BUTLER
HEGARTY
ARCHITECTS

16 St Peter's Road

Condition Discharge

REFERING TO APPLICATION 22/1754/HOT
DECISION NOTICE 1 SEPTEMBER 2022

DETAILED APPLICATION:
U0136965

Method statement
Prior to the commencement of development, a detailed method statement shall be submitted to and approved in writing by the Local Planning Authority. The method statement shall include details of how the new openings in the side wall of the listed building will be formed, the new opening in the internal wall of the same room, and how original features such as the skirting boards, cornicing, chimney breast and fireplace will be fully protected. This should also set out details of how existing openings will be enlarged, namely the window in the side wall which will be formed into a door.
Development shall be carried out in accordance with the approved details and retained as such thereafter.

REASON
In order to safeguard the special architectural or historic interest of the grade II listed building and character of the Conservation Area.

Condition Discharge Statement:
The required detailed method statement is in two parts: the structural impact assessment provided by the structural engineers, and the drawing Sk908 which illustrates and describes the method of working to form the openings in the wall. The drawings: Sk908, Sk147, Sk148, Sk149 and Sk150 show how the new openings in the side wall of the listed building will be formed and how the opening will be lined.

The opening in the internal wall in the Dining Room GR10 forming new door nDG04 is an existing opening, which has been filled with stud and plasterboard. The existing structural opening will be retained and the new door, lining door, and architrave as shown on drawing Sk133 and Sk134 will be installed in the existing opening.

Original features such as the skirting boards, cornicing, chimney breast, and fireplace will be fully protected during the works. The creation of the opening in the walls will require adjustment to the skirting length which will be carefully removed, salvaged, and re-fixed.

The revised proposals are to retain the existing window GW14 in its entirety including the box frame, sashes, and existing architraves, and adjusted by adding a film to the existing glass (this is included in the minor amendment to the listed building consent application ref. PP-13578751 made simultaneously with this discharge of condition application).

Condition Discharge Documents:

Please refer to Elite Designers:

- STRUCTURAL IMPACT ASSESSMENT_2023-166

Please refer to BHA drawings:

- Sk908A_Method Statement for Southeast Side Elevation External Wall Openings
- Sk147_Details of Dining Room Openings to New Main Kitchen Extension (Sheet 1of4)
- Sk148_Details of Dining Room Openings to New Main Kitchen Extension (Sheet 2of4)
- Sk149_Details of Dining Room Openings to New Main Kitchen Extension (Sheet 3of4)
- Sk150_Details of Dining Room Openings to New Main Kitchen Extension (Sheet 4of4)
- Sk133_Proposed Door nDG04 Plan Section & Elevation
- Sk134_Proposed Door nDG04 Plan & Section Details

STRUCTURAL IMPACT ASSESSMENT

Project information

Job No: 2023-166

Client: Mr John Oldcorn

Address: 16 St Peter's Road, Twickenham TW1 1QX

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1.0 Introduction:

Elite Designers are conducting the proposed structural design works at the above property in line with the currently approved planning. It is proposed to create a new opening in the side wall of the listed building and erection single storey side extension to the property. In engineering terms, this is a straightforward process.

This document comprises a comprehensive structural impact statement regarding the proposed installation of the new openings in the side wall of main building and new raft foundation for the house extension to the listed building located at 16 St Peter's Road, Twickenham TW1 1QX.

As a structural engineers with expertise in historic preservation, we have thoroughly assessed the potential structural impact of this modification and would like to present our findings. Please note that this statement focuses solely on structural matters and does not comment on any other non-structural works that may or may not be carried out on the building.

2.0 Description of the existing structure:

The construction of the existing building is formed of concrete walls with traditional timber joist floors and timber roof construction. The floor joists span onto the internal and external concrete walls that transfer the loads down to foundation level.

Based on our site assessment the garage appears to be an addition to the main house rather than an integral part of it hence the stability of the main house will not be affected by demolition of the garage and rebuilding it as an extension to the house.

It is important to note that the proposed installation of the new wall openings and raft foundations in and next to the listed building will consider the existing main building construction. The new elements do not compromise the integrity or stability of the building. Any necessary reinforcements or modifications will be implemented to accommodate the new wall openings and foundations while maintaining the structural strength of the existing structure.

Preservation of the historic fabric and architectural character will be prioritized throughout the installation process. Skilled craftsmen with expertise in working with listed structures will be involved to ensure that the necessary precautions are taken to protect the integrity and historical significance of the building.

By considering the existing wall structure and implementing appropriate measures, the proposed installation of the new openings can be successfully integrated into the side wall of the listed building while respecting its structural heritage.

3.0 Evaluation of Existing Structure:

We have conducted a thorough evaluation of the existing structure to assess its compatibility with the proposed structural works. This evaluation includes a review of condition of the supporting elements, and the impact of proposed works on the overall stability of the structure.

3.1 Potential Impact on Existing Structure:

The creation of new wall openings will primarily involve strengthening the existing wall in area directly adjacent to the opening where the opening will

be positioned. This targeted strengthening will ensure that the immediate area around the new opening has sufficient structural support to accommodate the additional load imposed by the new installation.
The proposed installation will not require any significant alterations or reinforcements to the surrounding elements. The timber floor, internal walls, and other components of the building structure will remain intact and unaffected by the creation of the new openings. Therefore, the overall historic fabric and architectural integrity of the building will be preserved.
To ensure the successful integration of the new elements without compromising the structural stability or historic significance, the installation process will be carried out by skilled professionals experienced in working with concrete structures and historic preservation.

3.2 Compliance with Safety Regulations and Building Codes

The proposed project will fully comply with all relevant safety regulations and building codes. Appropriate measures will be taken to ensure the safety of workers, visitors, and the surrounding areas during the construction period. This includes adherence to established safety guidelines, proper scaffolding, personal protective equipment, and safe working practices.

HEALTH & SAFETY REQUIREMENTS AND NOTES

A. The Health and Safety Regulations has been amended in April 2015, which places more onus on residential clients procuring building works, more similar to that which has long existed in the commercial building sector.
B. The clients / property owners have various duties including the appointment of a Principial Designer (normally the Architect) and a Principal Contractor (the builder) to construct the works in a safe manner. Please speak to your Architects and refer to this web link: http://www.hse.gov.uk/pubns/indg411.pdf for detail.
C. Please note Elite Designers DO NOT provided the role of Principal Designer. Please refer to Architects in this regard.
D. The Contractor is responsible for the stability of the existing structure and all retained earth works, both on the site and on adjoining sites and must take all necessary precautions to safeguard their stability. All temporary works and the stability of the works in general during construction is the responsibility of the Contractor.
E. The Contractor is to obtain relevant C.O.S.H.H. information with regards to the materials he proposes to use in the works and is to ensure that all operatives are aware of the requirements stated in the C.O.S.H.H. regulations
F. The Contractor must pay particular attention to health and safety matters and methods of working. The Contractor is to decide upon the sequence of working and must always use best practice with particular care when working at height and below ground, when dismantling, demolishing and installing temporary support for inserting new elements to support existing structure.
G. The contractor should advise the client and consultant team if they become aware of any particular health and safety concerns or if they discover any deleterious materials (i.e. such as asbestos etc.) We are not experts in matters such as deleterious materials and are not employed to advise.
H. ED are not employed by the client to provide contract administration or general supervision and may not be aware of the works and general progress on site. It is essential that the contractor alert both the client

and ED if any unforeseen elements or material design variations arise, leading to any changes to the structural drawings/specifications/scope of work.

