400c/c with noggins and 100mm sound quilt etc. See note 38.

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No.	Description	Date
B	Beams over lobby amended and block type changed	24/02/2021

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

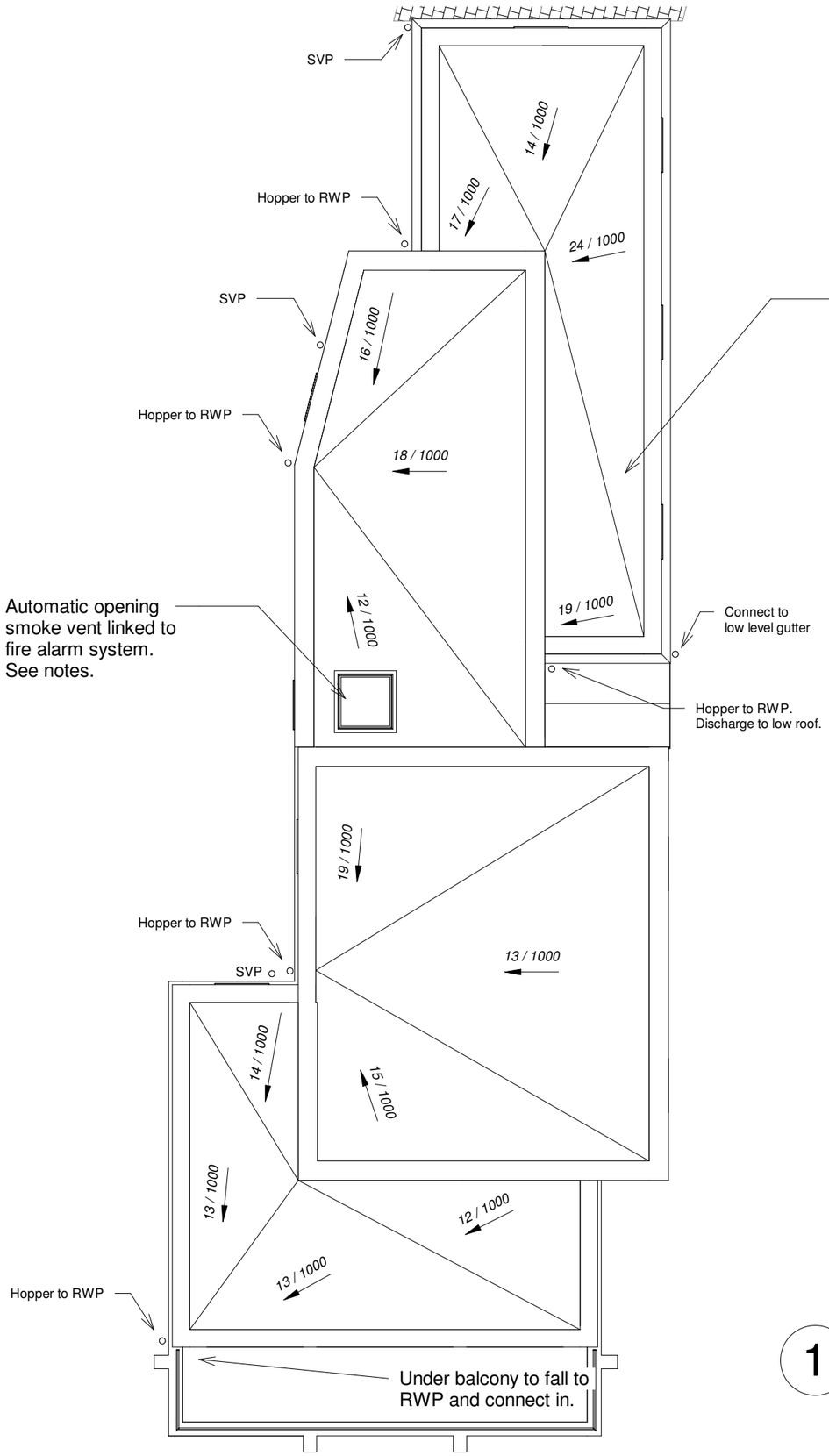
Penthouse Floor Flat 19

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

12

Scale @ A3 1 : 100

12/03/2021 12:35:53



WARM FLAT ROOF
To achieve U value 0.18 W/m²K
Flat roof to be single ply membrane roofing providing aa fire rating for surface spread of flame with a current BBA or WIMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 120mm Celotex Crown-Bond insulation.
Insulation bonded to vcl on 22mm external quality plywood decking or similar approved on sw firings to minimum 1 in 80 fall on sw treated C24 flat roof joists at 400mm c/cs as calculations. Underside of joists to have 12.5mm foil backed plasterboard and skim.
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

1 Roof Flats 19 & 27-33
1 : 100

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C R B

Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

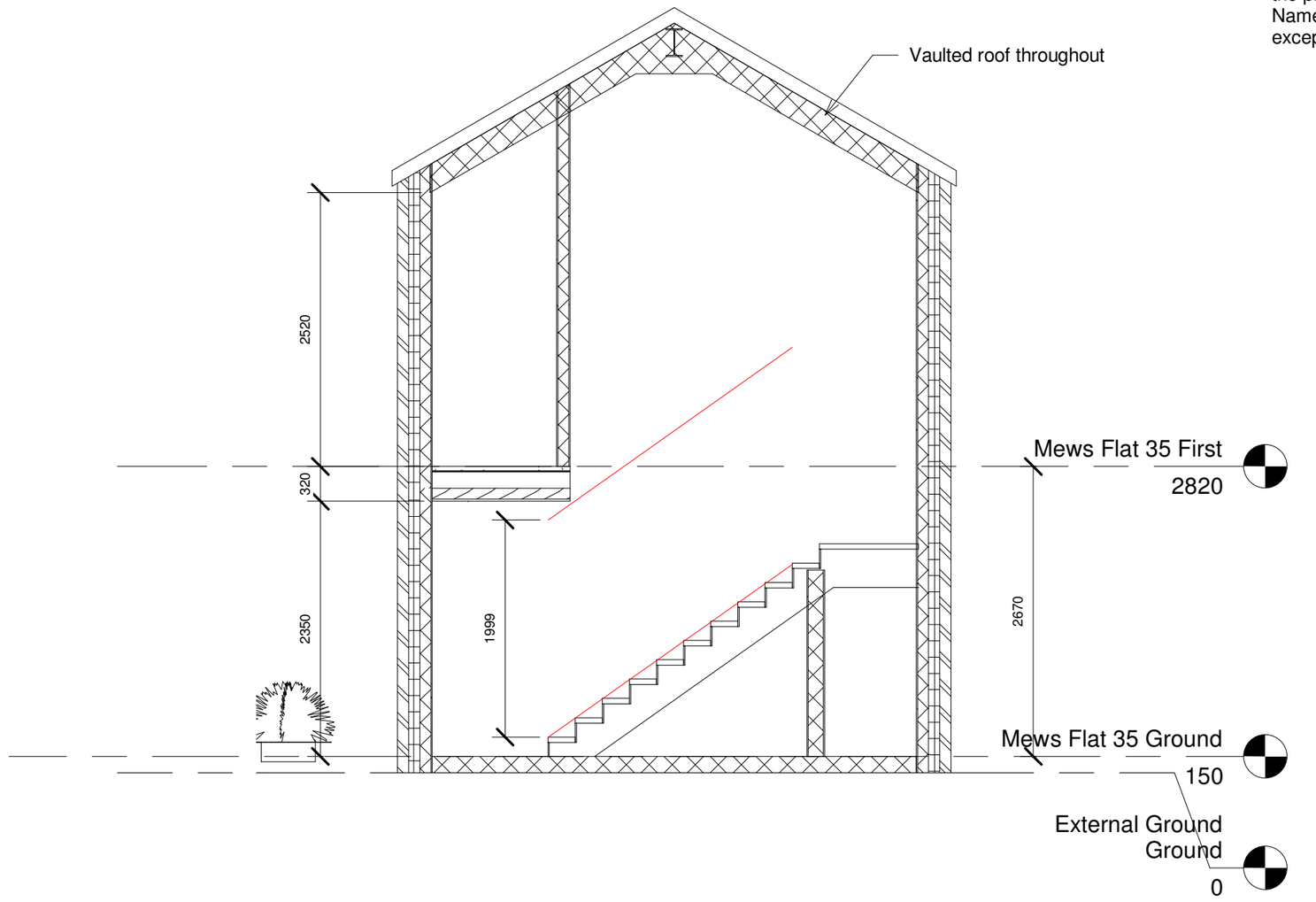
No.	Description	Date

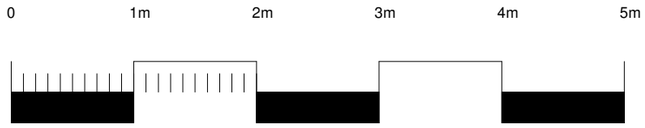
Roof Flats 19 & 27-33

Project number	CM1967	13	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 100

12/03/2021 12:35:54

This drawing only shows the 1 No 1 bedroom mews style flat with bin and bike store. For the 4 No one bedroom flats to the rear and an additional 1 No 3 bedroom flat above the existing please refer to drawings submitted under cover of the previous planning approval reference 17/1365/FUL. Namely 4,5,6,7,8,9,10A,11A,12A,14,15,16,17A,and 18, except as revised by drawings CM1967 01 to 17.





1 Section 1

1 : 50

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

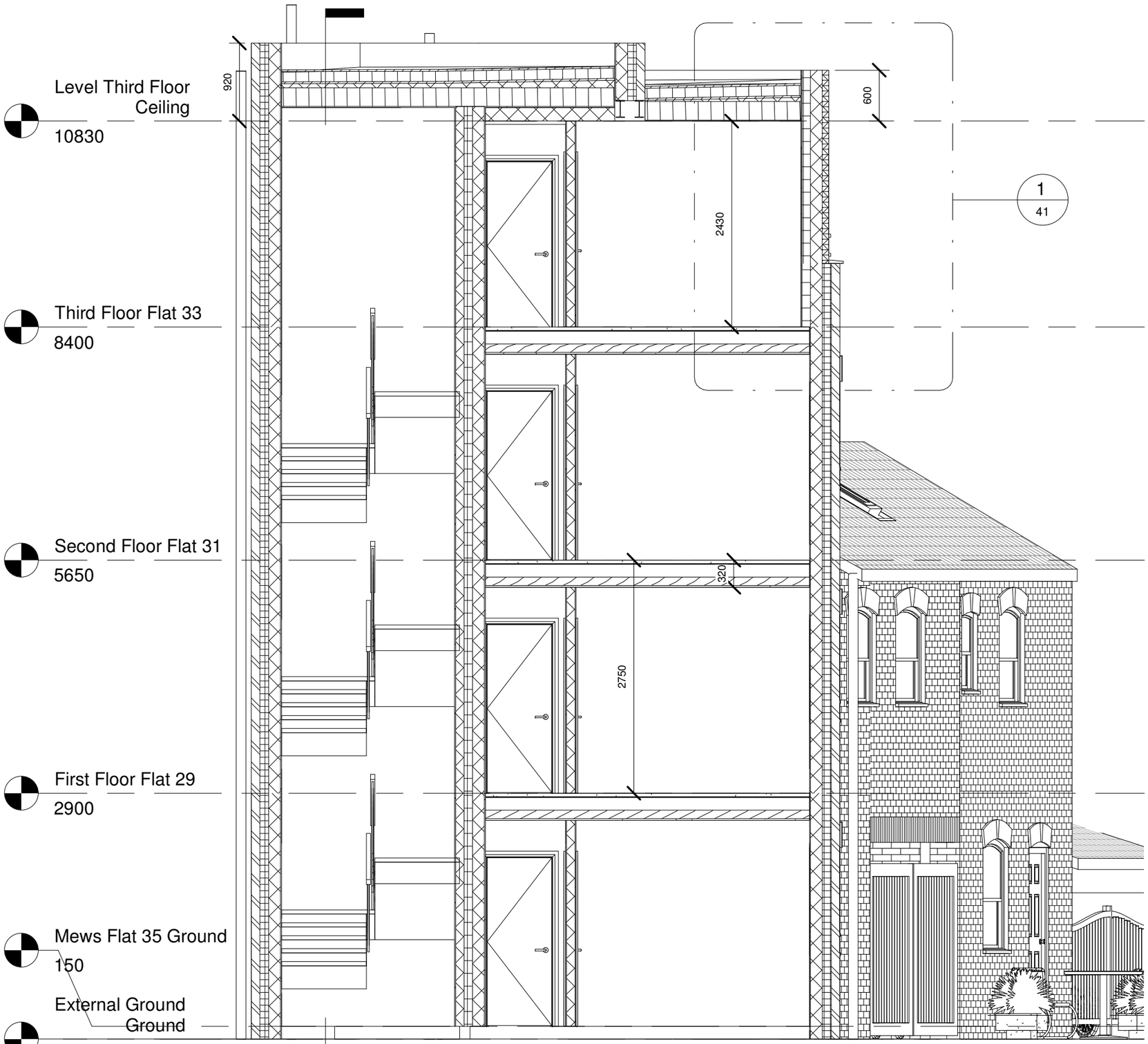
Section 1 of 6

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

20

Scale @ A3 1 : 50

12/03/2021 12:35:55



Section 2

1 : 50

1 / 24

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Mr Gary Wieland

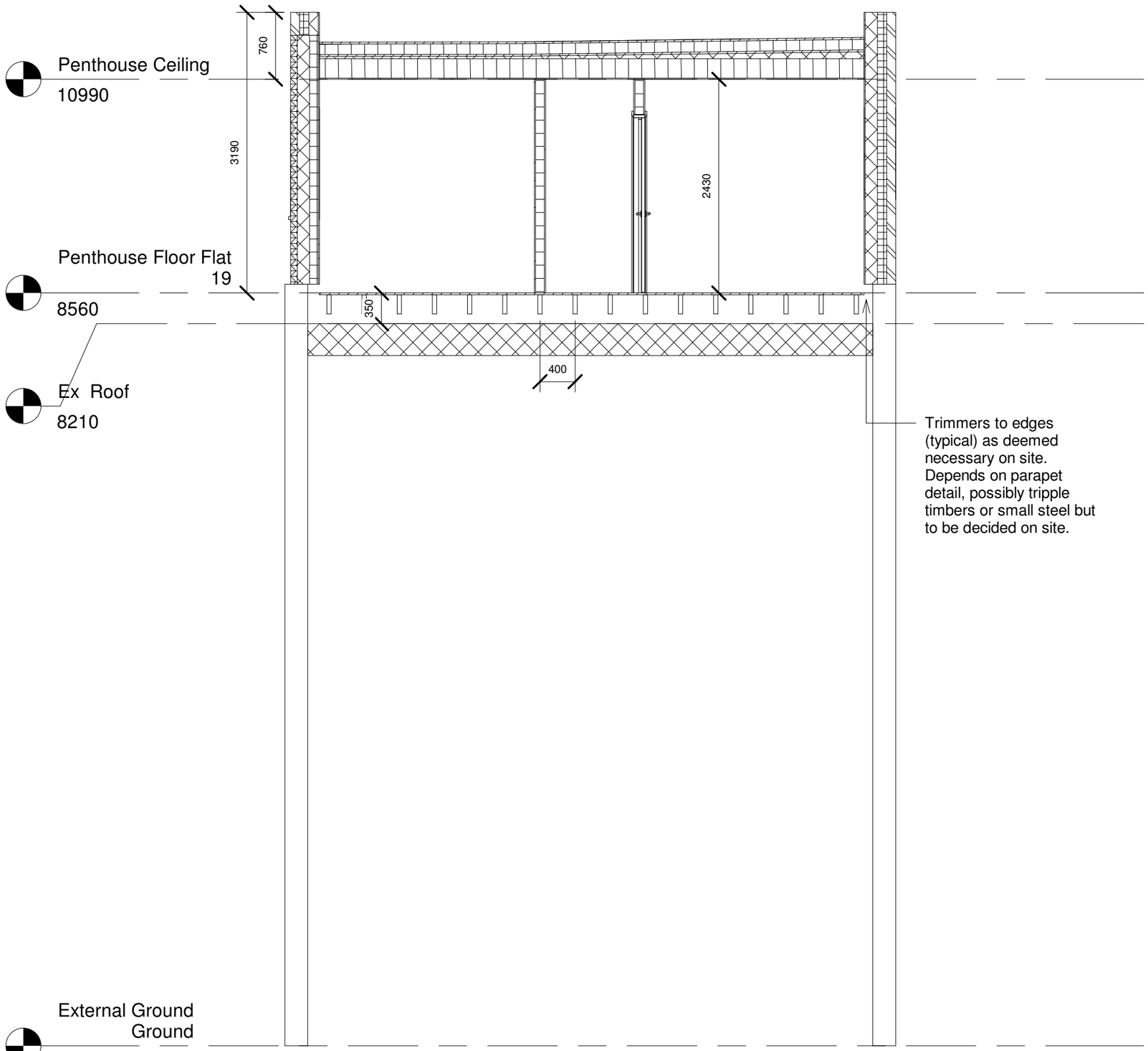
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

No.	Description	Date

Section 2 of 6

Project number	CM1967	21	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 50

12/03/2021 12:36:01



1 Section 3

1 : 50

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Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