I. It is important that the Contractor alerts the client and design team if there are any trades or skills required from the drawings and other contract documents, that are not within the immediate expertise of the Contractor.

3.3 Schedule of works / Method of construction:

This method statement is intended as a general guide and should be adapted and customized to the specific requirements and conditions of the project.

3.3.1 Pre-Construction Preparations:

- Obtain the necessary permits and approvals from the relevant authorities before commencing the construction activities.
- Conduct a detailed survey of the existing wall structure to accurately identify the location and dimensions of the new openings. This will guide the subsequent steps of the construction process.
- Prepare a detailed plan and sequence of work, ensuring that all necessary materials, tools, and equipment are available before starting the construction activities.
- As part of the pre-construction process, the contractor will take necessary precautions to secure the area of the roof light installation and ensure that weather conditions do not damage the existing roof structure.

The following measures will be implemented:

- Securing the Area:
  The contractor will cordon off the area surrounding the new structural elements installation to restrict access and create a safe working zone. This will prevent unauthorized personnel from entering the area and minimize the risk of accidents or damage to the roof structure.

- Temporary Covering:
  Once the new openings inside wall are created, the contractor will ensure that the exposed area is adequately protected. This may involve temporarily covering the opening with a suitable temporary material or boarding to prevent water ingress or damage to the internal floor structure.

3.3.2 Health and Safety:

- Prioritize the health and safety of all personnel involved in the construction process. Provide appropriate personal protective equipment (PPE) and ensure its proper use.
- Erect suitable scaffolding or working platforms to provide safe access to the work area. Regularly inspect and maintain the scaffolding to ensure its stability and integrity throughout the construction process.
- Identify and assess potential hazards associated with cutting existing rafters, such as falling debris or exposure to sharp edges. Implement

control measures to mitigate these risks and ensure a safe working environment.
- Adhere to all relevant health and safety regulations, codes of practice, and guidelines during the construction process.

3.3.3 Construction Procedure: New Wall Openings:

Installation procedure outlined in points below and in attached document:
'Sk908_Method Statement for Southeast Side Elevation External Wall Openings'

- Mark the exact location and dimensions of the new openings on the existing side wall, based on the survey conducted during the pre-construction phase.
- Erect temporary support structures, if necessary, to provide additional support to the existing floor structure during the cutting and modification process.
- Cut the existing wall at the predetermined positions to create an opening for the new openings. Use appropriate cutting tools and techniques to ensure clean and accurate cuts, minimizing any damage to the surrounding elements.
- Install new structural elements around newly created opening, such as additional steel angles. These new elements should be carefully integrated with the existing wall structure to ensure structural stability and compatibility.
- Securely fix and connect the new elements to the existing wall structure using suitable fasteners or connectors, ensuring proper load transfer and continuity of the load path.
- Install the new windows into the prepared opening, following the manufacturer's instructions and recommendations. Ensure that the installation is watertight and properly sealed to prevent any water ingress.
- Conduct regular inspections and quality checks throughout the construction process to verify the structural integrity and compliance with the design specifications.

3.3.4 Construction Procedure: New Raft Foundations:

- Excavate the area following the approved foundation layout and dimensions.
- Ensure the excavation is clean and free from debris, with the bottom levelled and compacted as per engineering specifications.
- Install any required formwork for the foundation, ensuring it is properly supported and secured.
- Place a layer of blinding concrete at the base of the excavation to provide a level and stable surface for the foundation.
- Transport the concrete to the site using appropriate equipment and pour it into the foundation formwork.
- Monitor the pouring process to avoid overpouring or spillage
- Protect the foundation from adverse weather conditions such as extreme heat, rain, or frost during the initial curing period.
- Once the foundation has achieved sufficient strength, backfill the excavated area with suitable material in layers, compacting each layer to the specified density.

3.3.5 Completion:

- Upon completion of the construction activities, conduct a thorough inspection of the newly formed elements and the surrounding structure to ensure compliance with the design requirements and relevant regulations.
- Make any necessary adjustments to ensure the functionality and aesthetic integration of the new elements.
- Remove all construction debris and waste from the work area, leaving the site in a clean and safe condition.
- Document all construction activities, including any modifications made to the existing structure, as part of the project record for future reference.

4.0 Conclusion:

In conclusion, the formation of the new opening and foundations will have minimal to negligible impact on the existing or surrounding structure of the main building.
The load path within the wall structure will remain unchanged, and no additional load will be added to the existing foundations. The installation process will prioritize the preservation of the historic fabric and architectural integrity of the building.

It is essential to appreciate that certain elements of the house are of significant age, and performance expectations should be adjusted accordingly. As with any historic structure, minor defects may arise over time, and addressing them can be integrated into routine maintenance procedures.

By adhering to these guidelines, the preservation of the historic fabric and character of the building will be prioritized while effectively addressing any necessary repairs or modifications that may arise during the wall re-decorating.

Kind Regards

Prepared by:

Bart Kopyto

Structural Engineer at Elite Designers

Checked by:

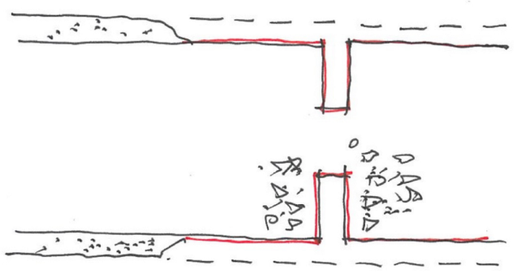
Nigel Reynolds

Director at Elite Designers

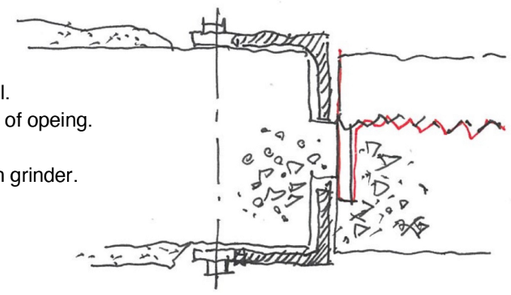
5.0 Appendix:

Sk908_Method Statement for Southeast Side Elevation External Wall Openings

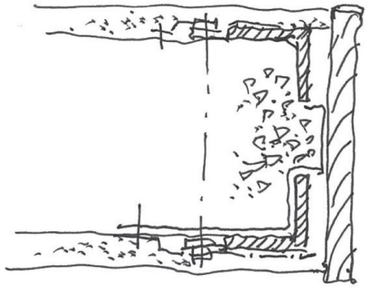
Stage One
Hack off render either side of wall.
Pilot hole in each corner to locate opening.
Cut slots with grider either side of of wall
approx 10mm wide 100 deep.



Stage Two
Insert 100x 100 angles with lugs either side of wall.
Fixing bolts bewteen angles set 150mm from face of opeing.
Finalise install angle frame to top and bottom.
Cuts out concrete to one side and cut through with grider.



Stage Three
Remove rest of concrete and complete opening.
Site weld angel together at each corner
to steelwork complete box.
Install opening lining timbers and re-render wall
on expanded metal lathing.