No.	Description	Date

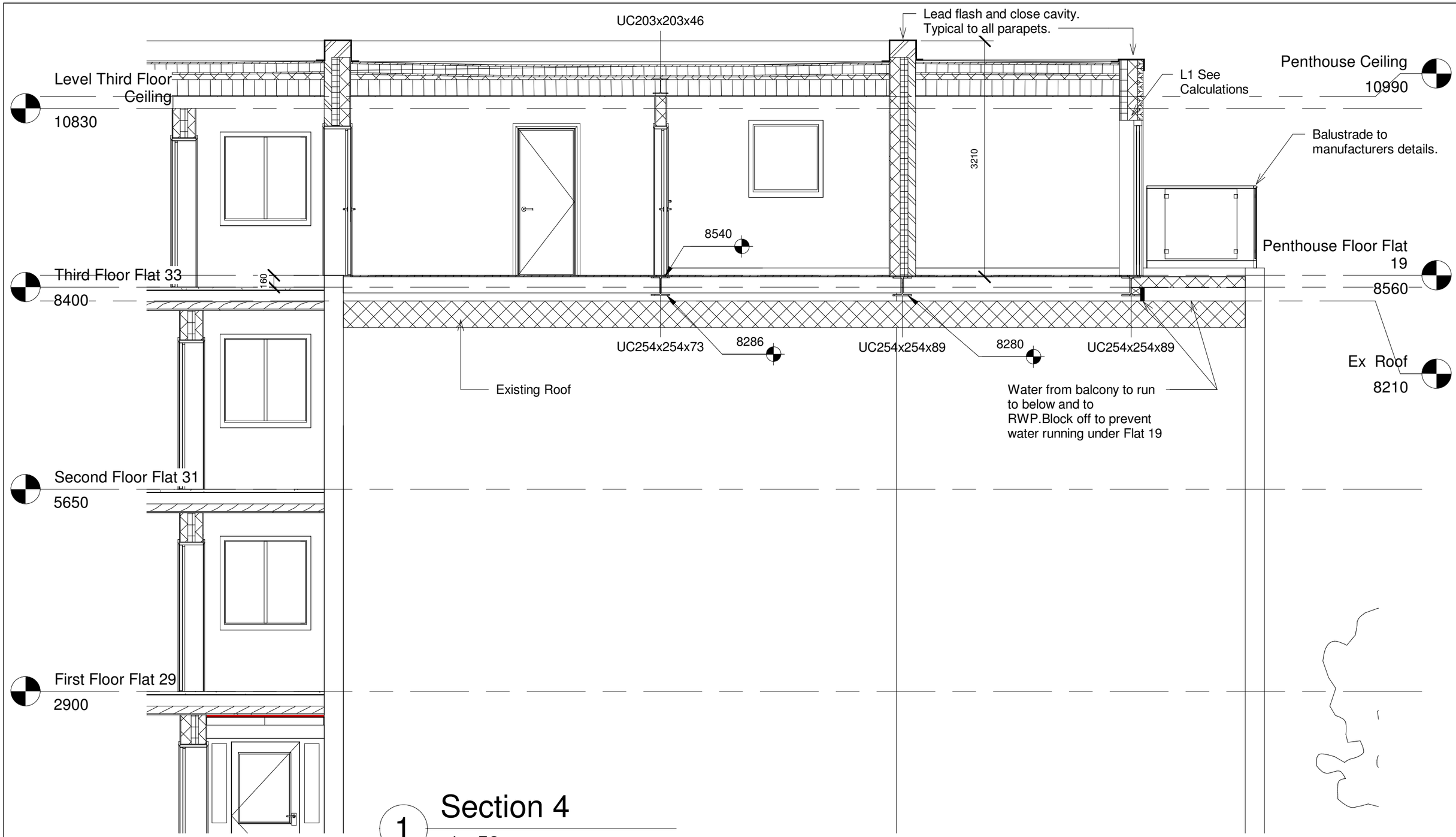
Section 3 of 6

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

22

Scale @ A3 1 : 50

12/03/2021 12:36:02



1 Section 4

1 : 50

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No.	Description	Date

Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

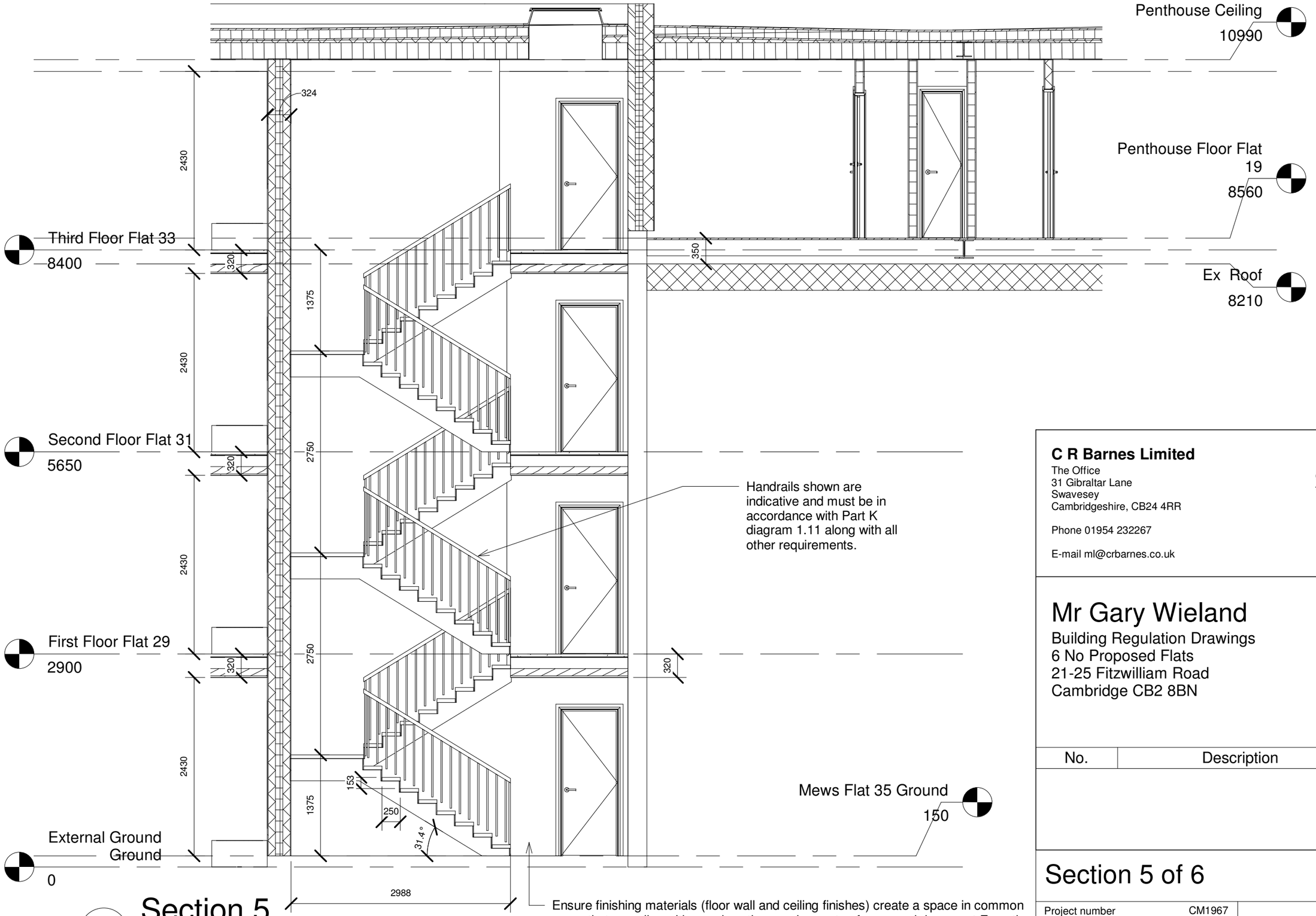
Section 4 of 6

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

23

Scale @ A3 1 : 50

12/03/2021 12:36:02



1 Section 5
1 : 50

Ensure finishing materials (floor wall and ceiling finishes) create a space in common areas that complies with reverberation requirements of approved document E section 7 - Reverberation in the common internal parts of buildings containing flats or rooms for residential purposes. Precast stairs and landings must be detailed to receive suitable floor finishings behind the nosings and the like.

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Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

No.	Description	Date

Section 5 of 6

Project number	CM1967	24	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 50

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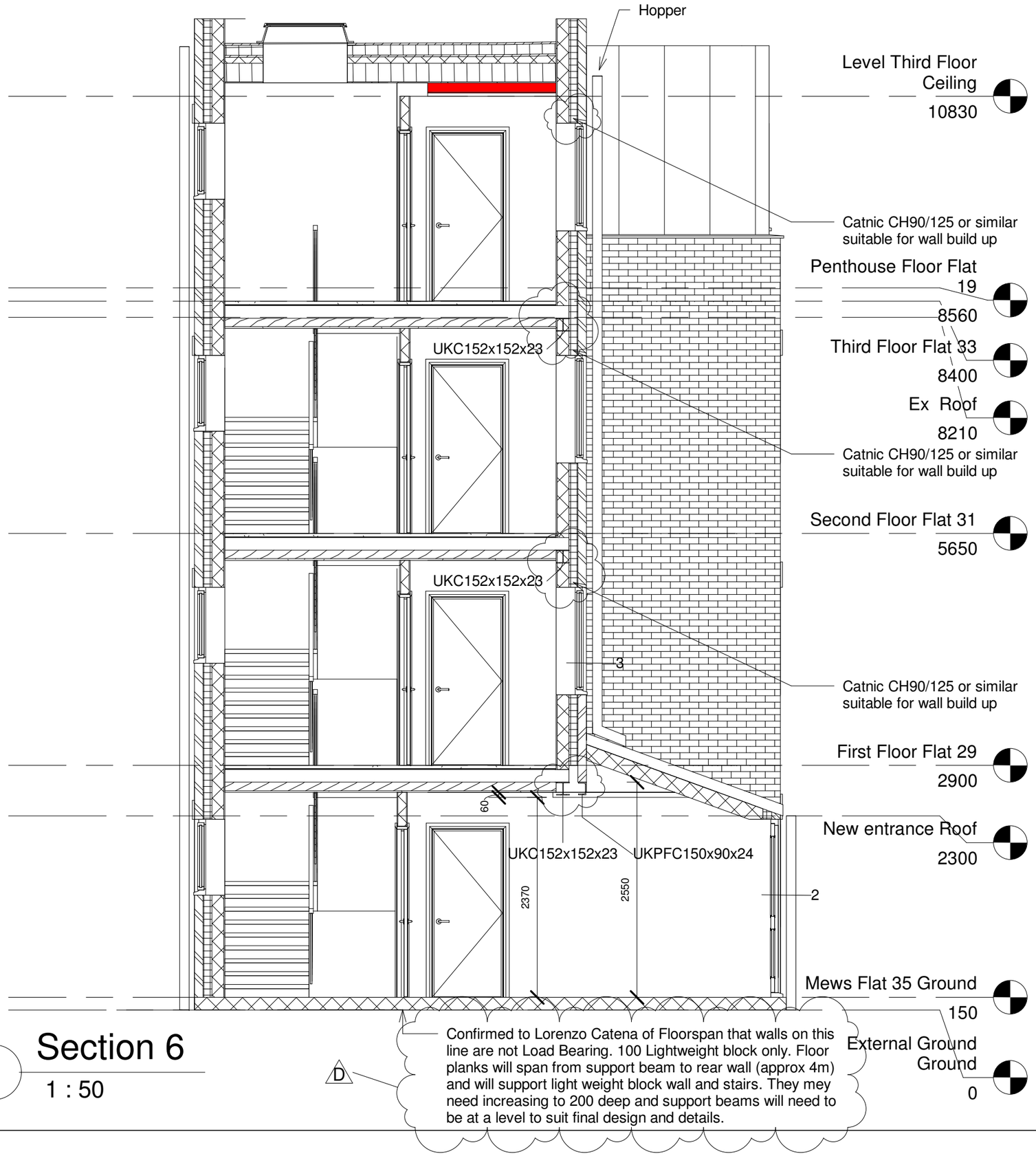

1 Section 6

1 : 50

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Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

No.	Description	Date
B	Beams over lobby amended and block type changed	24/02/2021
D	Plank Details in lobby area design note added	12/03/2021

Section 6 of 6

Project number	CM1967	25	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 50

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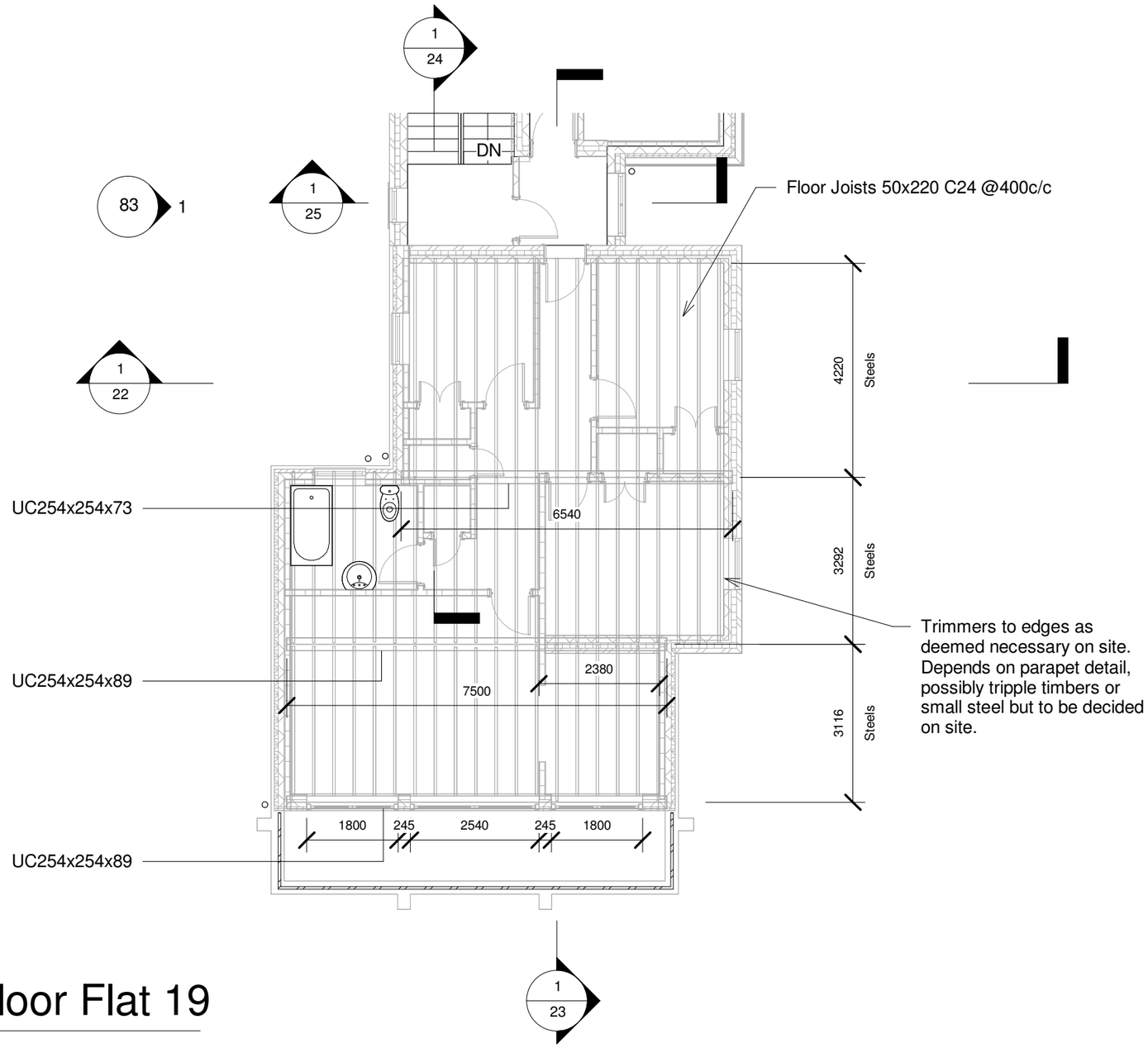

1 Structure Floor Flat 19

1 : 100

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Cambridgeshire, CB24 4RR

Phone 01954 232267

E-mail ml@crbarnes.co.uk

No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

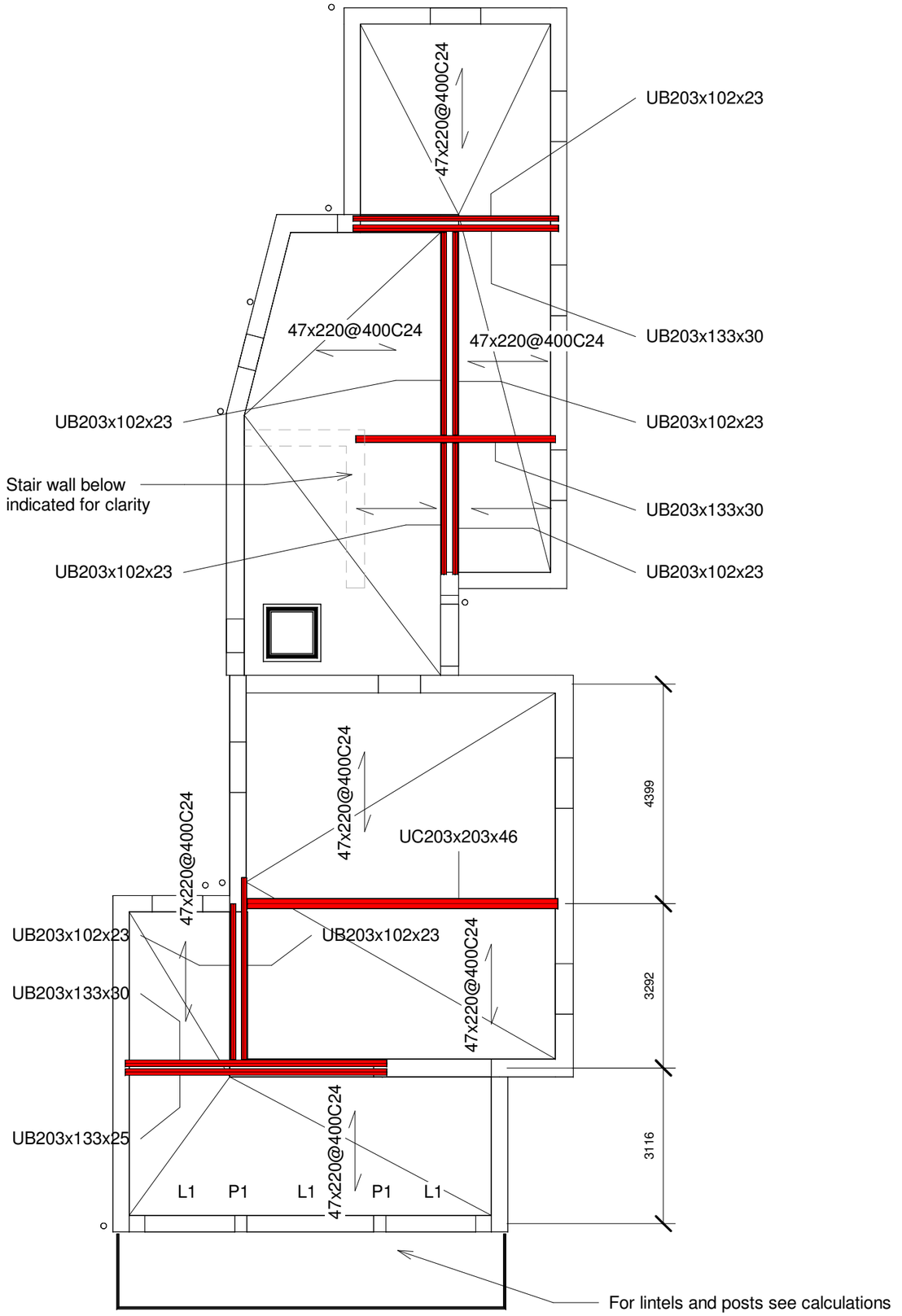
Penthouse Floor Structure

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

30

Scale @ A3 1 : 100

12/03/2021 12:36:05



Read in conjunction with calculations for bearings and connections etc.

1 Roof Steel Flats 19 & 27-33

1 : 100

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Mr Gary Wieland

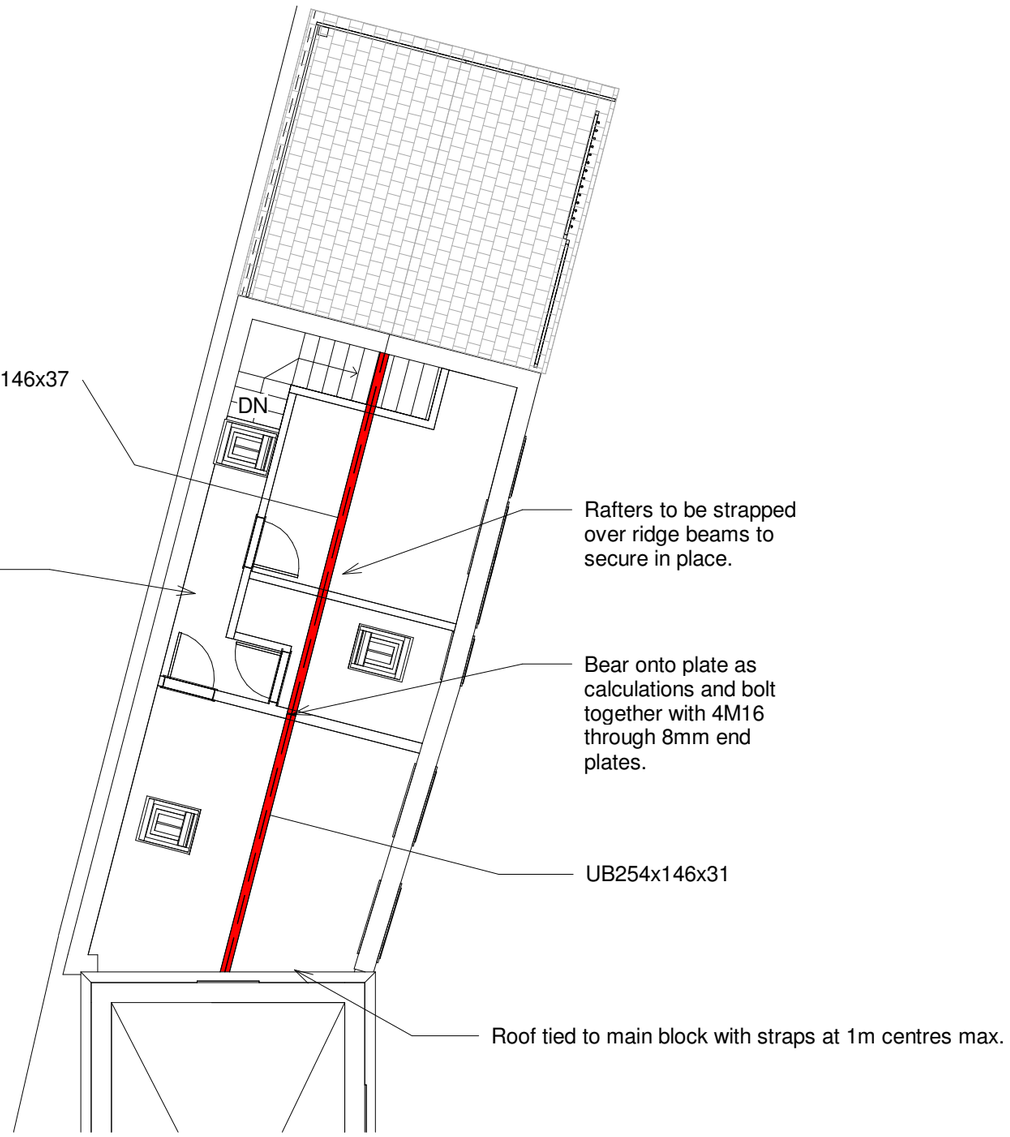
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

No.	Description	Date

Flats 19 & 27-33 Roof Structure

Project number	CM1967	31	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 100

12/03/2021 12:36:05



Roof
To achieve min U-value required of 0.18 W/m²K
Suitable roofing tiles fixed to tile battens secured over breathable sarking felt to relevant BBA Certificate allowing the breather felt to sag at least 10mm over preservative-treated counter battens (min 38mm x 50mm). Provide 110mm Celotex XR4000 insulation boards installed under the counter battens and over 47 x 150mm timber rafters strength class C24 at 400 c/c – to give a max 3.47m span. A vapour control layer should be provided to the underside of the rafters. Finish with 12mm ply boarding to brace top of walls and 12.5 plasterboard and skim.
Restraint strapping - 100mm x 50mm wall plate strapped down to walls. Rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.

1 Mews Flat 35 Roof Structure

1 : 100

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Cambridgeshire, CB24 4RR

Phone 01954 232267

E-mail ml@crbarnes.co.uk

No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

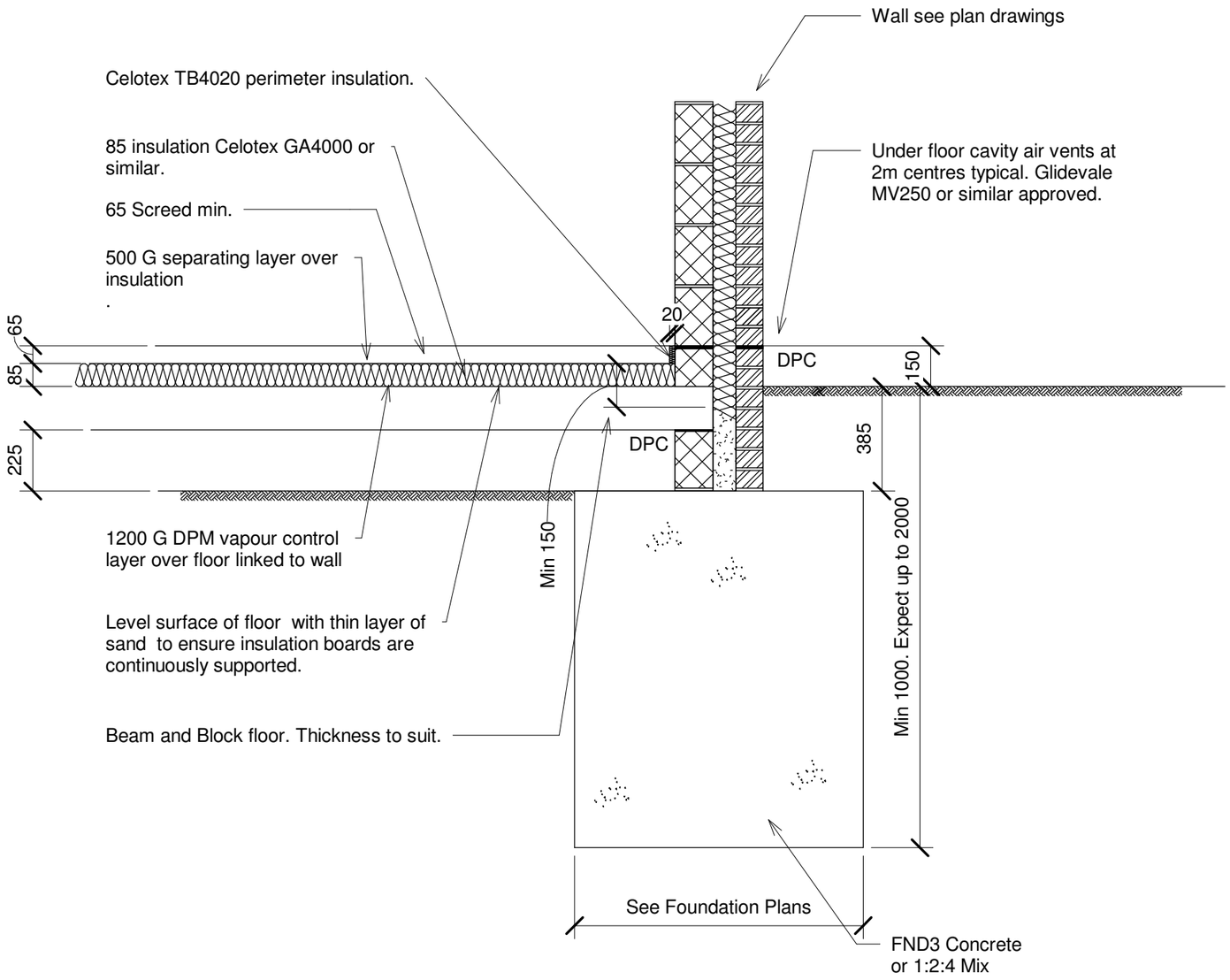
Mews Flat 35 Roof Structure

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

32

Scale @ A3 1 : 100

12/03/2021 12:36:06



1 Footing Floor and Wall

1 : 20

C

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Cambridgeshire, CB24 4RR

Phone 01954 232267

E-mail ml@crbarnes.co.uk

No.	Description	Date
C	Drawing Title Amended	12/03/2021

Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

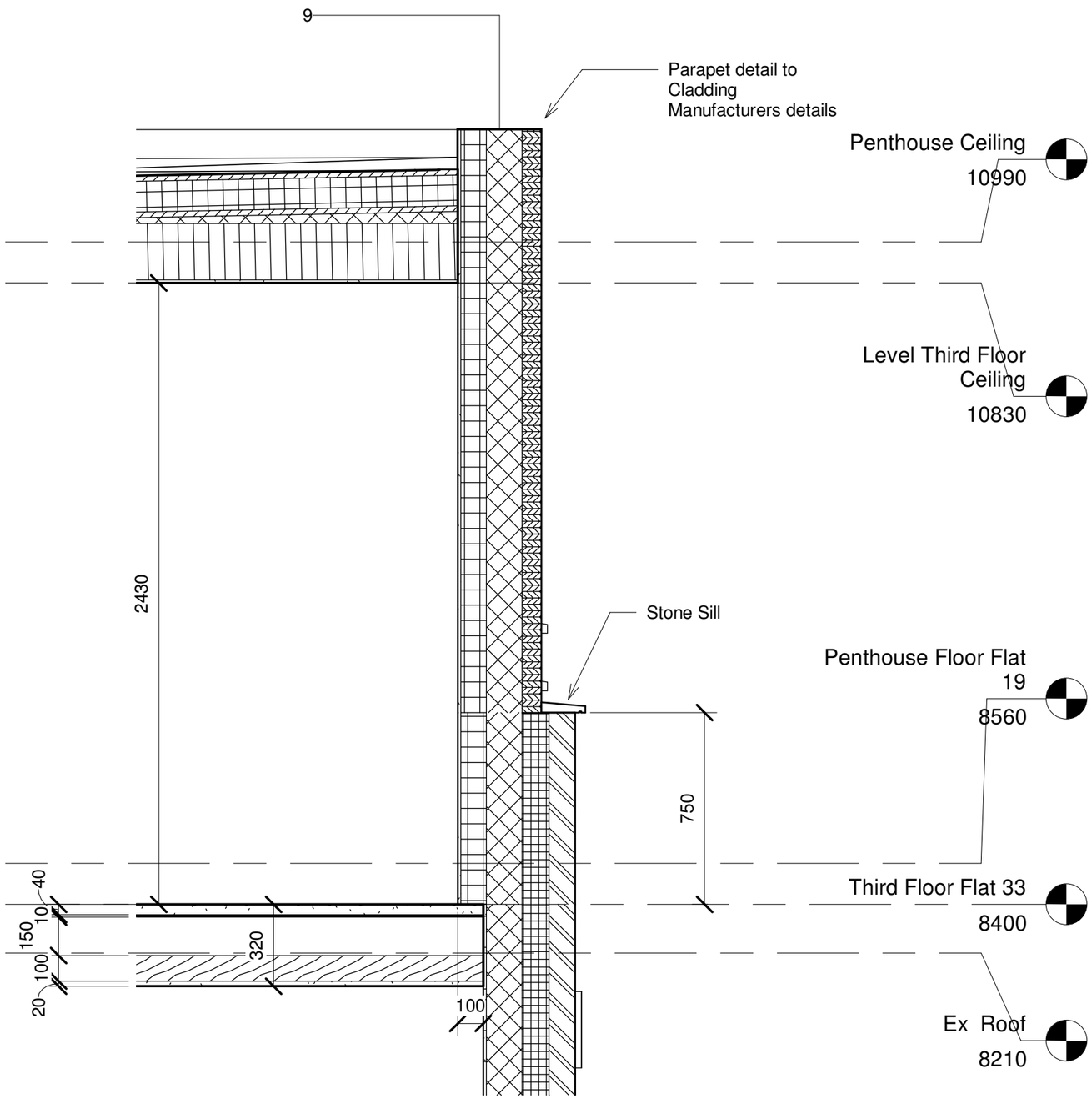
Details Sheet 1 of 4

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

40

Scale @ A3 1 : 20

12/03/2021 12:36:06



1 Callout of Section 2

1 : 20

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Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

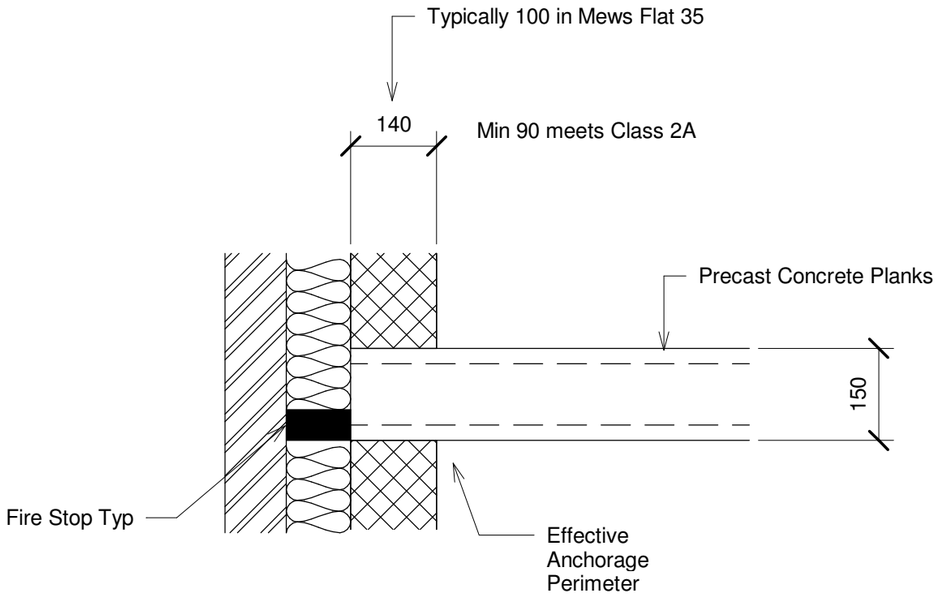
No.	Description	Date
C	Drawing Title Amended	12/03/2021

C

Details Sheet 2 of 4

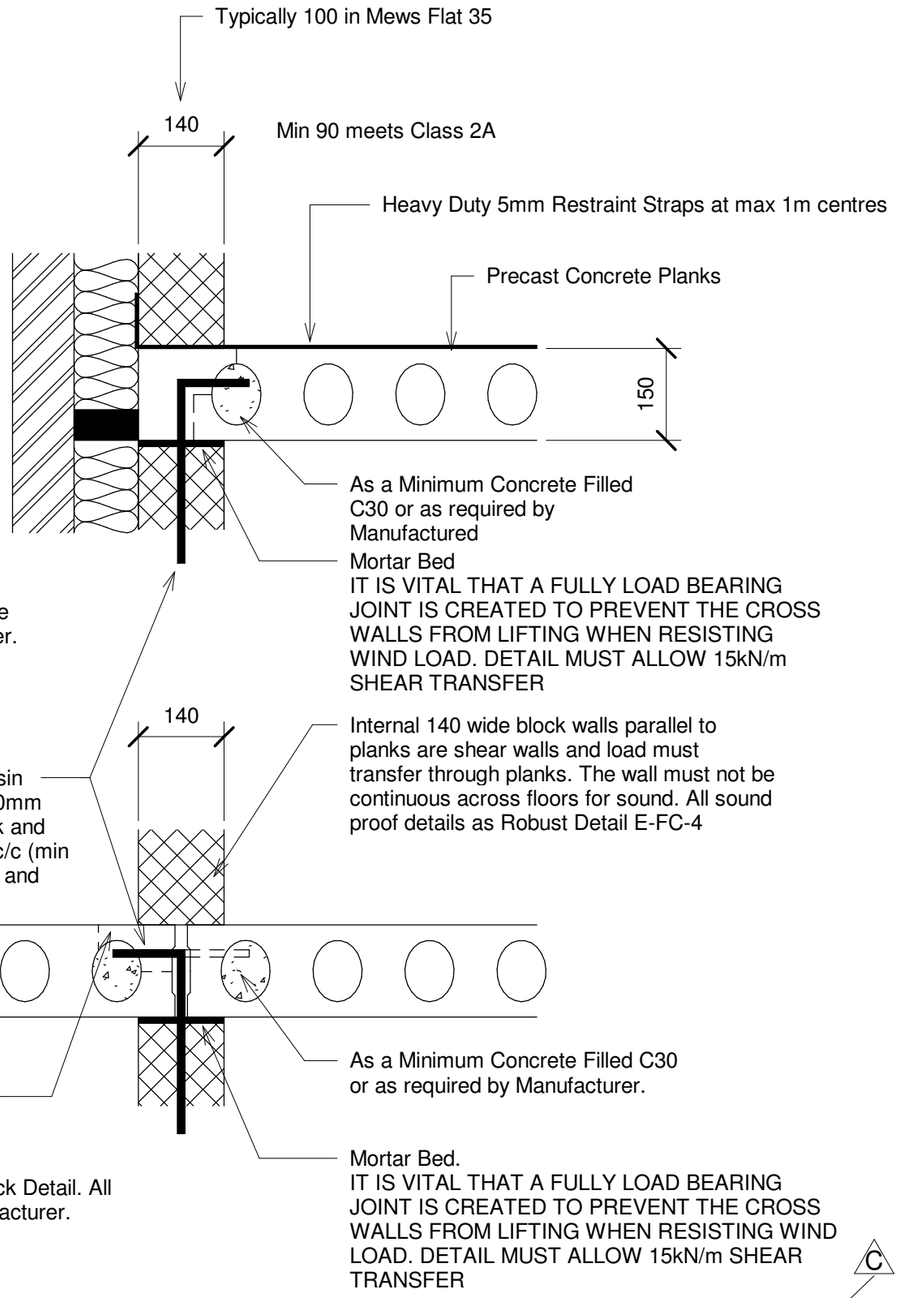
Project number	CM1967	41	
Date	19-06-2020		
Drawn by	CRB		
Checked by	ML	Scale @ A3	1 : 20

12/03/2021 12:36:07



Bearing Detail

All Planks to span full width of building so no internal joints needed.
Longitudinal joint reinforcement as required by Manufacturer



Indicative Edge Detail. All to be agreed with plank manufacturer.

Indicative Internal 140mm Block Detail. All to be agreed with plank manufacturer.