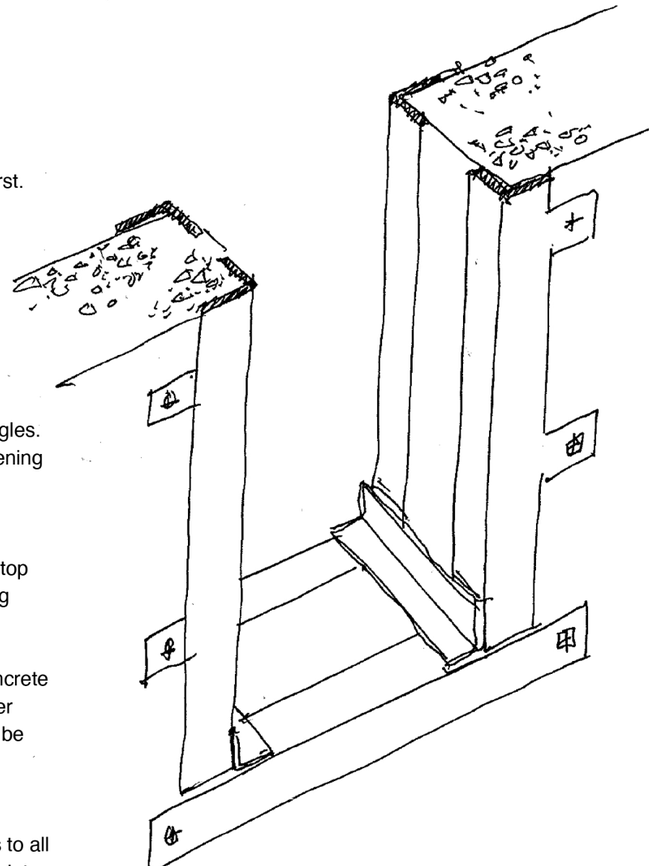
Angles inserted into wall first.

Bolt through to connect angles.
Set minimum 150 from opening
edge

Cut and insert bottom and top
angles to complete opening

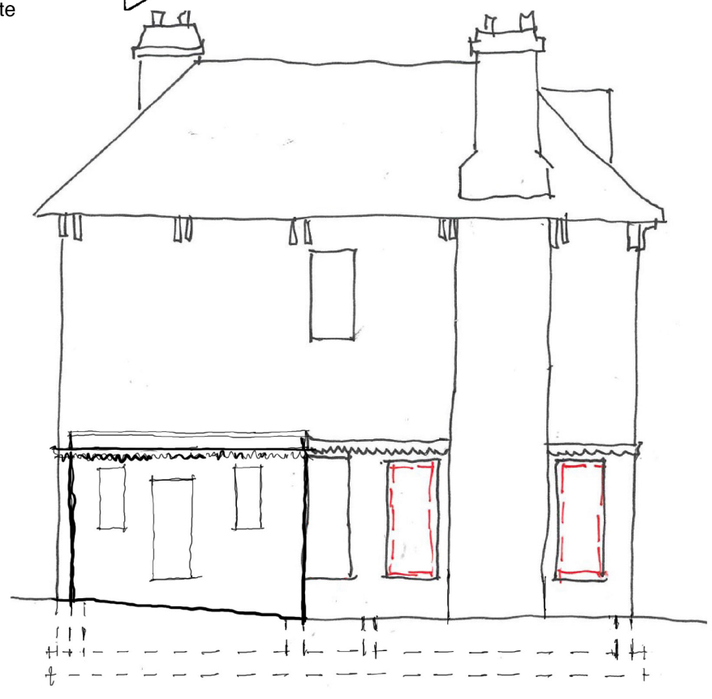
Hack away one side of concrete
and cut through with grinder
middle of concrete area to be
removed

Insert and site weld angles to all
corners of opening to complete
box



Elevation showing plane of
concrete wall with Hole

New openings shown in red



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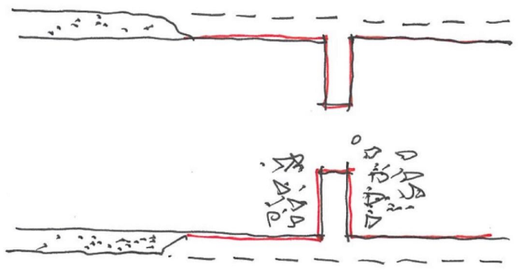
16 St. Peters Road
Title: Method Statement for Southeast Side Elevation
External Wall Openings
Drawing No: 0122823-**Sk908** Scale nts @ A3

Stage One
Mark the proposed opening on the concrete wall using chalk or other non-permanent markers.

Use a diamond-blade concrete saw for precision and minimal vibration.

Wet cutting is recommended to control dust and minimize the impact on the surrounding environment.

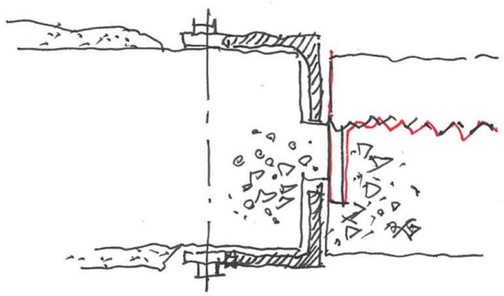
Hack off render either side of wall.
Pilot hole in each corner to locate opening. Cut slots with grinder either side of of wall approx 10mm wide 100 deep.



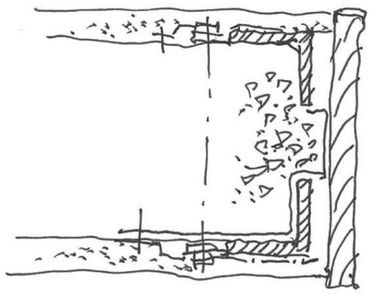
Stage Two
Insert *EA100x8 L-angles* with lugs either side of wall.

Fixing bolts bewteen angles set 150mm from face of opeing. Finalise install angle frame to top and bottom.

Cuts out concrete to one side and cut through with grinder.



Stage Three
Remove rest of concrete and complete opening.
Site weld angel together at each corner to steelwork complete box.
Install opening lining timbers and re-render wall on expanded metal lathing.

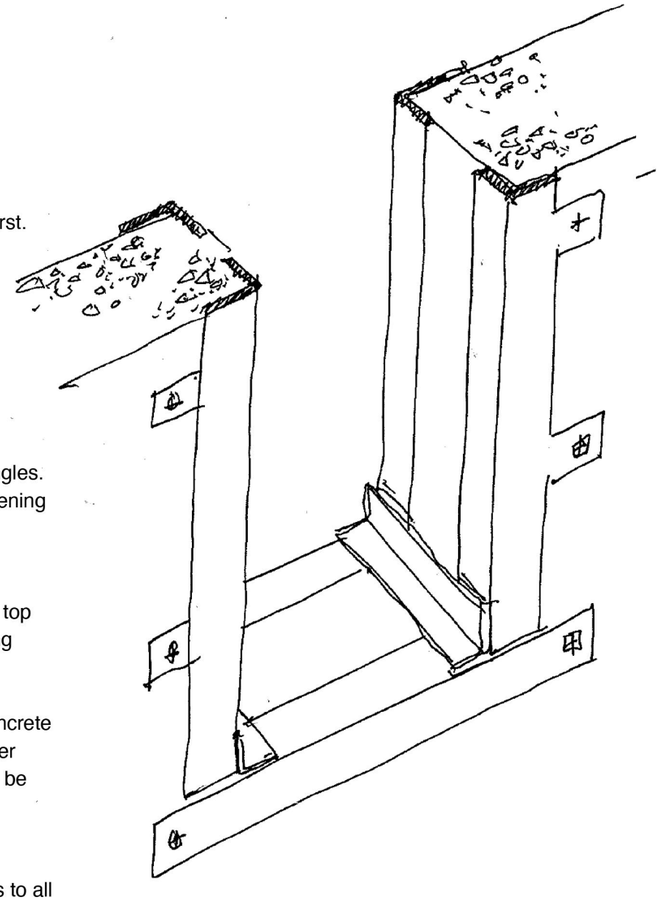


Angles inserted into wall first.

Bolt through to connect angles. Set minimum 150 from opening edge

Cut and insert bottom and top angles to complete opening

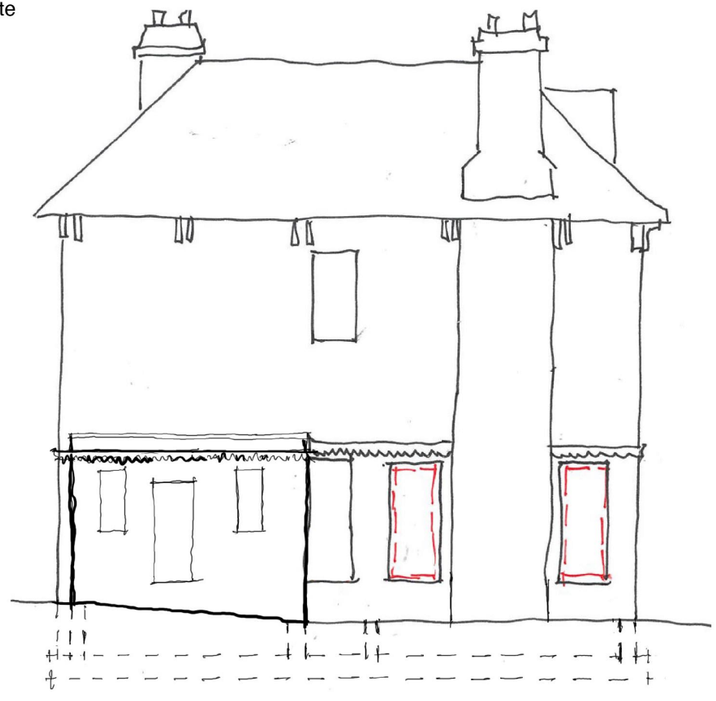
Hack away one side of concrete and cut through with grinder middle of concrete area to be removed



Insert and site weld angles to all corners of opening to complete box

Elevation showing plane of concrete wall with Hole

New openings shown in red



Rev A.	Amended to note 15/03/24 Elite Designers Structural Engineers Comments (added in italics)	**Mar 24**

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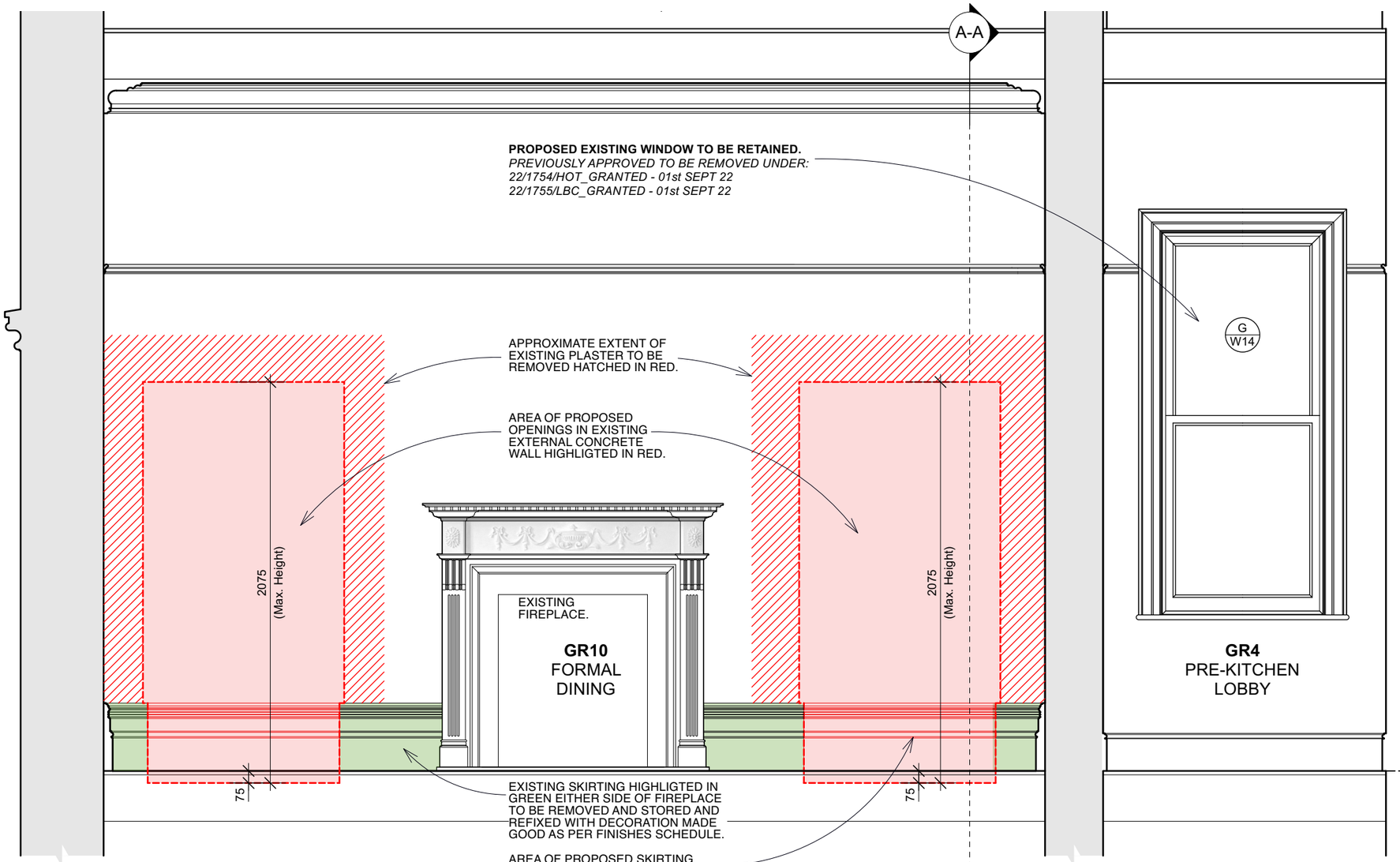
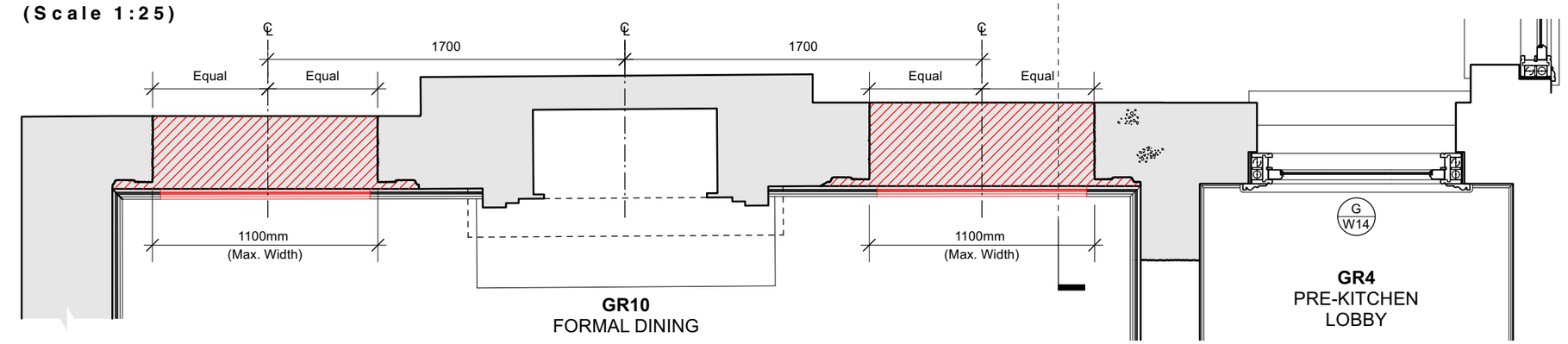
16 St. Peters Road
Title: Method Statement for Southeast Side Elevation External Wall Openings
Drawing No: 0122823-**Sk908A** Scale nts @ A3