1 Precast Floor Details

1 : 10

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No.	Description	Date
C	Drawing Title Amended	12/03/2021

Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Details Sheet 3 of 4

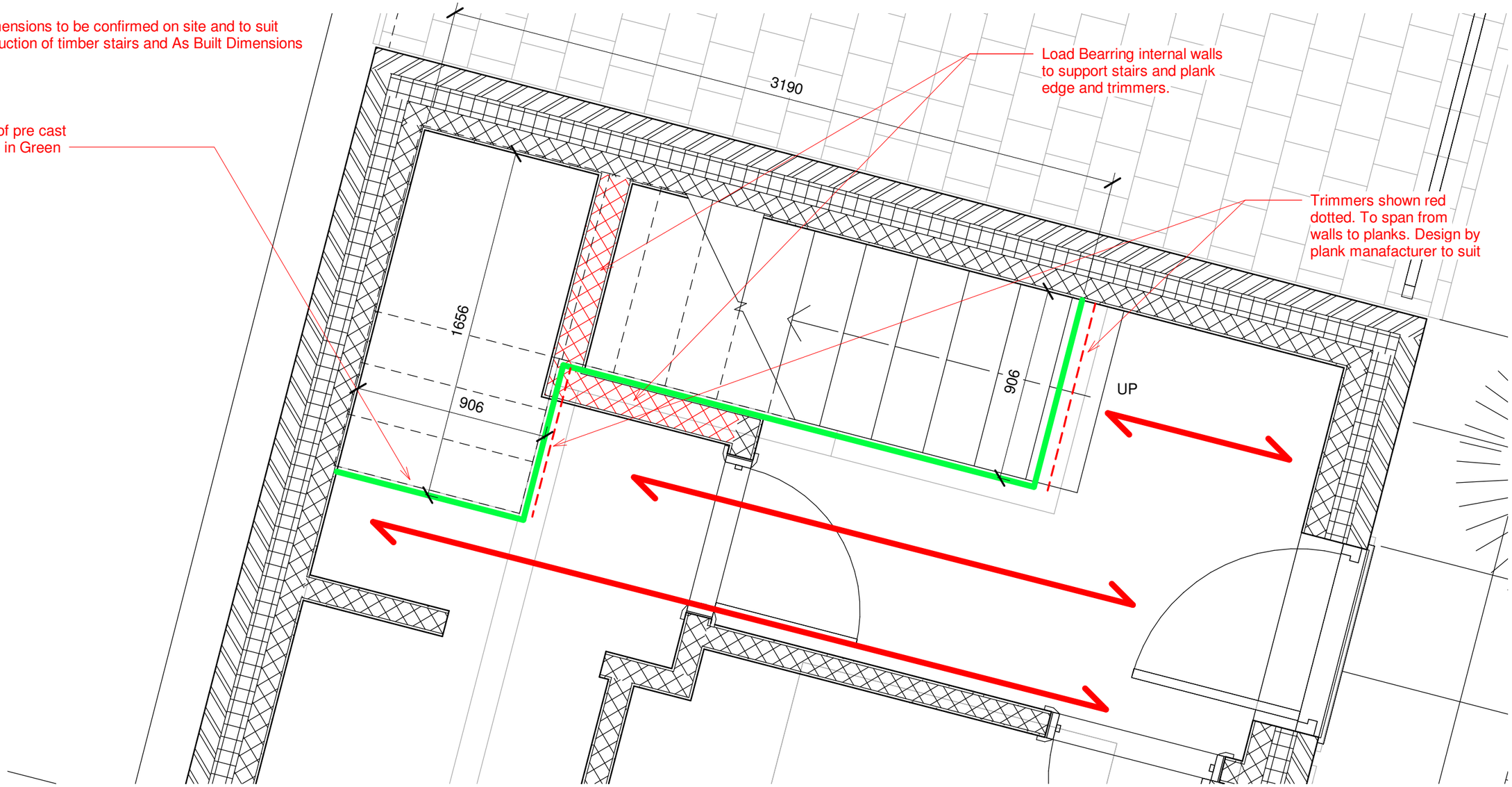
Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML
Scale @ A3	1 : 10

43

12/03/2021 12:36:07

All dimensions to be confirmed on site and to suit construction of timber stairs and As Built Dimensions

Edge of pre cast planks in Green



1 Mews Flat 35 Trimmers

1 : 20

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No.	Description	Date

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Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Details Sheet 4 of 4

Project number	CM1967
Date	12-03-2021
Drawn by	CRB
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44

Scale @ A3 1 : 20

12/03/2021 12:36:08

1 Drainage External

1 : 250

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No.	Description	Date

Mr Gary Wieland

Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

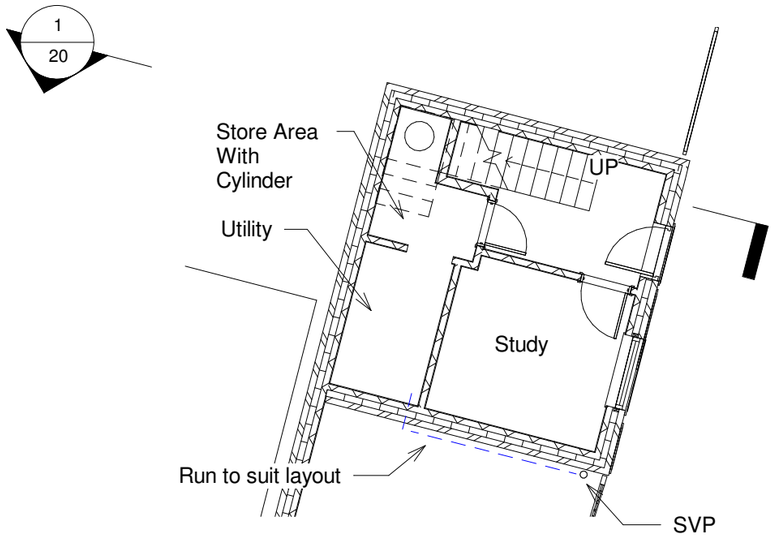
Drainage Sheet 1 of 3

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

50

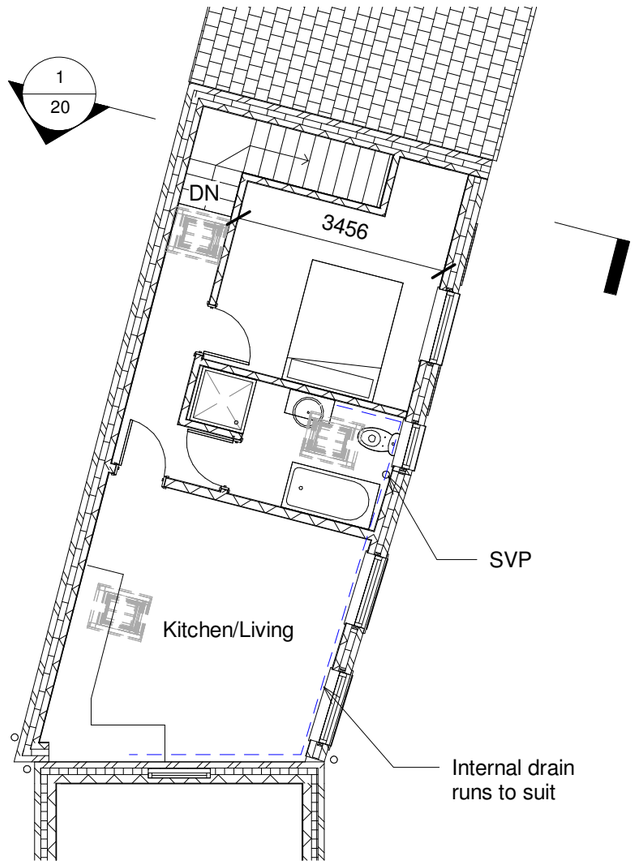
Scale @ A3 1 : 250

12/03/2021 12:36:08



1 Drainage Mews Flat 35 Gnd

1 : 100



2 Drainage Mews Flat 35 First

1 : 100

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

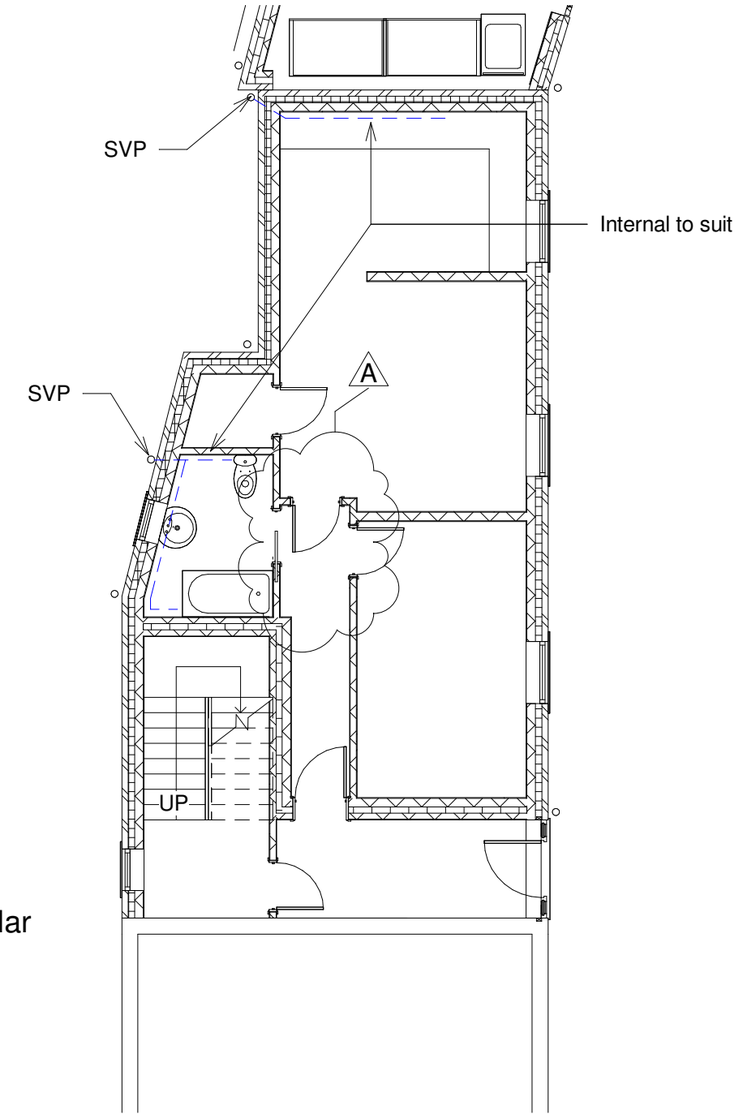
Drainage Sheet 2 of 3

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

51

Scale @ A3 1 : 100

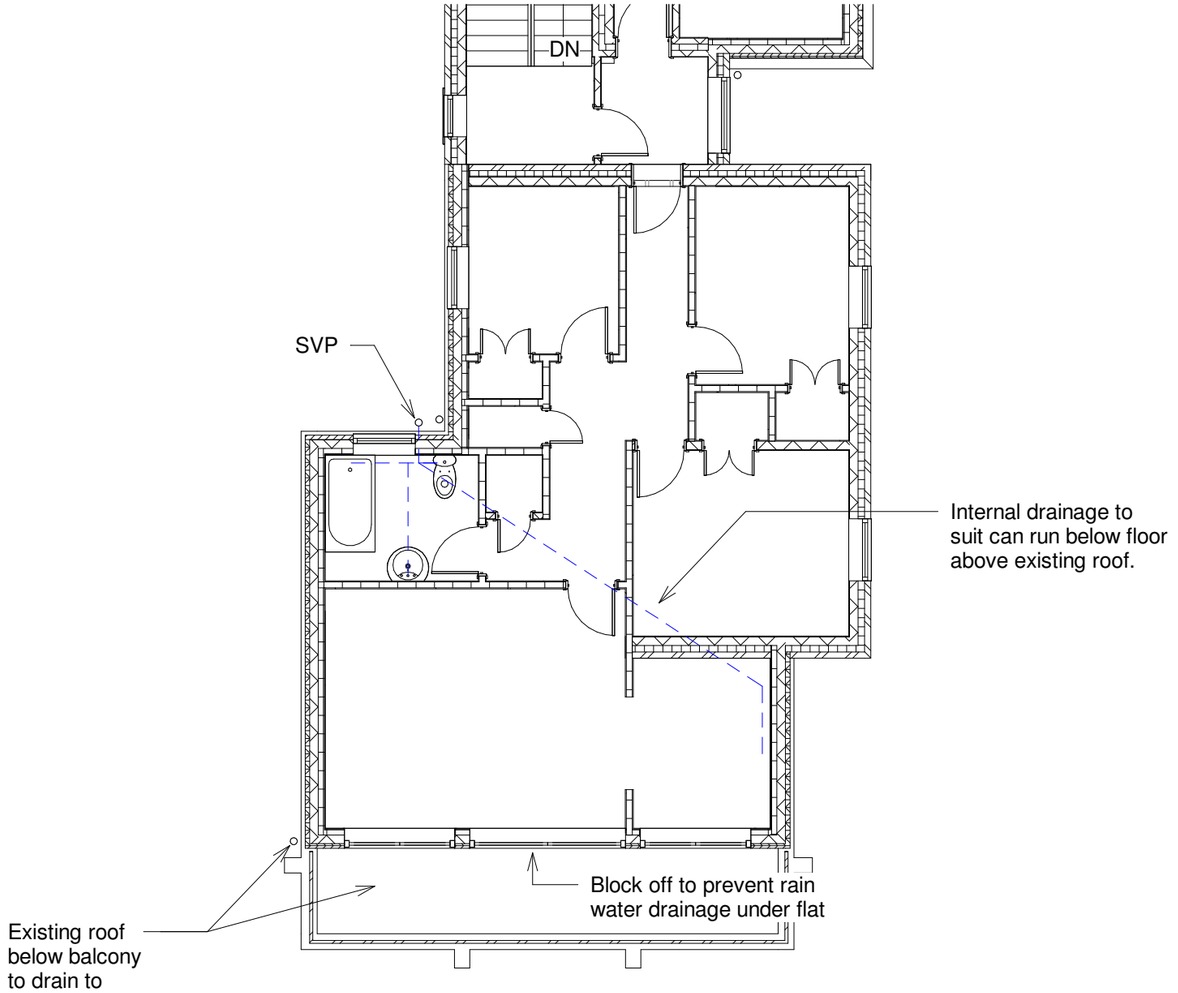
12/03/2021 12:36:09



Flats 3 - 5 similar

1 Drainage Gnd Floor Flat 27

1 : 100



2 Drainage Penthouse Flat 19

1 : 100

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No.	Description	Date
A	Revised layout of Hall and Bedroom Door	04/12/2020

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

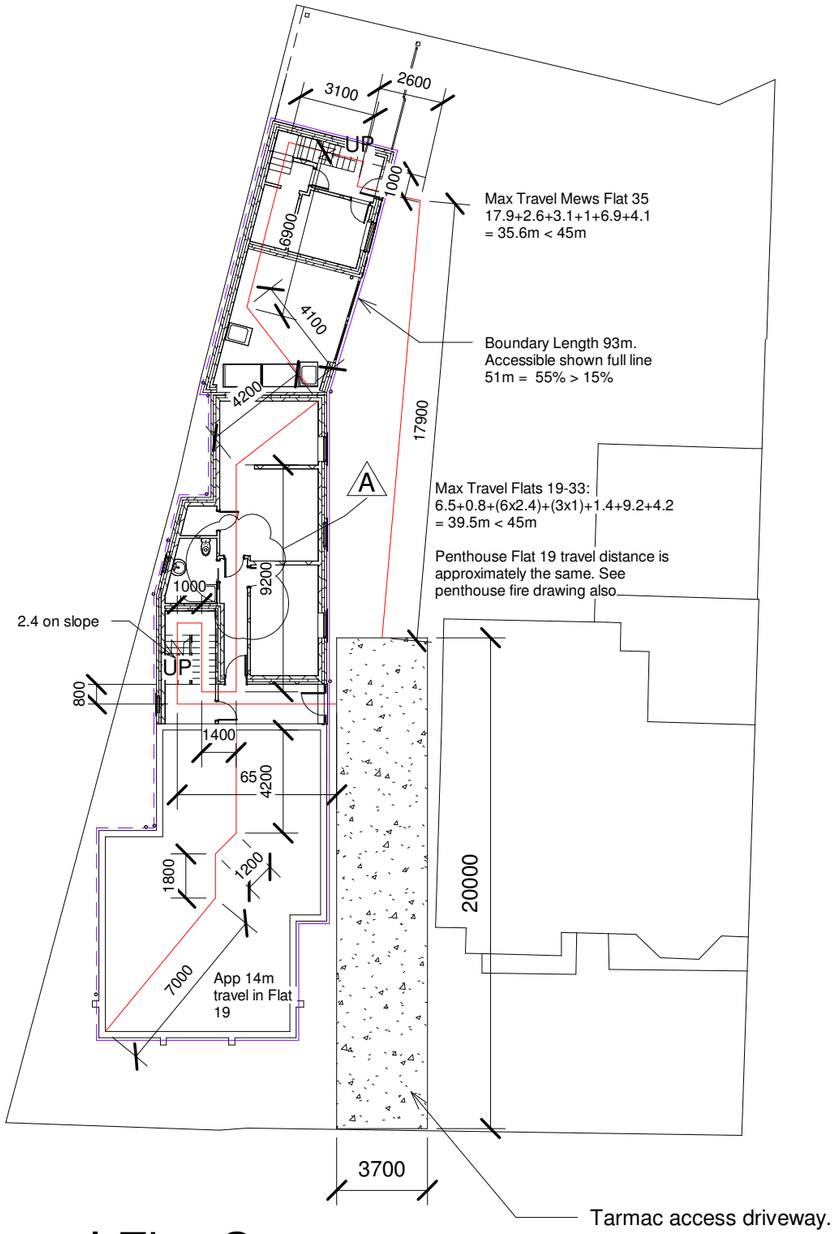
Drainage Sheet 3 of 3

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

52

Scale @ A3 1 : 100

12/03/2021 12:36:10



1 External Fire Strategy

1 : 250

Note:

1. Top Storey is less than 11m.
2. Flats 27 - 33 have 70sqm footprint. Flat 19 has 77 sqm footprint. Total area is 357 sqm which is less than 2000 sqm.
3. Access for fire appliance is adequate and does not require more than 20m reversing.
4. Travel distance to furthest points is less than 45m
5. Design incorporates suitable smoke venting and protected areas.
6. More than 15% of perimeter is accessible (approx 55%).

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No.	Description	Date
A	Revised layout of Hall and Bedroom Door	04/12/2020

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

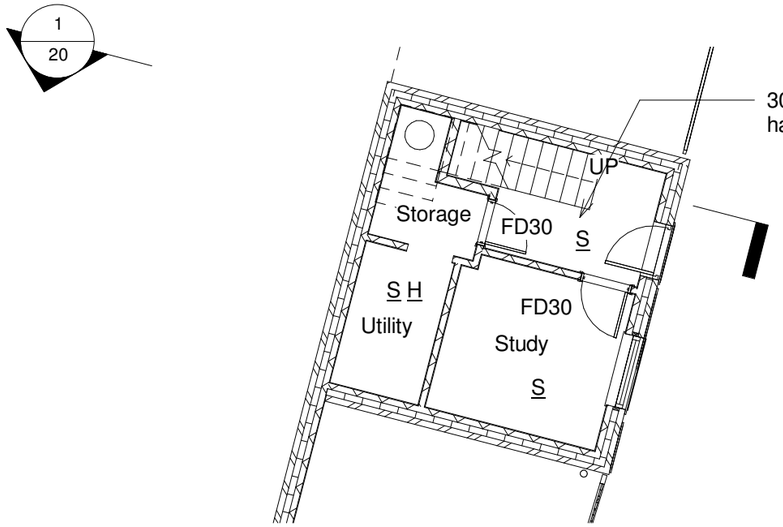
Fire Strategy Sheet 1 of 4

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

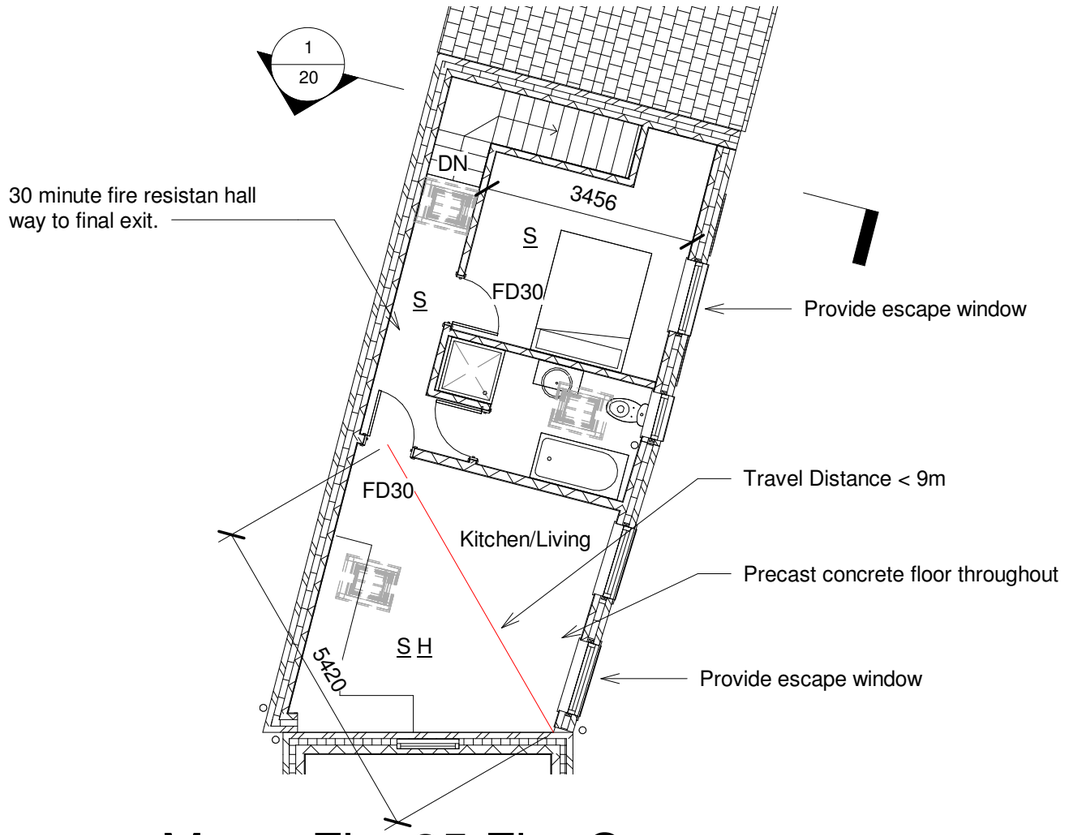
60

Scale @ A3 1 : 250

12/03/2021 12:36:11



Mews Flat 35 Fire Strategy
1 Ground
1 : 100



Mews Flat 35 Fire Strategy
2 First
1 : 100

Notes:

1. To be read in conjunction with all other drawings and main notes.
2. !st floor is less than 4.5m above ground.
3. Travel distances comply with requirements,
4. Individual flat fire detection noted is indicative. S = Smoke Sensor and Sounder H = Heat Sensor
5. Fire doors shown are indicative.