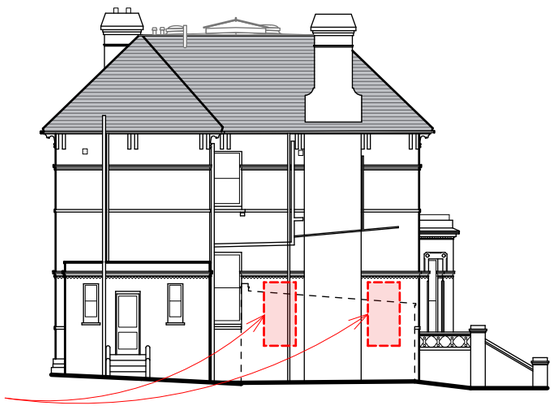


02. EXISTING ELEVATION
(Scale 1:25)

03. SECTION A-A
(Scale 1:25)



01. EXISTING PART PLAN
(Scale 1:25)



EXISTING SIDE ELEVATION WITH EXISTING GARAGE REMOVED FOR CLARITY TO REVEAL LOCATION OF PROPOSED NEW OPENINGS HIGHLIGHTED IN RED.

Please refer to Elite Designers:
STRUCTURAL IMPACT ASSESSMENT_2023-166
Please refer to BHA drawings:
Sk908_Method Statement for Southeast Side Elevation External Wall Openings

DO NOT SCALE

0 500mm 2.5m Scale 1:25

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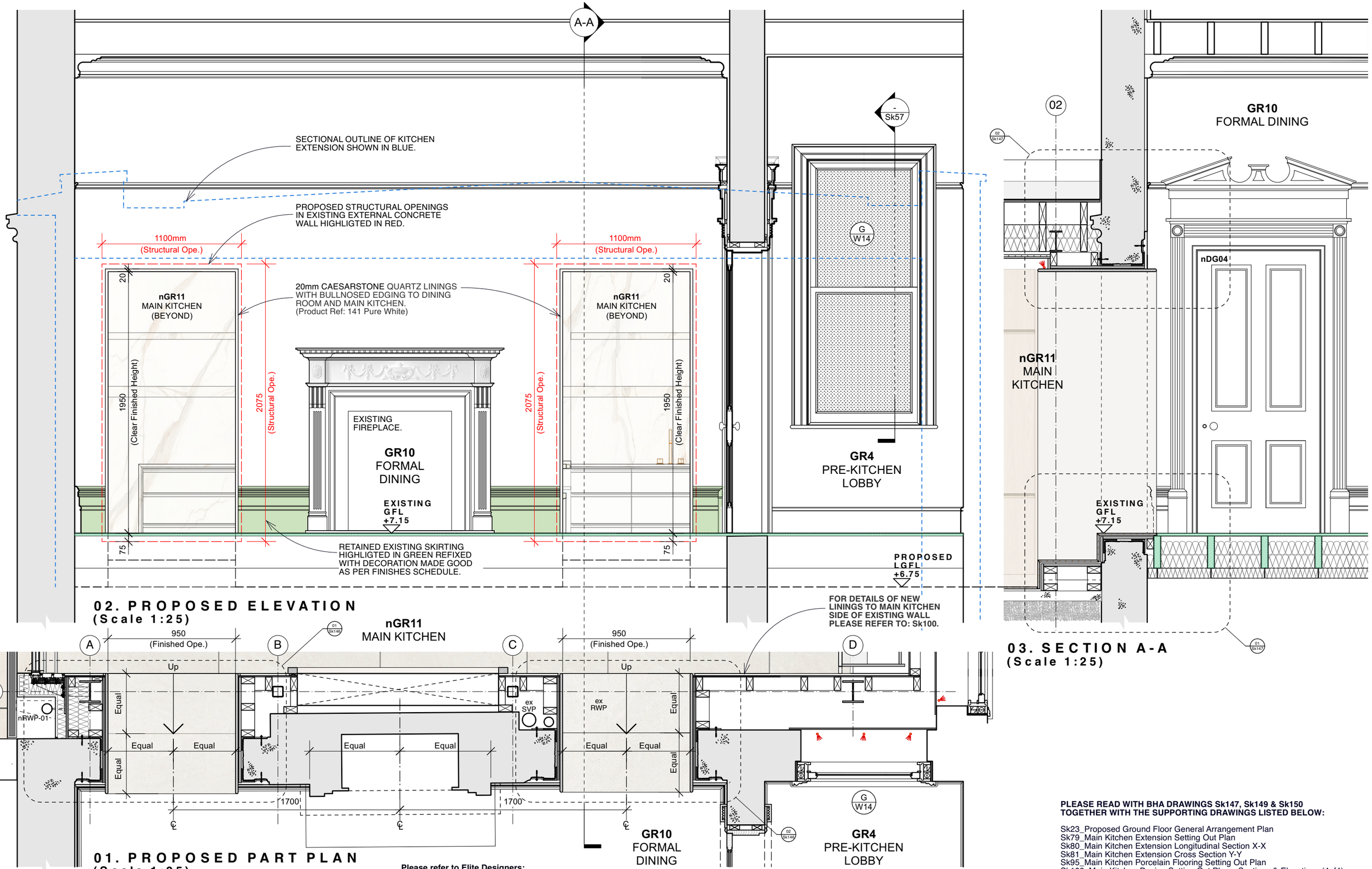
16 St. Peters Road
Title: Details of Openings in Existing Dining Room
External Wall to Kitchen Extension (Sheet 1of4)
Drawing No: 0122823-Sk147 Scale 1:25 @ A3



PLEASE READ WITH BHA DRAWINGS Sk147, Sk149 & Sk150 TOGETHER WITH THE SUPPORTING DRAWINGS LISTED BELOW:

Sk23_Proposed Ground Floor General Arrangement Plan
Sk79_Main Kitchen Extension Setting Out Plan
Sk80_Main Kitchen Extension Longitudinal Section X-X
Sk81_Main Kitchen Extension Cross Section Y-Y
Sk95_Main Kitchen Porcelain Flooring Setting Out Plan
Sk100_Main Kitchen Design Setting Out Plans, Sections & Elevations (4of4)

Please refer to Elite Designers:
STRUCTURAL IMPACT ASSESSMENT_2023-166
Please refer to BHA drawings:
Sk908_Method Statement for Southeast Side Elevation External Wall Openings

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0 500mm 2.5m Scale 1:25

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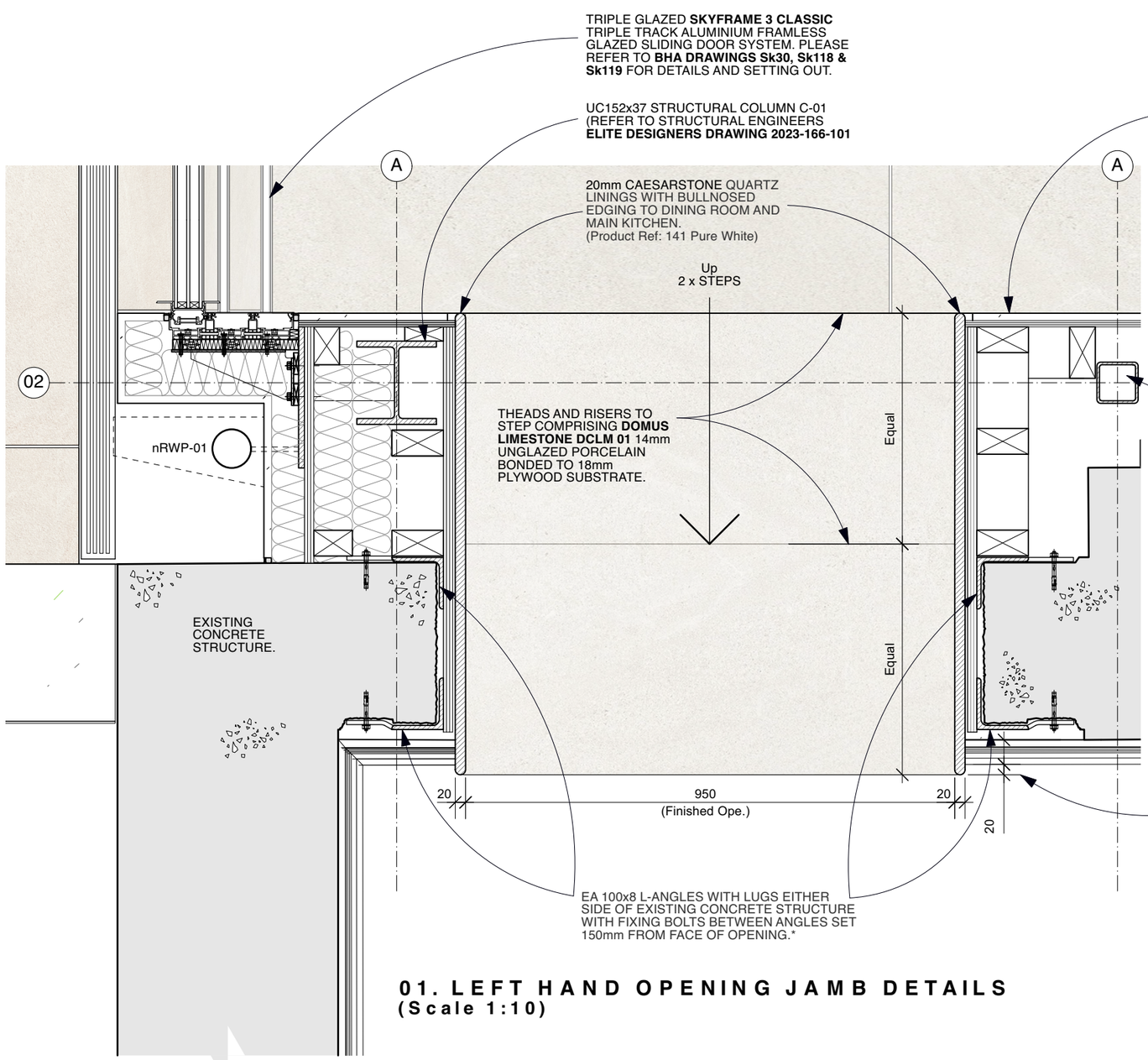
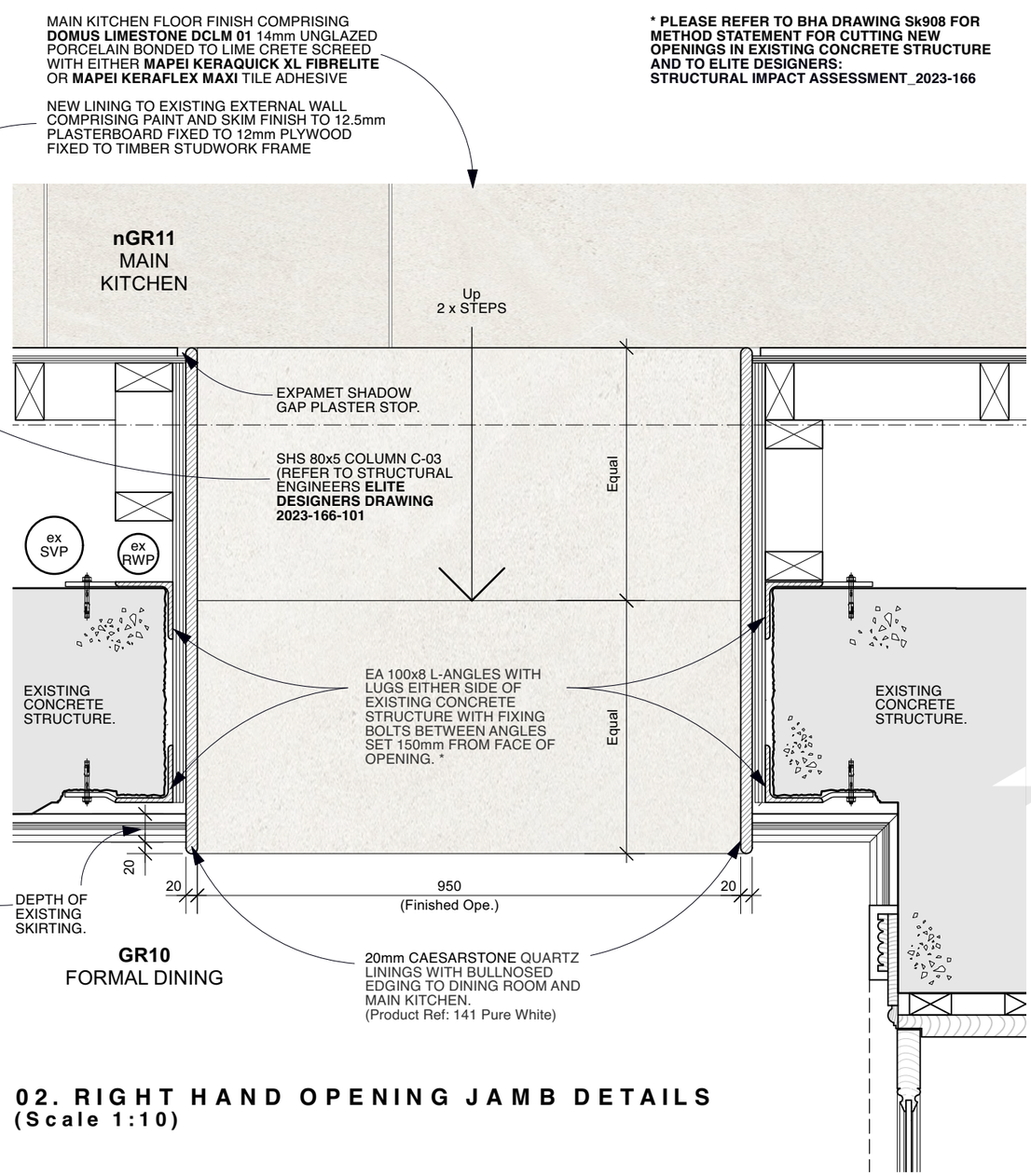
16 St. Peters Road
Title: Details of Openings in Existing Dining Room External Wall to Kitchen Extension (Sheet 2of4)
Drawing No: 0122823-Sk148 Scale 1:25 @ A3