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

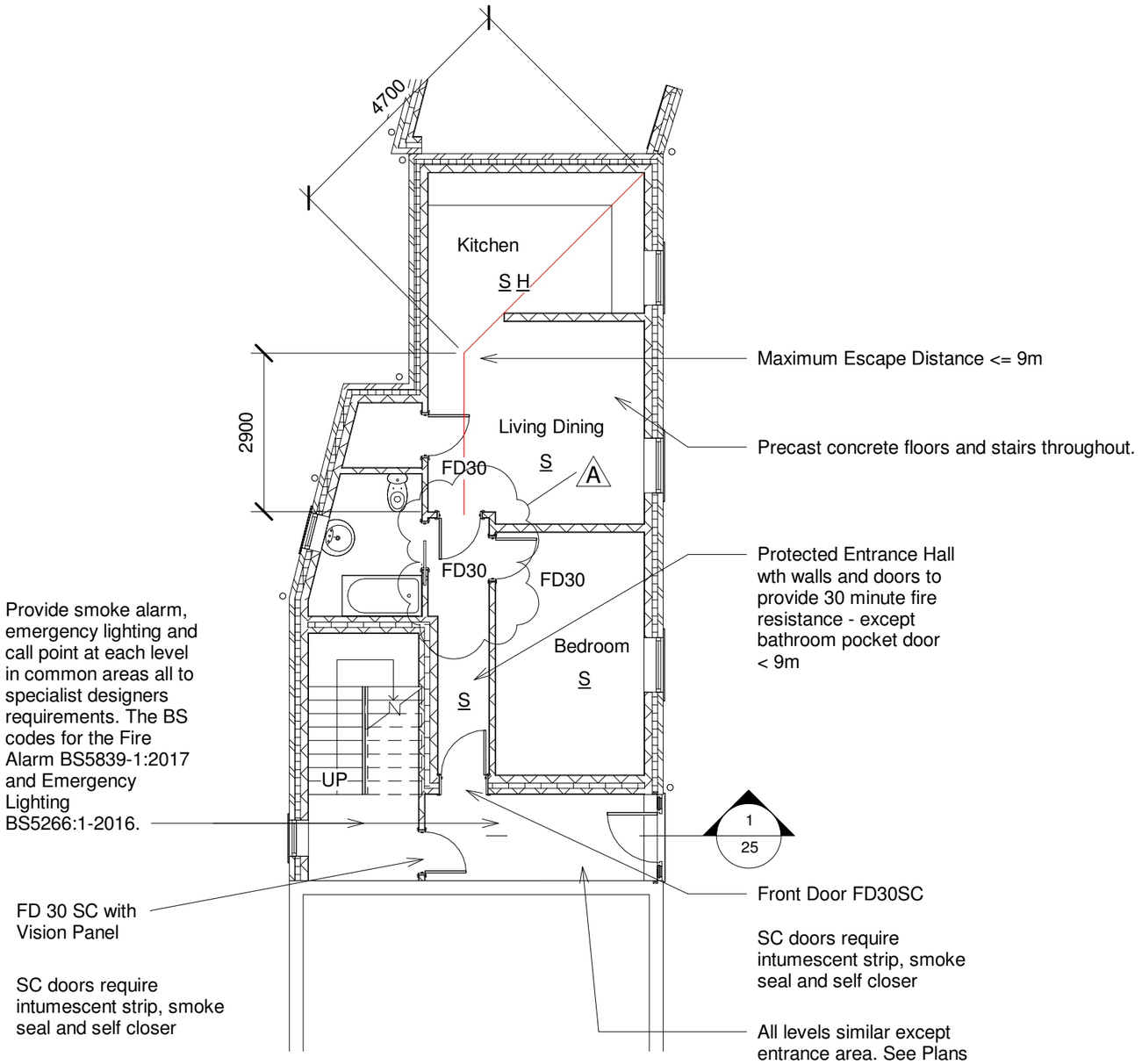
Fire Strategy Sheet 2 of 4

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

61

Scale @ A3 1 : 100

12/03/2021 12:36:12



Notes:

1. To be read in conjunction with all other drawings and main notes.
2. Travel distances comply with requirements,
3. Individual flat fire detection noted is indicative. S = Smoke Sensor and Sounder H = Heat Sensor
4. All floors are similar but entrance areas vary.
5. Fire doors shown are indicative.

1 Flat 27-33 Fire Stratergy

1 : 100

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No.	Description	Date
A	Revised layout of Hall and Bedroom Door	04/12/2020

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

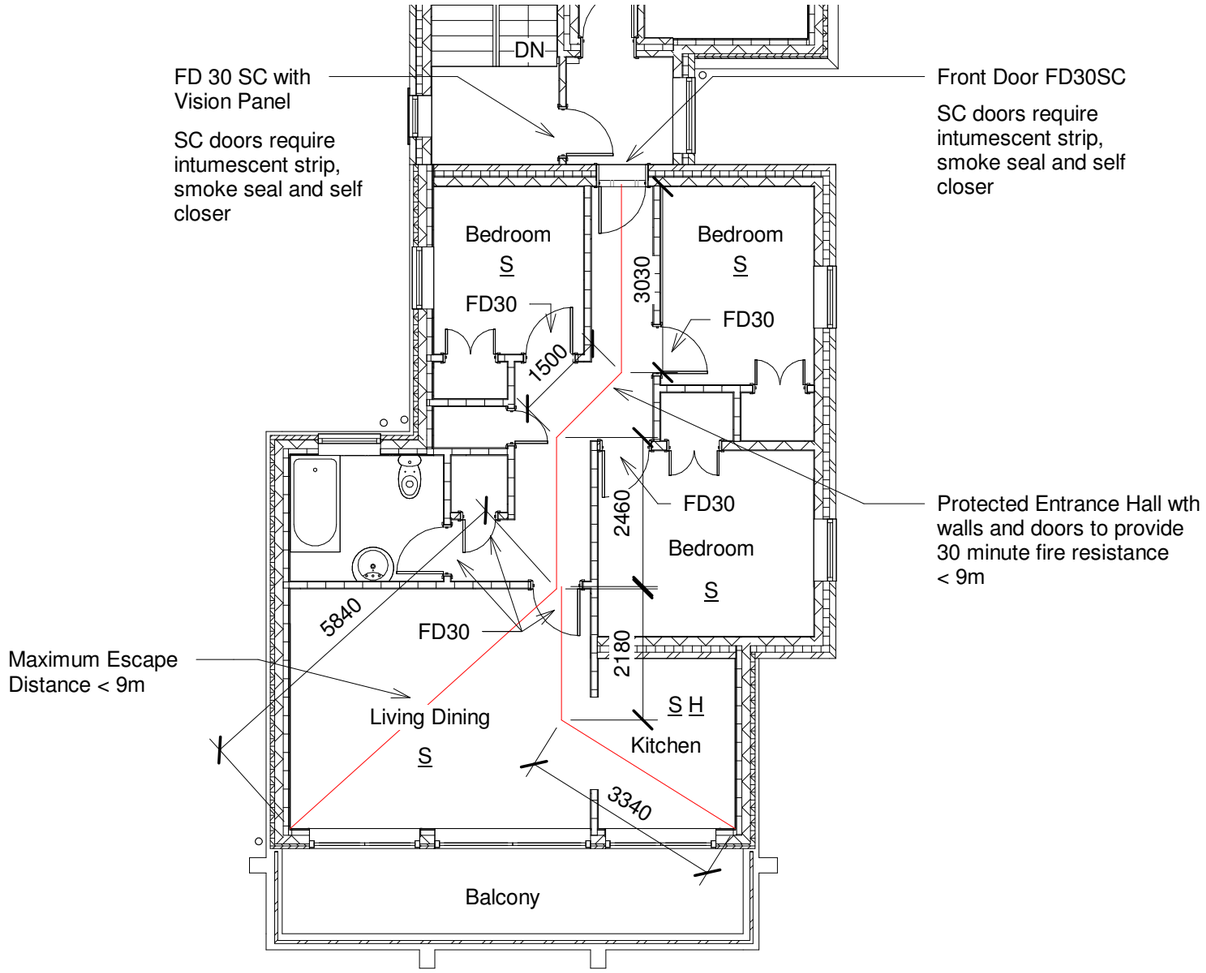
Fire Strategy Sheet 3 of 4

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

62

Scale @ A3 1 : 100

12/03/2021 12:36:12



Notes:

1. To be read in conjunction with all other drawings and main notes.
2. Travel distances comply with requirements,
3. Individual flat fire detection noted is indicative. S = Smoke Sensor and Sounder H = Heat Sensor
4. Fire doors shown are indicative.

1 Flat 19 Fire Strategy

1 : 100

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Fire Strategy Sheet 4 of 4

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

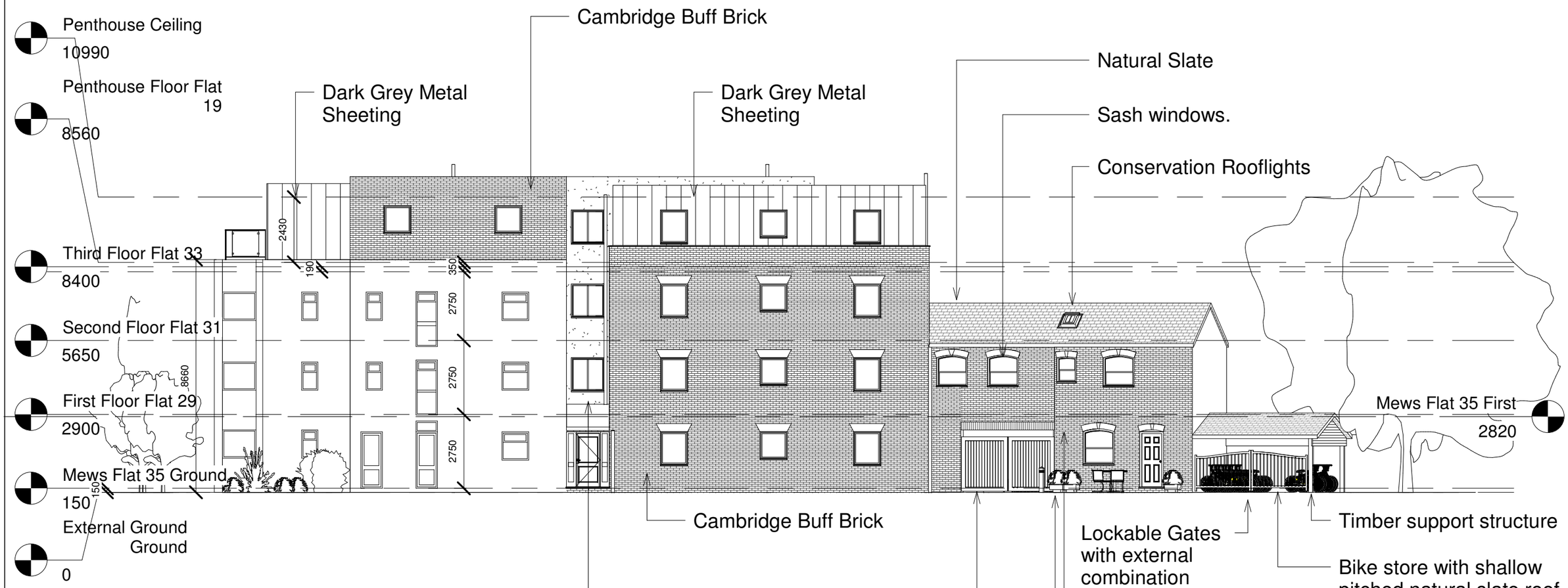
63

Scale @ A3 1 : 100

12/03/2021 12:36:13

Elevation faced on Existing Building.

This detailed sheet shows the proposed 4 No one bedroom flats to the rear, an additional 1 No 3 bedroom flat above the existing and a mews style one Bedroom flat all in context with the existing building. All materials to be agreed with the planning authority.



1 Detailed Front General

1 : 150

0 5m

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Detailed Front (Easterly) Elev'n

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

81

Scale @ A3 1 : 150

12/03/2021 12:36:34

This detailed sheet shows the proposed 4 No one bedroom flats to the rear, an additional 1 No 3 bedroom flat above the existing and a mews style one Bedroom flat all in context with the existing building which was requested as part of the preapplication advice reference 17/5309/PREAPP. All materials to be agreed with the planning authority.

1 Detailed End General

1 : 100

0 1m 2m 3m 4m 5m

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

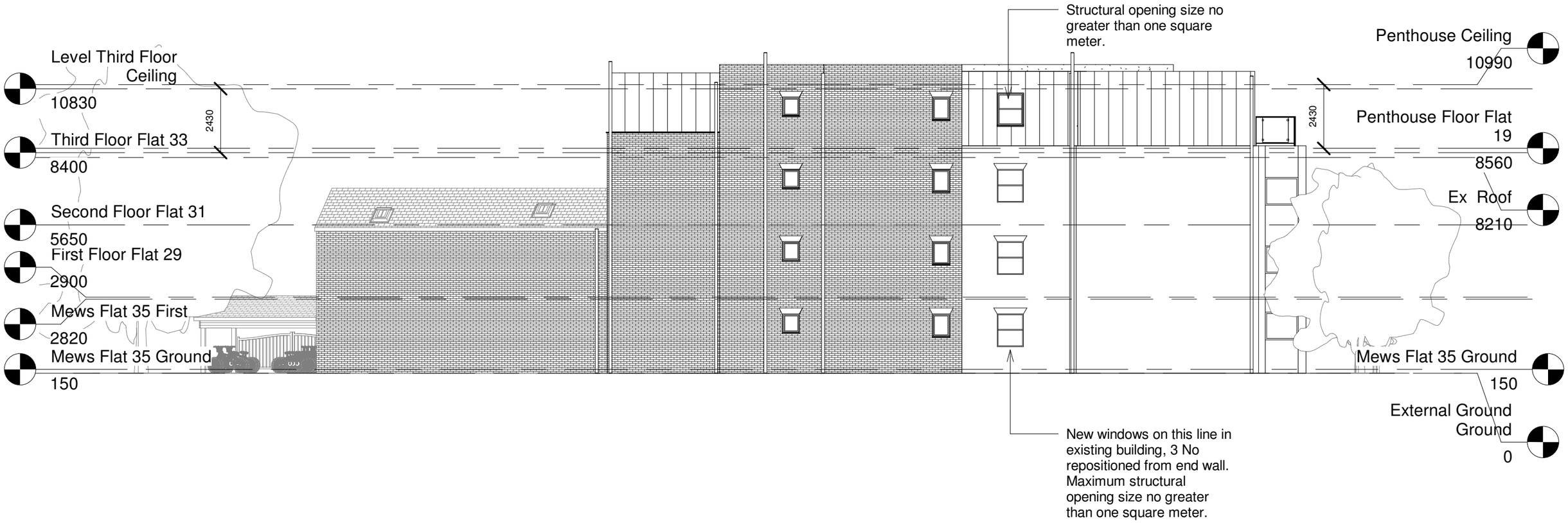
Detailed End (Northerly) Elev'n

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

82

Scale @ A3 1 : 100

12/03/2021 12:37:30



1 Detailed Rear General

1 : 150

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No.	Description	Date

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Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
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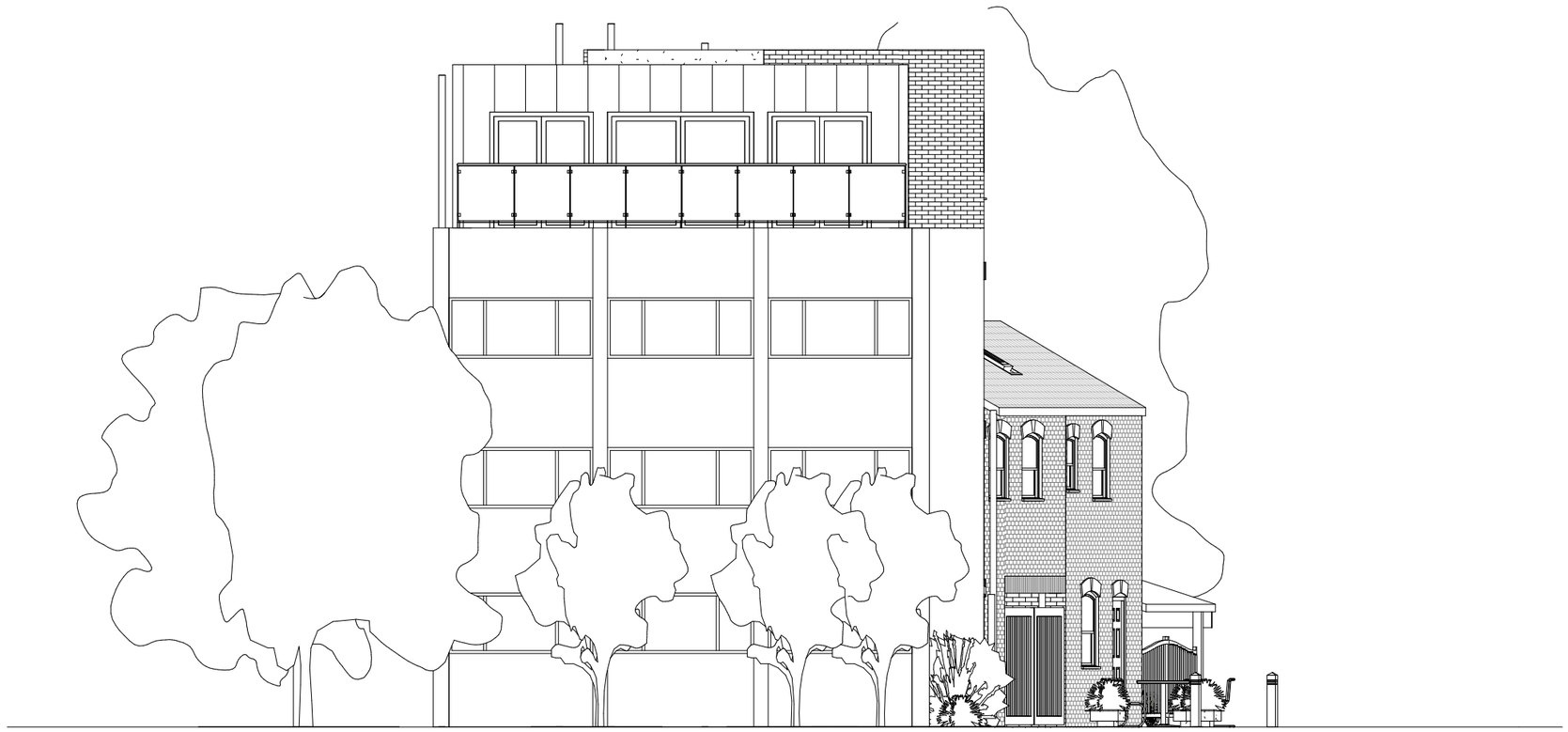
Detailed Rear (Westerly) Elv'n