01. LEFT HAND OPENING JAMB DETAILS
(Scale 1:10)



02. RIGHT HAND OPENING JAMB DETAILS
(Scale 1:10)

*** PLEASE REFER TO BHA DRAWING Sk908 FOR METHOD STATEMENT FOR CUTTING NEW OPENINGS IN EXISTING CONCRETE STRUCTURE AND TO ELITE DESIGNERS: STRUCTURAL IMPACT ASSESSMENT_2023-166**

PLEASE READ WITH BHA DRAWINGS Sk147, Sk148 & Sk150 TOGETHER WITH THE SUPPORTING DRAWINGS LISTED BELOW:

Sk23_Proposed Ground Floor General Arrangement Plan
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Sk80_Main Kitchen Extension Longitudinal Section X-X
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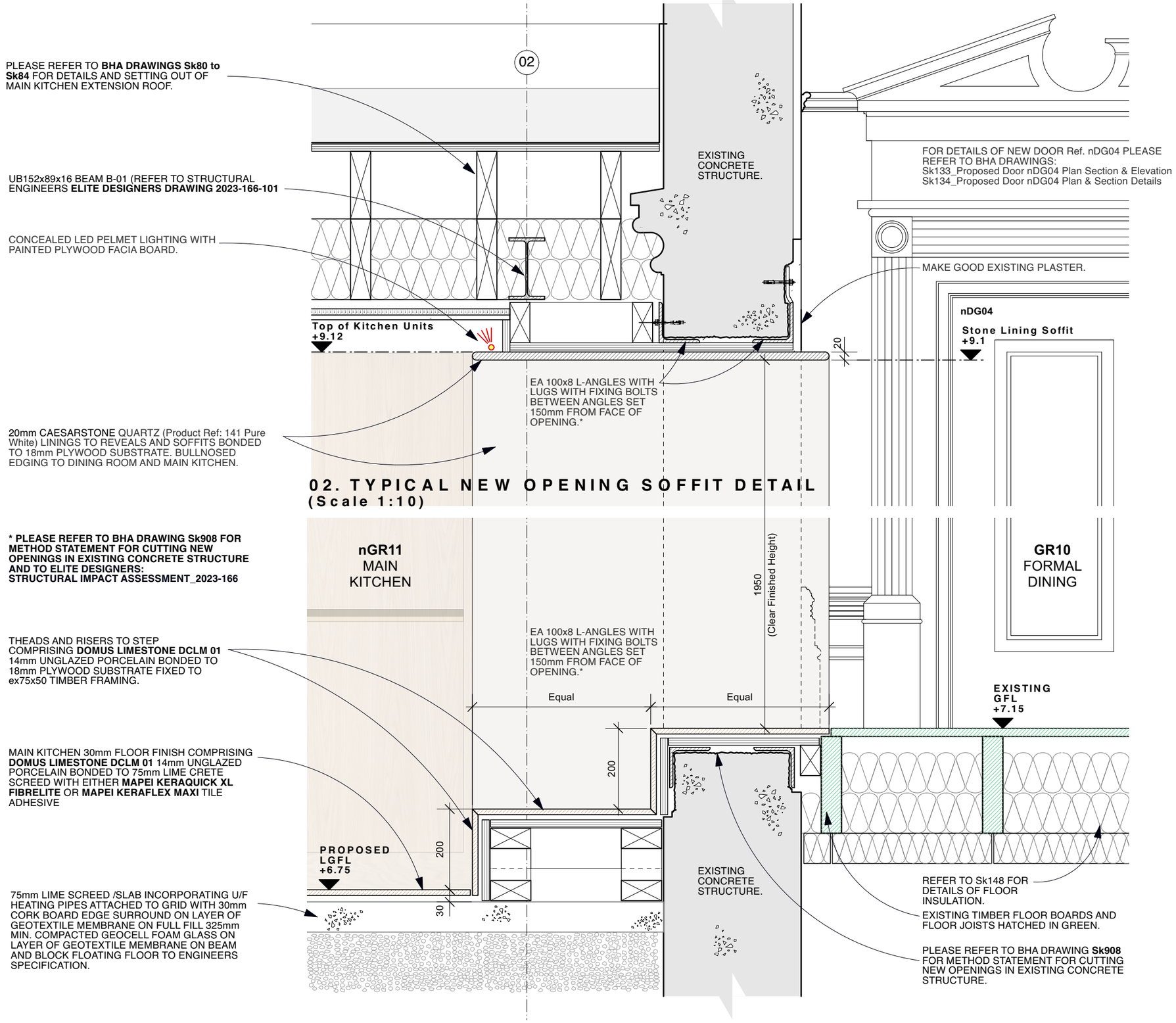
DO NOT SCALE

0 200mm 1m

Scale 1:10

16 St. Peters Road
Title: Details of Openings in Existing Dining Room External Wall to Kitchen Extension (Sheet 3of4)
Drawing No: 0122823-Sk149 Scale 1:10 @ A3



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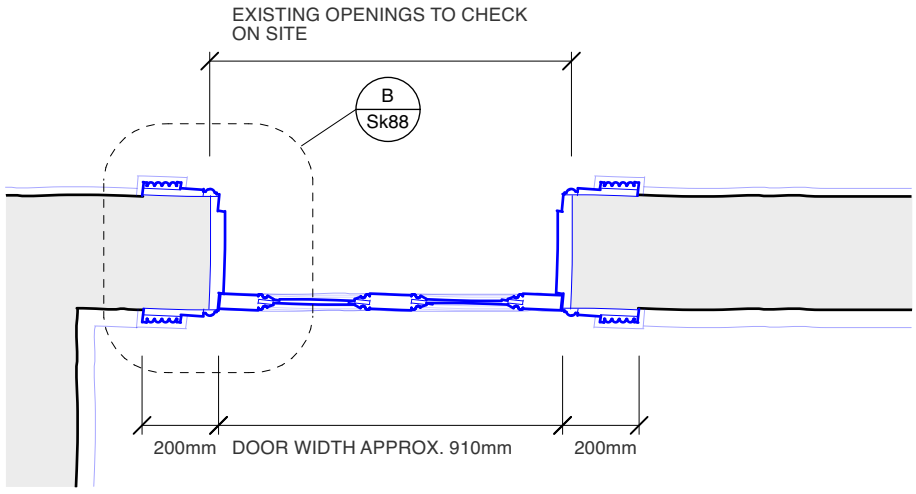
DO NOT SCALE

0 200mm 1m Scale 1:10

16 St. Peters Road
Title: Details of Openings in Existing Dining Room External Wall to Kitchen Extension (Sheet 4of4)
Drawing No: 0122823-Sk150 Scale 1:25 @ A3