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

83

Scale @ A3 1 : 150

12/03/2021 12:37:39



1 Detailed Rd Front General

1 : 100

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Detailed Rd View Elv'n

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

84

Scale @ A3 1 : 100

12/03/2021 12:37:44

1 Detailed Visual 1

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

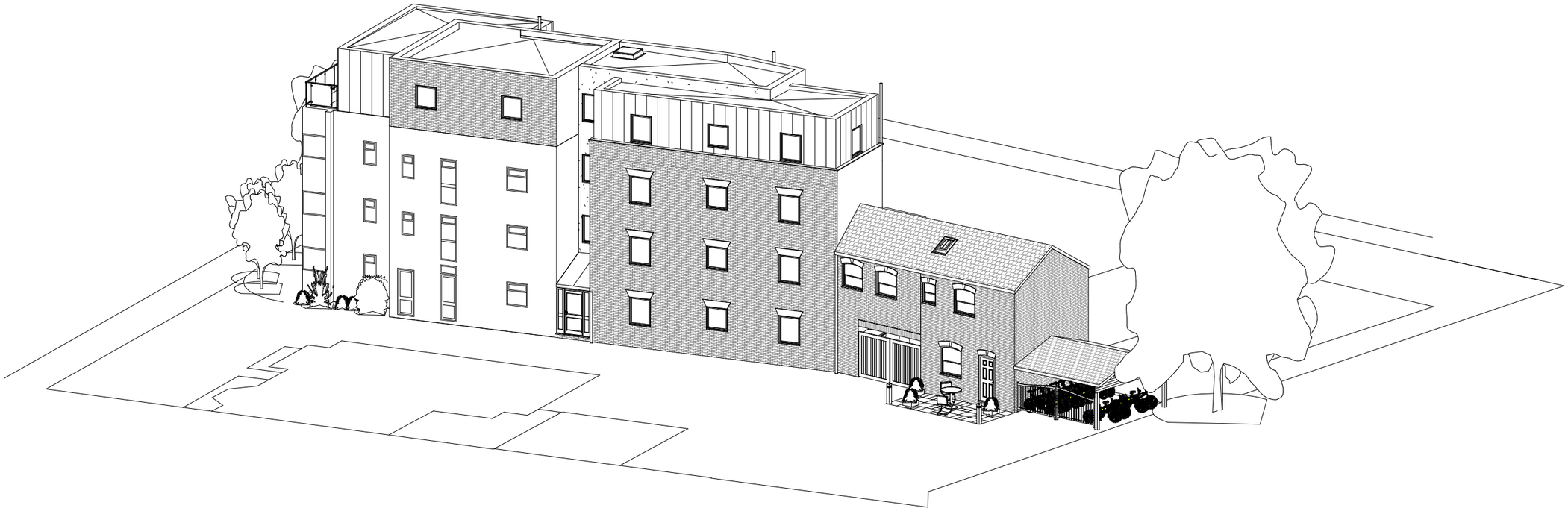
Detailed Visual 1 of 3

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

85

Scale @ A3

12/03/2021 12:37:51



1 Detailed Visual 2

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No.	Description	Date

Mr Gary Wieland
Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

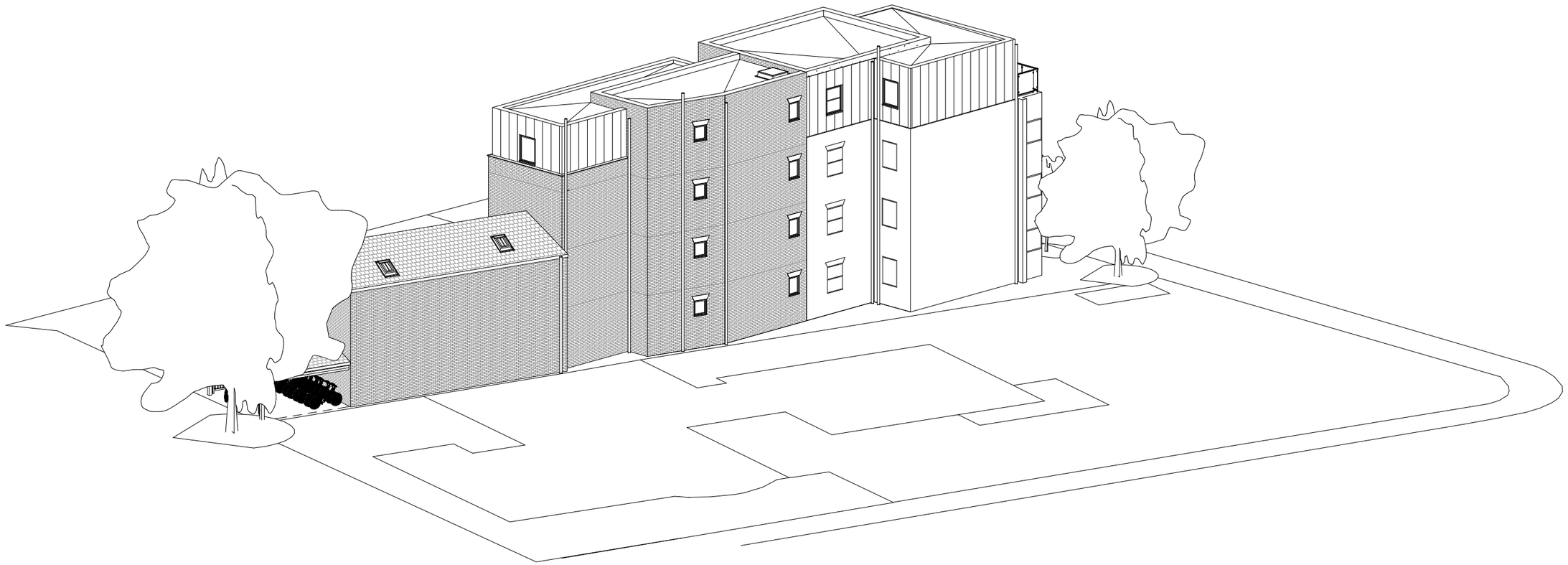
Detailed Visual 2 of 3

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

86

Scale @ A3

12/03/2021 12:38:03



1 Detailed Visual 3

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No.	Description	Date

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Detailed Visual 3 of 3

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

87

Scale @ A3

12/03/2021 12:38:13

Indicative Render to demonstrate how the Mews Style Dwelling softens the box form of the previously approved flats (which now form part of this application) and how a contrasting brick to the Cambridge Buff could further improve this effect.

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No.	Description	Date

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Building Regulation Drawings
6 No Proposed Flats
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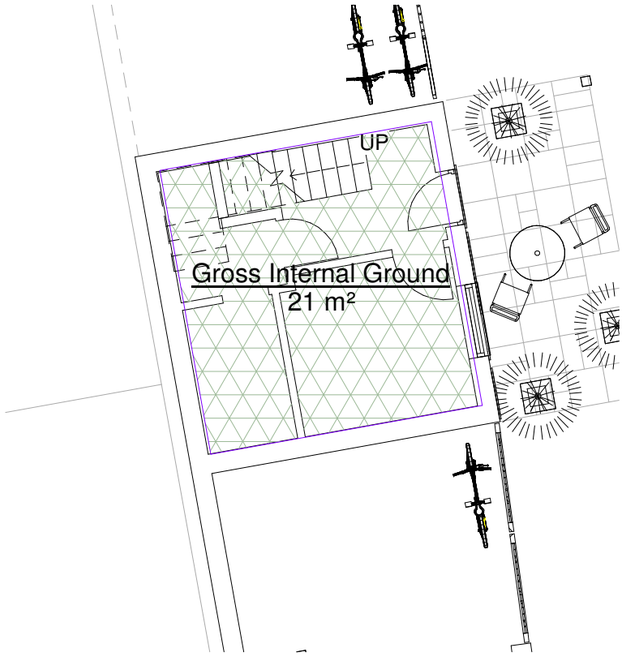
Indicative Render

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

88

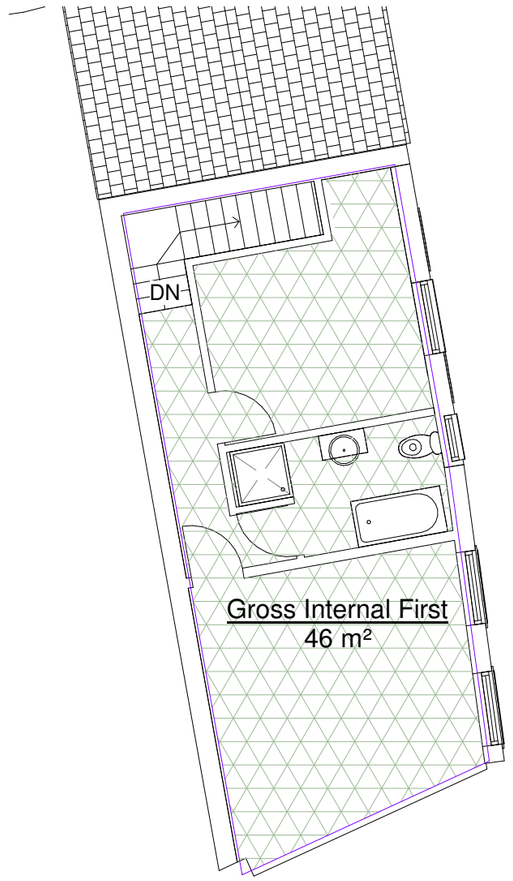
Scale @ A3 1 : 50

12/03/2021 12:38:14



1 Mews Flat 35 Ground

1 : 100



2 Mews Flat 35 First

1 : 100

This scheme demonstrates compliance with the Technical housing standards-nationally described space standard - March 2015 - as follows:

1) In accordance with Table 1 - 1b - 2p 2 Storey dwelling minimum requirements is 58 square meters. Provided is 67 square meters.
2) In accordance with Table 1 built in storage minimum is 1.5 square meters. Provided is 2.9 square meters see drawing 03.
3) 2p (2 bed spaces) requires a twin bedroom of 11.5 square meters and provided is 11.5 square meters as shown on drawing 04. Also minimum dimension is 3.475m which is greater than the required 2.75m.
4) Floor to ceiling heigh exceeds the minimum of 2.3m as shown on section 1.

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Area Plans Mews Flat 35

Project number	CM1967
Date	19-06-2020
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89

Scale @ A3 1 : 100

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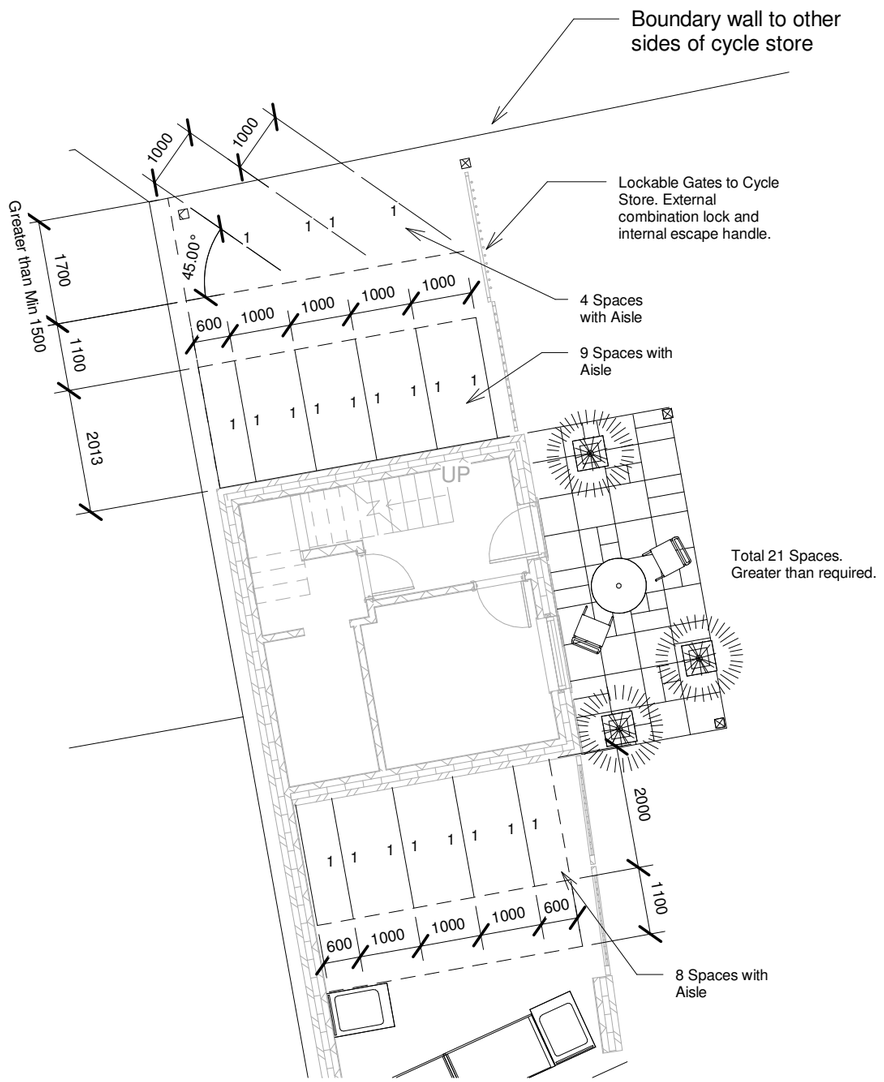

1 Cycle Parking Plan

1 : 100

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No.	Description	Date

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Building Regulation Drawings
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Cambridge CB2 8BN

Detailed Cycle Parking Plan

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

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Scale @ A3 1 : 100

12/03/2021 12:38:37

1) DO NOT SCALE DRAWING: Check all measurements on site before starting work. Report all variations to the designer.
2) REGULATIONS: All work is to be constructed in full accordance with the current building regulations and to conform to NHBC specifications if applicable. Works shall not commence without receipt of the Building Regulations Full Plans Certificate approving the design.
3) HEALTH AND SAFETY: It is the contractor's responsibility to make all provision to ensure that this building site complies with all the relevant health and safety issues. The contractor is reminded of their liability to ensure due care, attention and consideration is given in regard to safe practice in compliance with the Health and Safety at Work Act 1974.
4) TEMPORARY WORKS: To be designed by the contractor and to be suitable to carry all loads safely.
5) CDM REGULATIONS: The client must abide by the Construction Design and Management Regulations 2015. The client must appoint a contractor, if more than one contractor is to be involved, the client will need to appoint (in writing) a principal designer (to plan, manage and coordinate the planning and design work) and a principal contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works:
(a) Last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project.
(b) Exceeds 500 person days.
C R Barnes Limited is not undertaking the role of Principle Designer on this project in relation to the CDM regulations.
6) ROBUST DETAILS: All relevant publications will apply as appropriate.
7) CALCULATIONS: All drawings shall be read in conjunction with the calculations and details within the calculations shall be adopted.
8) MATERIALS AND WORKMANSHIP: All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking. All materials and components are to be installed in accordance with the manufacturer's recommendations and details.
9) FOUNDATIONS: All cavity walls are to be load bearing with mass concrete footings as shown. Provide trench fill foundations as shown on the drawings, concrete mix FND3 or 1:2:4 concrete mass fill to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2004 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting load bearing internal walls to be min 1000mm below ground level. Please note that should any adverse soil conditions or difference in soil type be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a Structural Engineer should be sought. If ground conditions warrant then sulphate resistant cement, brickwork and block work is to be used.
10) STEPPED FOUNDATION (trench): Stepped foundations should overlap by twice the height of the step, or 1m whichever is the greater. The height of the step should not be greater than the thickness of the foundation.
11) BELOW DPC WALLS: Only use approved clay bricks (fl or ml resistant) or 100mm minimum solid 7n concrete blocks to BS6073 below ground. Facing bricks are to be used where the wall is exposed. Minimum cavity of 105mm width is to be filled with lean mix concrete to within 225mm of the lowest DPC level. Construction is to be in two skins of brick or block work with stainless steel wall ties at 900mm horizontal and 450mm vertical spacing and are to be staggered vertically.
12) DAMP PROOF COURSES: To be either bitumen damp proof courses to BS6398 or polythene black 0.5mm thick minimum to BS6515. DPC is to be laid horizontally to all walls and to be a minimum of 150mm above ground level. All damp proof courses are to be bedded both sides. Close all openings with 'thermobate' or similar insulated cavity closure. All damp proof membranes are to be 1200g polythene and linked to the DPC.
13) LINTELS BELOW DPC: Provide suitable lintels where drains pass through footings.
14) DRAINS UNDER SLAB: All are to be bedded and surrounded with 100mm pea shingle. A minimum of 50mm clearance is to be provided all around pipes. All lintel areas are to be fitted with vermin guards.
15) EXISTING DRAINS: Where existing drains pass under any new work or floor slab the drain run is to be tested and repaired if necessary.
16) RAIN WATER DRAINAGE: All to be as required and clipped in accordance with the manufacturer's recommendations. Down pipes are to be connected to the existing system or if necessary to a new soakaway with 100mm suitable pipe laid to falls of 1:100. Below ground all pipe runs are to be bedded and surrounded with 100mm minimum of pea shingle. All soakaways are to be at least 5.0m from the building and 3.5m from boundaries. Soakaways are to be at least 1.0mx1.0mx1.5m deep filled with clean hard-core to at least the incoming pipe invert level. The hard-core is to be covered with 1200g polythene and backfilled with soil. Soakaway to be min of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill with geotextile surround to prevent migration of fines. If necessary carry out a porosity test to determine design and depth of soakaway. Paved areas to be suitably drained free from storm water.
17) SUSPENDED BLOCK AND BEAM FLOOR: Remove top soil and vegetation and apply weed killer. The underside of beams are not to be less than 225mm above the top of the ground. PCC beams to be supplied and fixed to beam manufacturer's plan, layout and details (details and calculations to be sent to the Building Control Officer and approved before works commence). Minimum bearing 100mm onto DPC and load bearing walls. Provide concrete blocks to BS6073 pt.1, wet and grout all joints with 1:4 cement/sand mix. Provide double beams below non-load bearing partitions. Lay 1200g DPM/radon barrier, with 300mm laps double welted and taped at joints and service entry points using radon gas proof tape, over beam and block floor and sand layer. Lay floor insulation over DPM, 85mm Celotex GA4000 applied as a rigid material. Lay 500g separating layer over insulation and provide 65mm sand/cement screed over and prepare for floor finishes as required. Provide cross-ventilation of the under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm² per metre run of perimeter wall or 500mm² per square metre of floor area, whichever is the greater. Sleeper walls shall be of honeycombed construction or have provision for distribution of ventilation.
18) EXTERNAL CAVITY WALLS: Cavity walls to be as shown on the drawings or similar approved to achieve 0.28 w/m²k extending a minimum of 225mm below lowest damp proof course and 150mm below perimeter insulation. Insulation to be full height and carried through to join roof insulation to form a continuous or overlapping perimeter insulation. All walls constructed with stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 5628-6.1: 1996 and BS EN 845-1: 2003.
19) CAVITIES: Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non-combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.
20) CAVITY BARRIERS: 30 minute fire resistant cavity barriers to be provided at tops of walls, gable end walls and vertically at junctions with separating walls & horizontally at separating floors with cavity tray over installed according to manufacturer's details.
21) PIPES PASSING THROUGH SEPARATING WALLS: Provide adequate fire stopping where pipes pass through walls using proprietary systems including acoustic intumescent sealant, intumescent collars and fire sleeves to ensure the appropriate level of fire and sound resistance is maintained.
22) THERMAL BRIDGING: Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element, (i.e. around windows and door openings). Reasonable provision shall also be made to ensure the dwelling is constructed to minimise unwanted air leakage through the new building fabric.
23) COMMON STAIRS AND CORRIDORS: Fire Brigade to be consulted on the means of escape within the common areas of flats. Common corridors and stairs should be protected, i.e. within a 30 minute fire resisting enclosure, and should lead directly to outside. Wall and ceiling surfaces are to have the appropriate linings to inhibit surface spread of flame in accordance with BS476. Meters located within the stairway should be enclosed with a secure cupboard which is separated from the escape route with fire resisting construction. All gas services within a protected stairway must be installed in accordance with The Gas Safety (Installation and Use) Regulations 1998.

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Building Regulation Drawings
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Cambridge CB2 8BN

Notes 1 of 5

Project number	CM1967
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24) ACCESS AND FACILITIES FOR THE FIRE BRIGADE: Consultation with the local Fire Authority is required to ensure the provision is made within the site of the building to enable fire appliances to gain access to the building. This provision shall include:
Vehicle access for fire appliances
Access for firefighting personnel
The provision of fire mains within the building - not thought necessary but to be confirmed by fire brigade.
The provision of adequate water supplies
25) MEANS OF ESCAPE – (Internal planning of flat): All flats to be provided with a protected entrance hall (lobby) with half hour partitions between the hall and all room. Entrance hall to lead directly to a protected common hallway or lobby. The travel distance from the flat entrance door to the door to any habitable room not to be greater than 9m. Inner rooms are not acceptable. All doors from rooms on to the entrance hall must be FD20 rated fire doors to BS 476-22:1987 (fitted with intumescent strips rebated around sides & top of door or frame if required by BCO). Where applicable, any glazing in fire doors to be half hour fire resisting and glazing in the walls forming the escape route enclosure to have 30 minutes fire resistance and be at least 1.1m above the floor level.
26) SMOKE DETECTION: Mains operated linked smoke alarm detection system to BS EN 14604 and BS5839-6:2013 to at least a Grade D category LD3 standard to be mains powered with battery back up to be placed in the hall way of each flat with an additional interlinked heat detector at ceiling level in kitchens if required by BCO. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all levels/ storeys and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Interlinked smoke detection to be provided in the common ways to BS5839-1 as required by Building Control in accordance with Approved Document B and the Regulatory Reform (Fire Safety) Order 2005. Individual smoke detection systems in flats are not to be linked to common areas.
27) SMOKE VENTILATION IN COMMON WAYS: Provide an automatic opening smoke vent with a geometric free area of at least 1.0m² located on an external wall at the top of the stair as high as practicable, or through the roof at top floor and so the top edge is at least as high as the top of the door. Vent to be opened on detection of smoke on any storey in the stair (vents to be placed on every level if required by Building Control Officer).
28) EMERGENCY LIGHTING: Emergency Lighting to BS 5266 Pt 1 will be required in common escape routes, including stairways, Some buildings will, in addition, require emergency escape lighting in the escape route. These will include:
Large buildings with long escape routes;
Buildings with a complex layout;
Buildings with no natural or borrowed lighting along the escape route; and buildings with vulnerable occupiers or those posing a specific risk.
It is recommended that the Emergency Lighting system is tested on a monthly basis with a record of the test maintained.
29) NEW AND REPLACEMENT WINDOWS AND DOORS: All doors and windows are to be as indicated on the drawings. Windows and doors are to be properly constructed. Windows to be double glazed with argon filled gap and with a soft coat low-E glass. Window Energy Rating to be Band A or better and to achieve U-value of 1.4 W/m²K. Opaque doors to achieve U-value of 1.0 W/m²K. Semi glazed doors to achieve U-value of 1.2 W/m²K. Glazed areas to be double glazed with argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K of the current Building Regulations. Habitable rooms shall have opening sashes equivalent to 1/20tth of the floor area. All glazing in critical locations to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1:2011 and Part K of the current building regulations, i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows. All habitable rooms at first floor level and any rooms not exiting directly on to a hallway are to have opening windows giving a minimum opening area of 0.33m² and a minimum dimension of 450mm in height and width with the lower edge of opening to be between 800mm and 1100mm from the finished floor.
30) ESCAPE WINDOWS: Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. Windows to have an unobstructed openable area of 450mm high x 450mm wide, minimum 0.33m sq. The bottom of the openable area should be not more than 1100mm above the floor. The window should enable the person to reach a place free from danger from fire.
31) BACKGROUND AND PURGE VENTILATION: Background ventilation - Controllable background ventilation via trickle vents to BS EN 13141-3 within the window frame to be provided to new habitable rooms at a rate of min 5000mm²; and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm². Purge ventilation - New Windows/roof-lights to have openable area in excess of 1/20th of their floor area, if the window opens more than 30° or 1/10th of their floor area if the window opens less than 30°. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide.
32) MECHANICAL VENTILATION: All extracts be light activated and to have a 15 minute over run when lights are turned off.
EXTRACT FOR SHOWER ROOM: Provide mechanical extract ventilation to shower room ducted to external air capable of extracting at a rate of not less than 15 litres per second. Vent to be connected to light switch and to have 15 minute over run if no window in the room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.
EXTRACT TO BATHROOM: Bathroom to have mechanical vent ducted to external air to provide min 15 litres / sec extraction. Vent to be connected to light switch and to have 15 minute over run if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.
EXTRACT TO W/C: W/C to have mechanical ventilation ducted to external air with an extract rating of 15l/s operated via the light switch. Vent to have a 15min overrun if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.
EXTRACT TO UTILITY ROOM: To utility room provide mechanical ventilation ducted to external air capable of extracting at a rate of 30 litres per second. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.
EXTRACT TO KITCHEN: Kitchen to have mechanical ventilation with an extract rating of 60l/sec or 30l/sec if adjacent to hob to external air, sealed to prevent entry of moisture. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.
33) BLOCK AND BEAM FLOOR VENTILATION: Provide cross-ventilation of the under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm² per metre run of perimeter wall or 500mm² per square metre of floor area, whichever is the greater.
34) ROOF LIGHTS: Min U-value of 1.6 W/m²K. Roof-lights to be double glazed with16mm argon gap and soft low-E glass. Window Energy Rating to be Band C or better. Roof lights to be fitted in accordance with manufacturer's instructions with rafters doubled up to sides and suitable flashings etc.
35) PLASTERING: All new plastering internally is to have either a 12mm render coat or dot and dab plasterboard and 3mm plaster finish, to include all lintels and reveals. All surfaces are to be cleaned and prepared to manufacturer's specification and all to be applied to conform to BS5492.
36) EXTERNAL LINTELS: Messrs Keystone/Catnic/IG or similar approved insulated lintels, size to suit span and loading, 150mm minimum bearing solidly bedded in mortar, cavity tray fitted above lintel and weep holes with insect screen to be fitted where required.
37) INTERNAL LINTELS: Catnic, IG, concrete plank or similar approved.

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38) INTERNAL STUD PARTITIONS: 100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m³ density acoustic soundproof quilt tightly packed (e.g. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.
39) CUT ROOF DESIGN: Is to conform to good practice. Sizes are to be as stated on the drawing or in the calculations. All rafters are to be longitudinally and diagonally wind braced in accordance with the Trussed Rafter Association (data sheet 4). All wall plates 50mm x 100mm to be bedded on cement mortar and tied to wall with wall plate ties. Joists and rafters where parallel to an external wall are to be secured using 5 x 30 x 1650mm galvanised restraint straps at maximum of 2.0m centres and secured across a minimum of 3 joists/rafters. This incorporates the gable. All details are to comply with the Building Regulations inclusive of noggins to provide
40) STEELWORK: Steelwork to be minimum 5mm thick to BS 4360 (UNO S275 to BS en 10025:1993, BS en 10113:1993, BS en 10210:1994). All steelwork is to be painted with 2 coats of red oxide paint on primer. Welding of structural steelwork shall be in accordance with BS 5135. All welding to be a minimum 6mm continuous fillet weld unless noted otherwise. All works in accordance with the national structural steelwork specification for building construction 2nd edition. Bolts are to be grade 8.8 to BS 4190, minimum size 16mm diameter unless stated otherwise. Steel below ground to be painted with Epigrip C400V3 zinc phosphate primer/build coat 250 dft microns or similar and concrete cased min 75 cover.
41) ELECTRICAL INSTALLATIONS: The power and lighting circuits are to be installed in strict accordance with the current edition of IEE regulations. All lighting and power circuits are to comply with NHBC requirements. All work is to be carried out by a person qualified to do so or to be checked and a certificate signed by a person competent to do so. The certificate is to be passed to the Building Control Officer to gain a completion certificate. Energy efficient light fittings are to be fitted where possible, to at least three in four locations, mains powered and on a separate circuit. All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a competent person registered under a competent person self-certification scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.
42) INTERNAL LIGHTING: Internal energy efficient light to be fitted as calculated in the DER and in compliance with the Domestic Building Services Compliance Guide. Provide low energy light fittings not less than three per four (excluding infrequently accessed spaces used for storage, such as cupboards and wardrobes). Low energy light fittings should have lamps with a luminous efficacy greater than 45 lamp lumens per circuit-watt and a total output greater than 400 lamp lumens. Fixed internal lighting to be pin based fluorescent or compact fluorescent lamps or low energy bayonet or Edison screw base compact florescent lamps.
43) LEAD WORK AND FLASHINGS: All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.
44) HEATING: All radiators to have TRVs. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.
45) NEW GAS BOILER: Heating and hot water will be supplied via a wall mounted condensing vertical balanced flue pressurised boiler with a min SEDBUK rating of 90%. System to be fitted with thermostatic radiator valves and all necessary zone controls and boiler control interlocks. The system will be installed, commissioned and tested by a "competent person" and a certificate issued to demonstrate that the installation complies with the requirements of Part L. Carbon monoxide alarm to be positioned near boiler. Boiler flue to be installed in accordance with Approved Document J, British Gas requirements and manufactures guidance. Flues to be terminated externally with metal terminal guard and positioned a minimum of 600mm away from any openings into the building. Where the flue passes through a wall, floor or roof, enclose in a non-combustible sleeve. Where the flue is within a void provide appropriate and sufficiently sized access to allow inspection of the flue. No combustible materials to be within 50mm of the flue. Provide new metered gas supply to the dwelling. All works to comply with gas authority standards.
46) UNDERGROUND FOUL DRAINAGE: Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1: 2009.
47) INSPECTION CHAMBERS: Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.
48) ABOVE GROUND DRAINAGE: All new above ground drainage and plumbing to comply with BS EN 12056-2:2000 for sanitary pipework. All drainage to be in accordance with part H of the Building Regulations. Wastes to have 75mm deep anti vac bottle traps and rodding eyes to be provided at changes of direction.
Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)
-Wash basin - 1.7m for 32mm pipe 3m for 40mm pipe
-Bath/shower - 3m for 40mm pipe 4m for 50mm pipe
-W/c - 6m for 100mm pipe for single WC
-All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m.
-Or to 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet -is above the trap of the highest fitting.
-Waste pipes not to connect within 200mm of the WC connection. Supply hot and cold water to all fittings as appropriate.
49) AUTOMATIC AIR VALVE: Ground floor fittings from wc to be connected to new 110mm UPVC soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting and connected to underground quality drainage encased with pea gravel to a depth of 150mm.
50) SOIL AND VENT PIPE: SVP to be extended up in 110mm dia UPVC and to terminate min 900mm above any openings within 3m. Provide a long radius bend at foot of SVP. Internal soil vent pipes to be wrapped in 25mm un-faced mineral fibre and enclosed in minimum two layers of 12.5mm plasterboard (15g/m² mass per unit area) to provide adequate sound proofing. Soil and vent passing through floors to be enclosed in ducts comprising of timber framing faced with fire line plasterboard to achieve half hour fire resistance. All ducts to be fire stopped at floor levels using mineral wool quilt packing.
51) PIPEWORK THROUGH WALLS: Where pipework passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall. Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.
52) TARGET AND DWELLINGS EMISSIONS RATES: Target emissions rate (TER) to be submitted to building control in compliance with SAP 2012 and Approved Document L1A before works commence on site. To comply with Regulation 26 and Regulation 26A the dwellings emissions rate (DER) must not exceed the TER and the dwelling fabric energy efficiency (DFEE) is to be no greater than target fabric energy efficiency (TFEE).The DER, based on the buildings as constructed and incorporating any changes made during construction, and a registered Energy Performance Certificate (EPC) accompanied by a recommendation report in compliance with SAP 2012 and Regulation 29, is to be given to the owner of the building and submitted to building control, no later than 5 days after the work has been completed.
53) LIMITING THE EFFECTS OF SOLAR HEAT GAINS IN SUMMER: Reasonable provision is to be taken to limit solar gains in compliance Approved Document L1A. Excessive Solar gains to be checked using SAP 2012 and consideration given to provision of adequate daylight as detailed in BS 8206 -2 Code of Maintaining Adequate Level of Daylight.
54) PARTY WALLS: All party walls to provide a min U value of 0.20 W/m².K.
55) AIR PERMEABILITY AND PRESSURE TESTING: Reasonable provision shall be made to ensure the extension is constructed to minimise unwanted air leakage through the new building fabric. The new dwelling to be pressure tested by a specialist registered with the British Institute of Non-destructive Testing in compliance with Regulation 43 of the Building Regulations. The measured air permeability to be not worse than 10 m³/(h.m²) at 50 Pa or in compliance with the TER design limits, ensuring the DER calculated using the measured air permeability is not worse than the TER. Where the dwelling is not to be tested an assessed air permeability to the value of 15 m³/(h.m²) at 50 Pa is to be assumed for the purpose of the TER. If the required air permeability is not achieved, then remedial measures should be undertaken and a new test carried out until satisfactory performance is achieved. A copy of the test results to be sent building control no later than 7 days after the test has been carried out.
56) PROVIDING INFORMATION: Information about the fixed building services and their maintenance, including timing and temperature control settings, shall be provided to the owner of the dwelling on completion in compliance with Approved Document L1A.

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57) CONSIDERATION OF HIGH-EFFICIENCY ALTERNATIVE SYSTEMS FOR NEW BUILDINGS – REGULATION 25A: On commencement of the works, Building Control to be given documentation to confirm consideration has been given to the technical, environmental and economic feasibility of using high-efficiency alternative systems such as decentralised energy supply systems based on energy from renewable sources where available, renewable sources and heat pumps.
58) LEVEL DWELLING APPROACH: Provide a level approach to the principal entrance door no steeper than 1:20 and at least 900mm wide, with cross falls no greater than 1:40. Approach surface material to be firm and non-slip, capable of supporting the weight of a wheel chair and its user (loose material such as gravel and shingle would not be suitable).
59) ACCESSIBLE LEVEL DOOR THRESHOLDS INTO THE BUILDING: Entrance door to have an accessible level threshold provided with a weather bar (maximum height 15mm) with suitable drainage channel. Landings to have a fall of 1:40-1:60 away from the door. Principal entrance door to have a minimum 775mm clear opening between the door leaf and doorstops.
60) INTERNAL CORRIDORS AND DOOR WIDTHS: Internal passageways/corridors to be 1200mm minimum clear width and doors into all rooms to have 750mm minimum unobstructed opening width.
61) ACCESSIBLE SWITCHES, SOCKETS, and CONTROLS ETC: All electric sockets outlets, controls and switches etc. to be positioned between 450mm and 1200mm above floor level. Accessible consumer units should be fitted with a child proof cover or installed in a lockable cupboard.
62) LIFETIME HOMES: Dwelling to comply with the criteria set out for lifetime homes including:
Parking
Dwelling approach
Entrances
Internal doors and hallways
Circulation space
Entrance level living space
WC
Bathrooms
Glazing
Location of service controls
etc.
63) CIRCULATION AREA AND INTERNAL DOORWAYS: Every hall and landing to be a minimum 900mm wide. Any localised obstructions should not occur opposite or close to a doorway or at a change or direction and to be no longer than 2m in length. The corridor is not to be reduced below a minimum 750mm width at any point. Every door to have a minimum clear opening width as set out in Table 2.1 of Approved Document M and a minimum 300mm nib is to be provided to the leading edge of every door within the entrance storey.
64) SOUND PROTECTION AND TESTING: Separating walls, floors, stairs and party walls to achieve a performance standard of 45 dB (minimum values for airborne sound insulation) and 62 dB to floors and stairs (maximum values for impact sound insulation) to demonstrate compliance with Approved Document E1. Pre completion sound testing to be carried out by a suitably qualified person with appropriate third party accreditation (either UKAS accreditation or be a member of the Association of Noise Consultants Registration Scheme). Test to be carried out once the dwelling is complete but before carpeting and a copy of the test results given to Building Control. If any elements were to fail the sound test, remedial works must be undertaken before retesting to the satisfaction of the Building Control Officer. Where flanking walls or floors are continuous across separating walls specialist advice is to be sought to ensure additional treatments are provided to control flanking transmission.
65) WATER EFFICIENCY: The estimated water consumption not to exceed 125 litres per person per day in accordance with Approved Document G2 (or 110L per-person if required by the planning conditions) Water Efficiency to be calculated using the 'Water Efficiency Calculator for New Dwellings' or from the list of fitting from the 'Table of fittings' in ADG to comply with part G. The results submitted to building control before works commence on site.
Water calculation to be in compliance with Code for Sustainable Home Level 3/4 as stipulated by the local Planning Authority. Example calculation below;
-WC 5/3 (dual flush)
-Taps (excluding kitchen taps) 4
-Baths 180
-Shower 8
-Kitchen sink taps 6
-Washing machine 8.17 (not supplied)
-Dishwasher 1.25 (not supplied)
-Water recycling 0 (not supplied)
-Predicted per capita consumption (Code) 103.28
66) COLD WATER SUPPLY: There must be a suitable installation for the provision of a wholesome water supply in accordance with Approved Document G. Cold water supply to be provided to washbasins, bidets, baths, WCs, showers, any place when drinking water is drawn off and to any sink provided in areas where food is prepared. Supply of cold water to comply with section 67 of the water industry act 1991 and the Water Supply Regulations 2000.
67) HOT WATER SUPPLY: All bathrooms, washbasins, bidet, baths and showers to be provided with adequate hot and cold water supply in accordance with Approved Document G3. Washbasin with hot and cold water supply to be provided in or adjacent to all rooms containing a WC. A sink with hot and cold water also to be provided to any area where food is being prepared.
68) CONTROL OF WATER TEMPERATURE: The installation of the hot water supply to comply with Approved Document G3. All baths and showers are to be fitted with an inline thermostatic mixing valve to ensure that the temperature of the water delivered to the bath is limited to 48℃.
69) HOT WATER STORAGE SYSTEMS: Hot water storage systems should be designed and installed in accordance with BS 12897 2006. Hot water vessels, cisterns etc and must be adequately supported. Any hot water storage system including any cistern or other vessel shall incorporate precautions to ensure suitable pressure relief and that any discharge from any safety devices is safely conveyed to where it is visible but will not cause harm to persons in or about the building. Precautions to be in place to prevent stored water stored exceeding 100℃. Hot water vessels to be fitted with a non self-resetting energy cut out to instantly disconnect the power supply. Outlets from domestic hot water storage vessels to be fitted with an in line valve to prevent water temperatures exceeding 60℃. All pipes carrying hot water to be insulated where they pass through unheated spaces. Hot water storage system to be provided with suitable warning labels. Relevent certificates for the heating system i.e. Benchmark certificate, and commissioning certificates for fixed building services are to be given to the building owner and a copy provided to Building Control on completion.

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Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Notes 4 of 5

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

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70) APPROVED DOCUMENT R: Physical infrastructure for high-speed electronic communications networks. Building to be equipped with high-speed-ready in-building physical infrastructure, up to a network termination point for high-speed electronic communications networks. So that copper or fibre-optic cables or wireless devices capable of delivering broadband speeds greater than 30 Mbps can be installed. A suitable position for at least one network termination point should be provided for dwelling as well as a suitable access point. If more than one dwelling must have a common access point for high-speed electronic communications networks

71) PART Q – SECURITY: Confirmation required that all doors and windows are to be installed in accordance with the advice stated in PAS24:2012 or alternatively comply with the requirements set out in Approved Document Q – Appendix B. Doors to be manufactured to a design that has been shown by test to meet the requirements of British Standard publication PAS PAS24:2012 or designed and manufactured in accordance with Appendix B or Approved Document Q.

For example:

-Doors to be fitted with a viewer, door chain and mechanically fixed as the manufacturer's installation guide.
-The door set should be manufactured from solid or laminated timber with a minimum density of 600kg/m3.
-Any panel in the door must be a min15mm thick and suitably secured in place.
-The smaller dimension of the panel must be no larger than 230mm in either width or height.
-Main front doors should be fitted with multipoint locking system.

Windows:

-Any part of a window or doorway, which is within 2m vertically of an accessible level surface such as the ground or basement level, or an access balcony, or windows within 2m vertically of a flat or sloping roof (with a pitch of less than 30 degrees) that is within 3.5m of ground level should be secure windows in accordance with paragraphs 2.2 and 2.3 of Approved Document Q.
-Windows to be made to a design that has been shown by test to meet the security requirements of British Standards publication PAS 24:2012
-Frames to be mechanically fixed to the structure of the building in accordance with manufacturer's installation instructions.

72) GLASS BALUSTRADING: All balcony balustrades to be min 1.1m in height. Balustrades to be in toughened glass in accordance with Part K of the Building Regulations and designed to resist the horizontal force given in BS 6180:2011. No openings in any balustrading should allow the passage of a 100mm sphere and children should not readily be able to climb the guarding. Take care not to end up with a step in front of the railings which could reduce the guarding requirement.

73) FIXED EXTERNAL LIGHTING: External light fittings to be fitted as calculated in the DER and in compliance with the Domestic Building Services Compliance Guide.

Light fitting to be either:

A). lamp capacity not greater than 100 lamp-watts per light fitting and provided with automatic movement detecting devices (PIR) and automatic daylight sensors ensuring lights shut off automatically when not required.

Or

B). lamp efficacy greater than 45 lumens per circuit-watt; fitted with manual controls and automatic day light cut-off sensors so that lights switch off when daylight is sufficient.

74) EXTERNAL SURFACE WATER DRAINAGE: Drainage of paving areas to be carried out in accordance with BS 6367:1983 and Approved Document H. Hard surfaces around the building should be provided with a proprietary non slip permeable surface laid to manufacturer's details and in compliance with BS6717, to allow adequate drainage. or provided with a non slip surface and cross fall of 1:40 – 1:60 draining away from the building (for a minimum of 500mm) to a suitable soakaway. Paths, driveways and other narrow areas of paving should be free draining away from any buildings to a pervious area such as grasslands or to a suitable soakaway.

75) SOLID WASTE STORAGE (REFUSE): Bin storage to be in accordance with BS 5906:2005 Code of Practice for waste management in buildings to ensure that there is suitable spaces/enclosures for bins. Adequate provision shall be made for the collection of waste as required by the Waste Collection Authority. Each new dwelling is to be provided with an area of 1.2m x1.2m for refuse storage containers. Separate containers are to be provided for recycling and non-recycling household waste. Waste collections that are less than weekly may require increased capacity as agreed with the Waste Collection Authority. If a communal solid waste storage facility is used, storage to have a combined capacity of 0.25m³ per dwelling or as agreed with the Waste Collection Authority. Refuse storage areas to be sited within 25m of the waste collection point or as specified by the Waste Collection Authority, and placed so that the householder does not need to carry refuge more than 30m. Refuse storage areas are to be positioned away from any windows and ventilators and are not to impede access into the dwelling.

76) PARTY WALL ACT:

The owner should they need to do so under the requirements of the Party Wall Act 1996 has a duty to serve a Party Structure Notice on any adjoining owner if the building work involves works on or to an existing Party Wall including:

-Support of beam
-Insertion of DPC through wall
-Raising of wall or cutting of projections
-Demolition and rebuilding
-Underpinning
-Insertion of lead flashings
-Excavations within 3 metres of an existing structure where the new foundations will go deeper than adjoining foundations, or within 6 metres -of an existing structure where the new foundations are within a 45 degree line of the adjoining foundations.

A Party wall agreement is to be in place prior to start of works on site.

77) CARBON MONOXOIDE ALARMS:

A CO2 alarm is required in all rooms containing solid fuel appliances including Gas Boilers. It must be sited either on the ceiling at 300mm from a wall or on the wall at least 150mm from the ceiling. The detector should be between 1m and 3m horizontally from the appliance.

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Building Regulation Drawings
6 No Proposed Flats
21-25 Fitzwilliam Road
Cambridge CB2 8BN

Notes 5 of 5

Project number	CM1967
Date	19-06-2020
Drawn by	CRB
Checked by	ML

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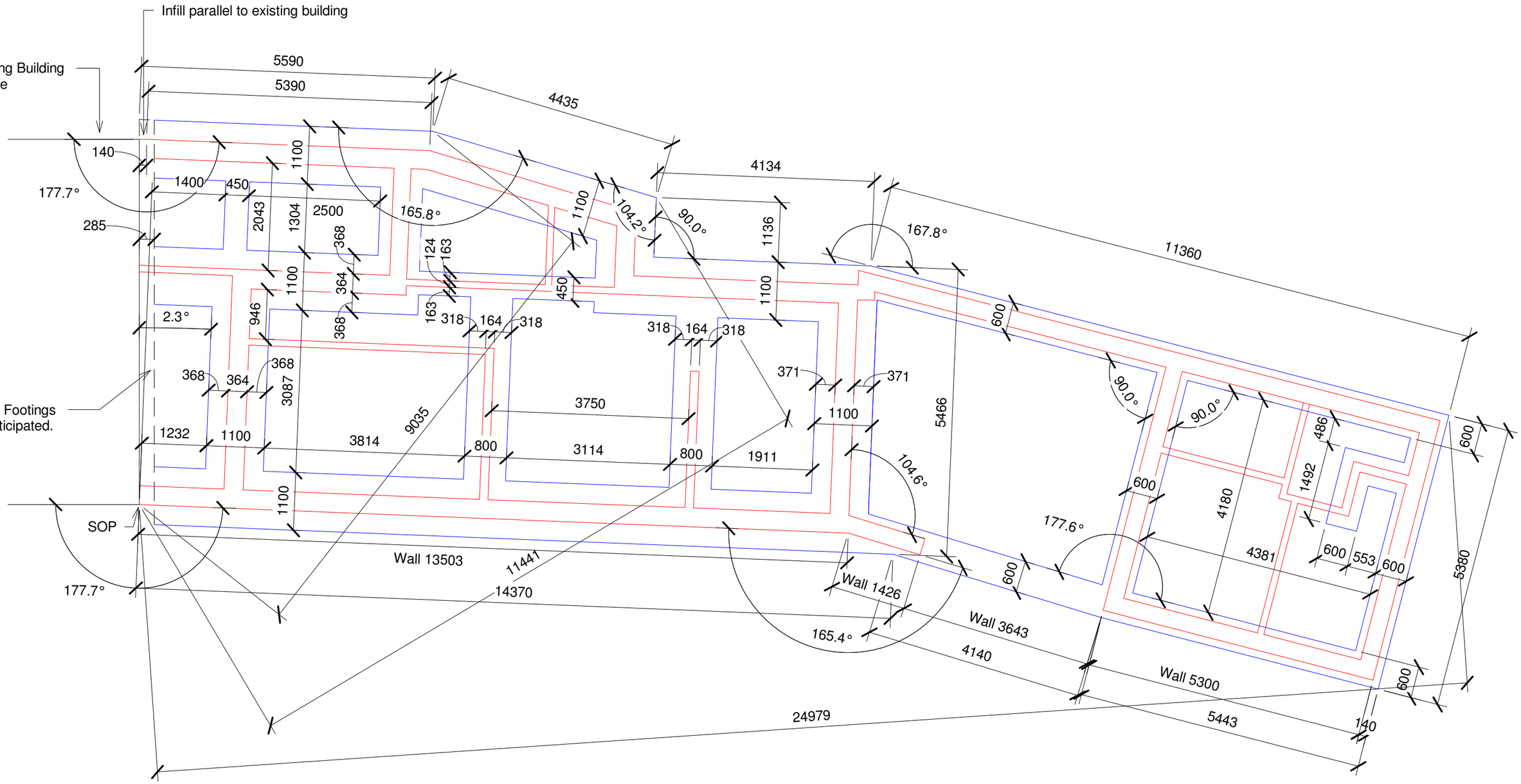

1 2.3 Degree Setting

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No.	Description	Date

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Building Regulation Drawings
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21-25 Fitzwilliam Road
Cambridge CB2 8BN

Ground Wall and Footing Setting

Project number	CM1967
Date	02-11-2020
Drawn by	CRB
Checked by	ML

110

Scale @ A3 1 : 75

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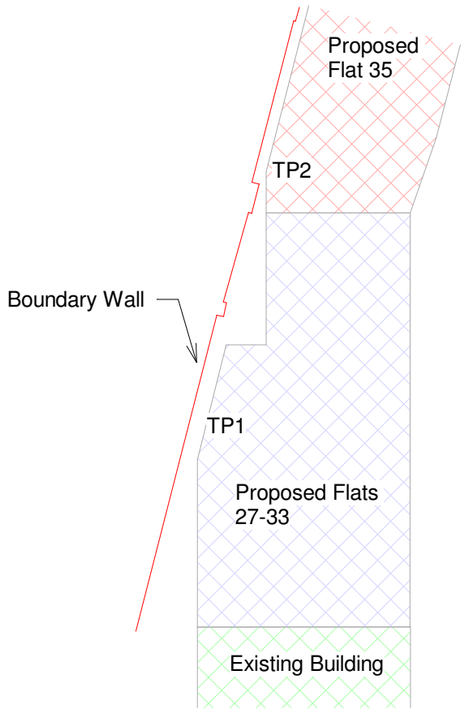
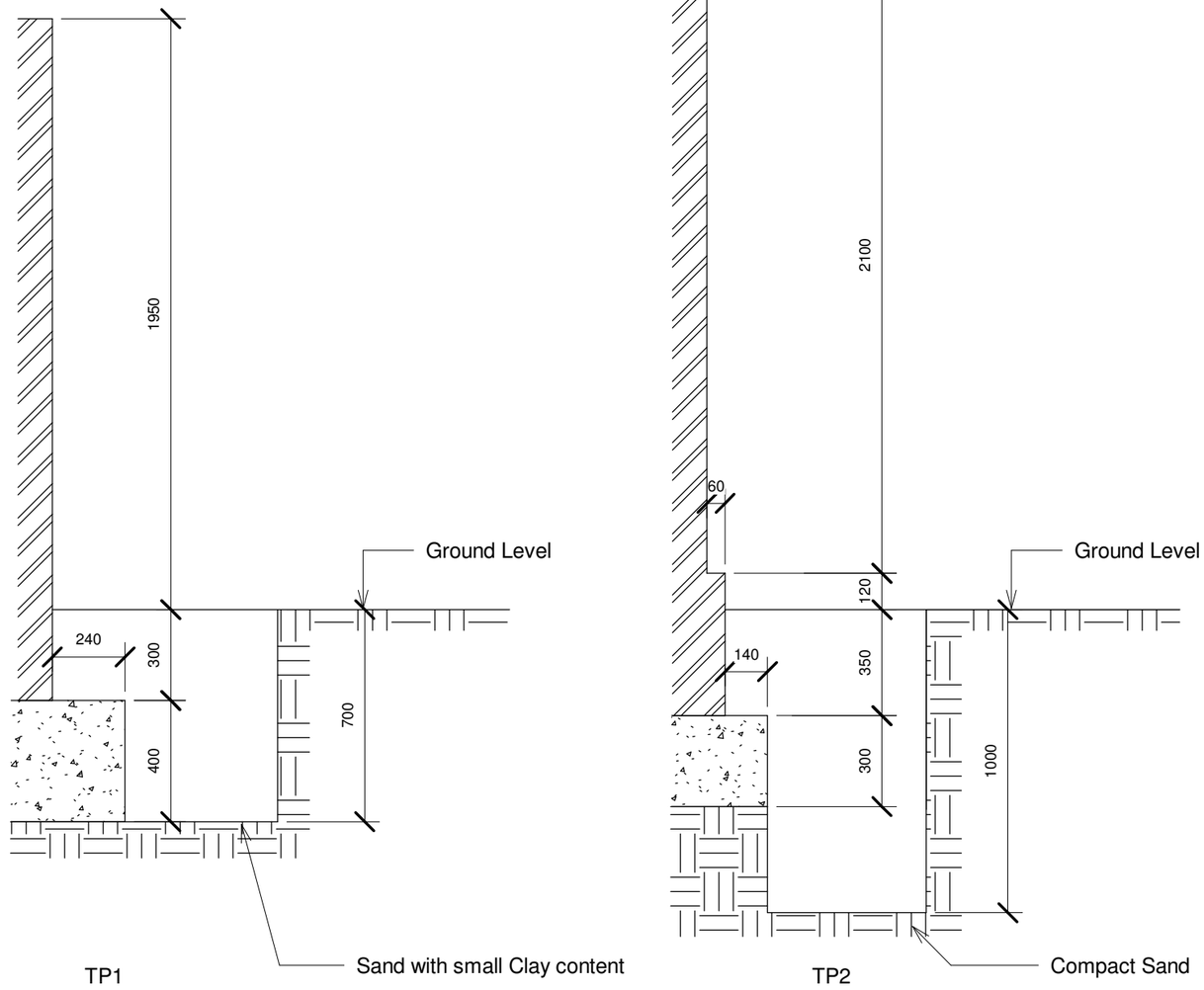


1 Trial Pits Locations

1 : 200



2 Trial Pit Details

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Trial Pits Boundary Wall

Project number	CM1967
Date	19-06-2020
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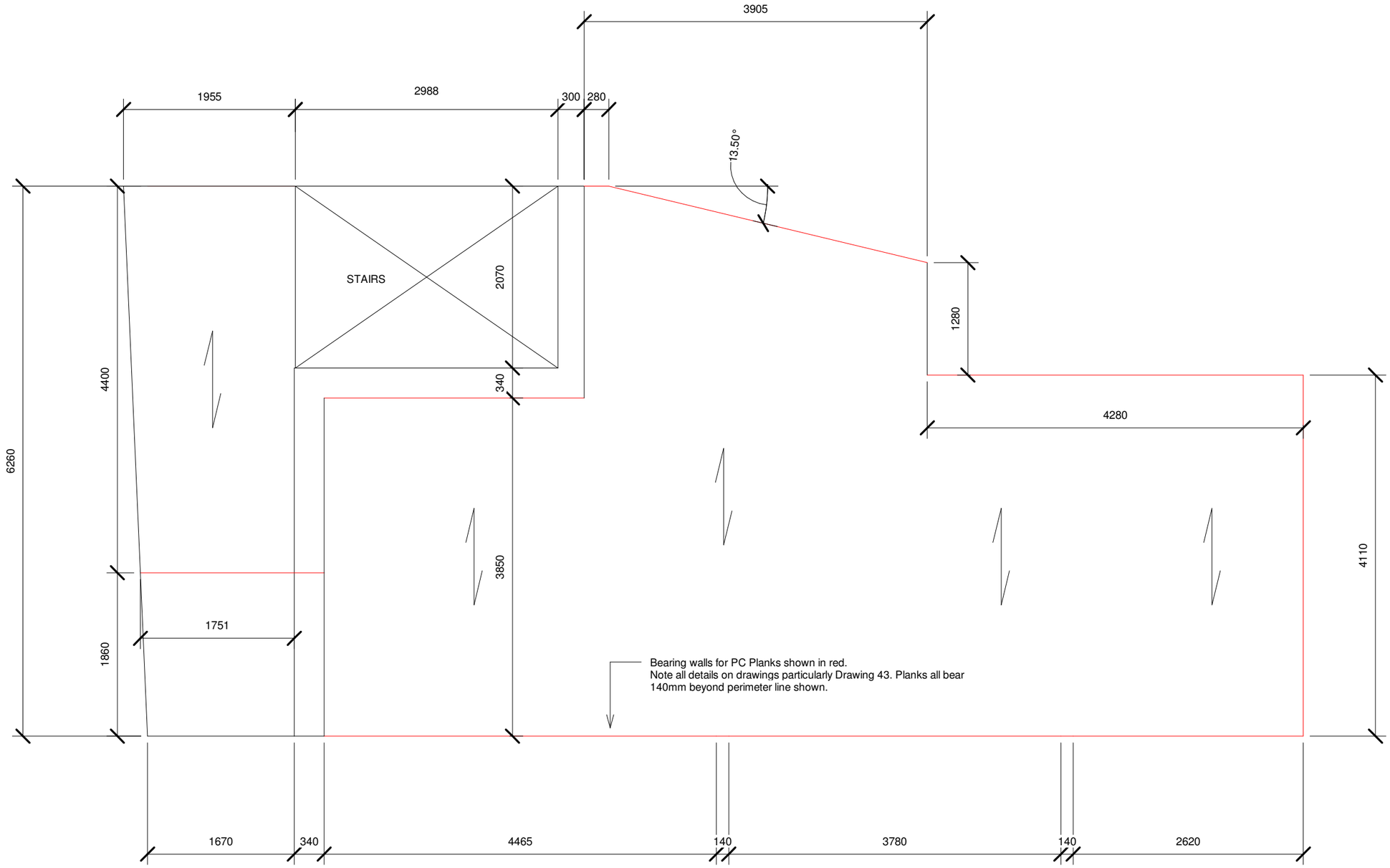
Scale @ A3 As indicated

12/03/2021 12:38:40



1 As Built for PC Planks.

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As Built Walls for PC Planks

Project number	CM1967
Date	24-02-2021
Drawn by	CRB
Checked by	ML

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