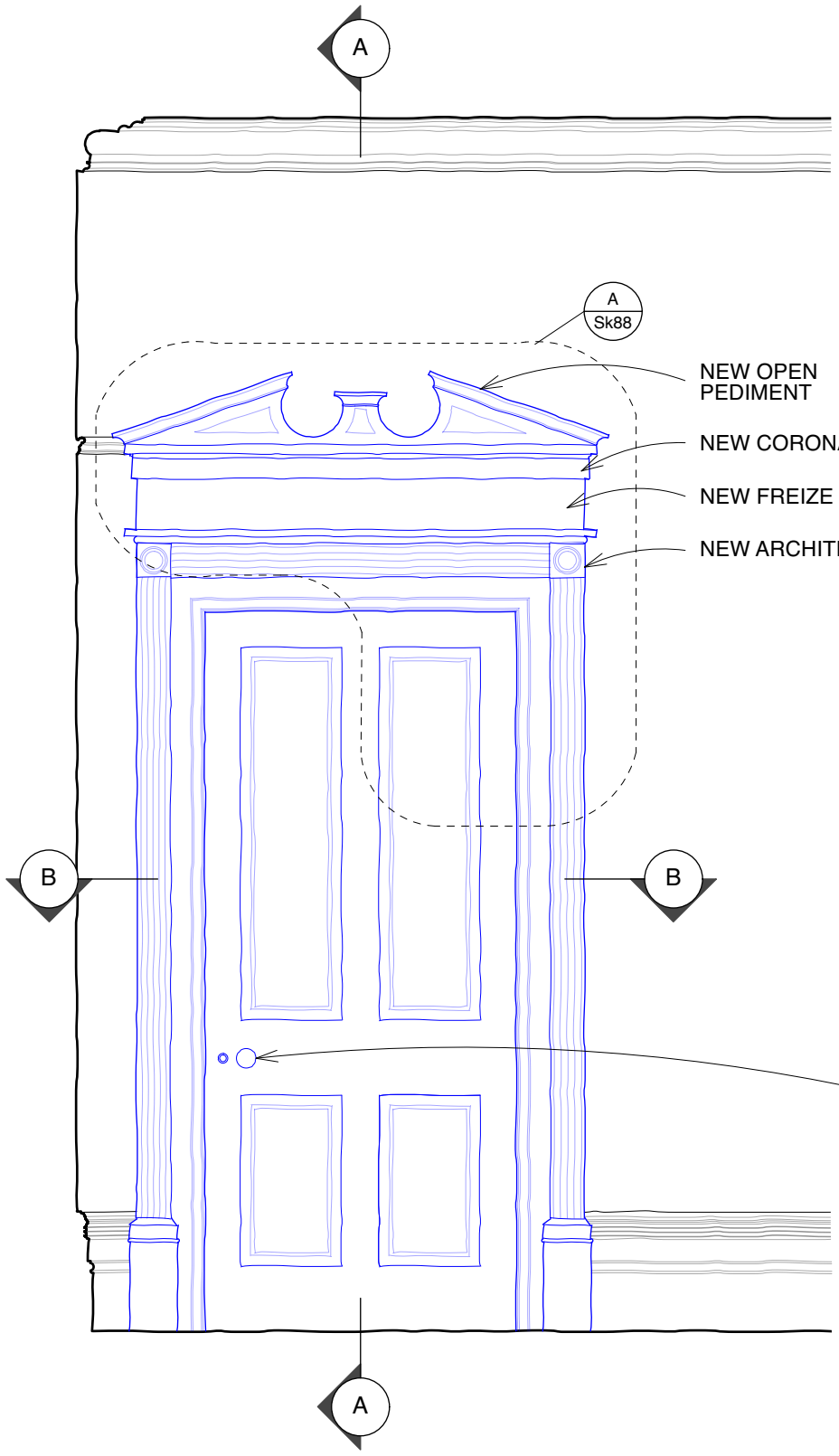


PLAN SECTION B-B @ 1:20

PROPOSED DOOR nG04

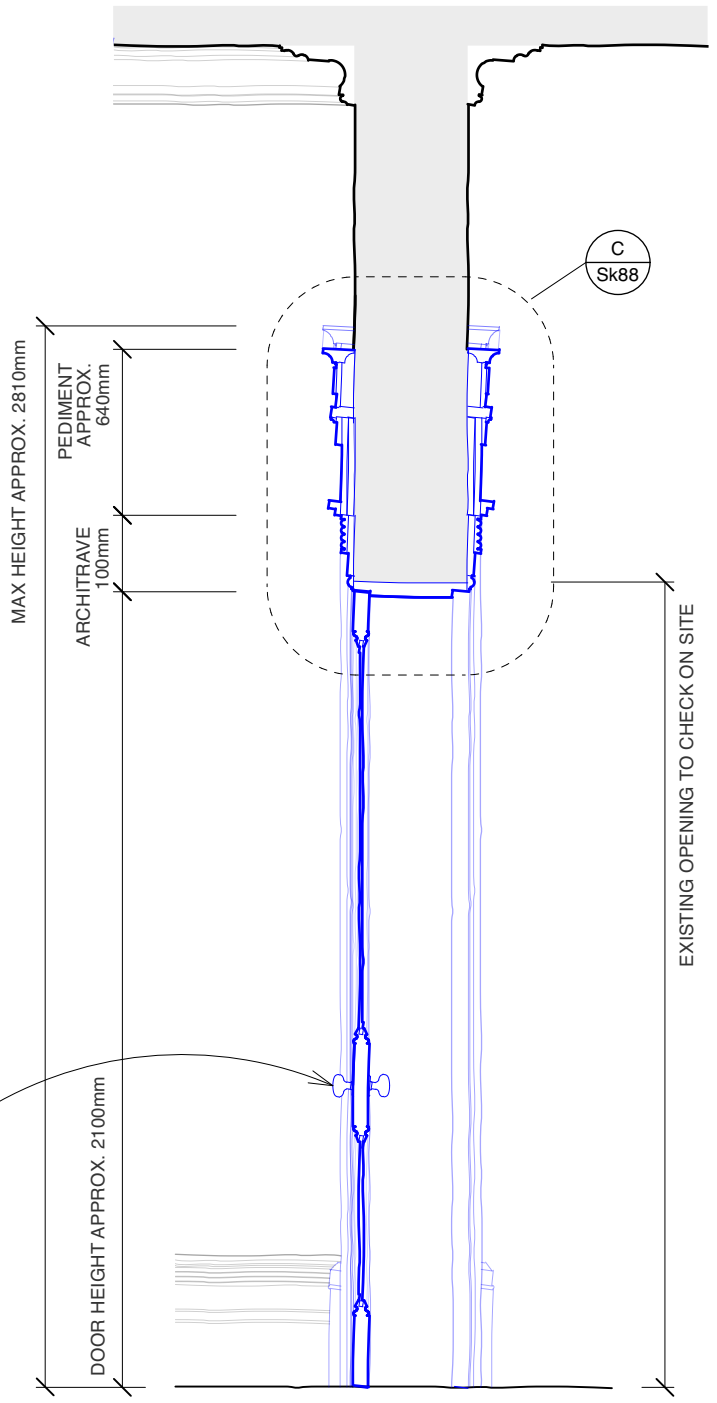
EXISTING DOOR DG14

FULL ELEVATION @ 1:50



MADE TO FIT EXISTING
OPENING AND MATCH
EXISTING DOOR DG14

ELEVATION @ 1:20



SECTION A-A @ 1:20

PROPOSED DOOR nDG04 PLAN SECTION AND ELEVATION

FOR DETAIL DRAWINGS SEE Sk121

0 400mm 2m Scale 1:20

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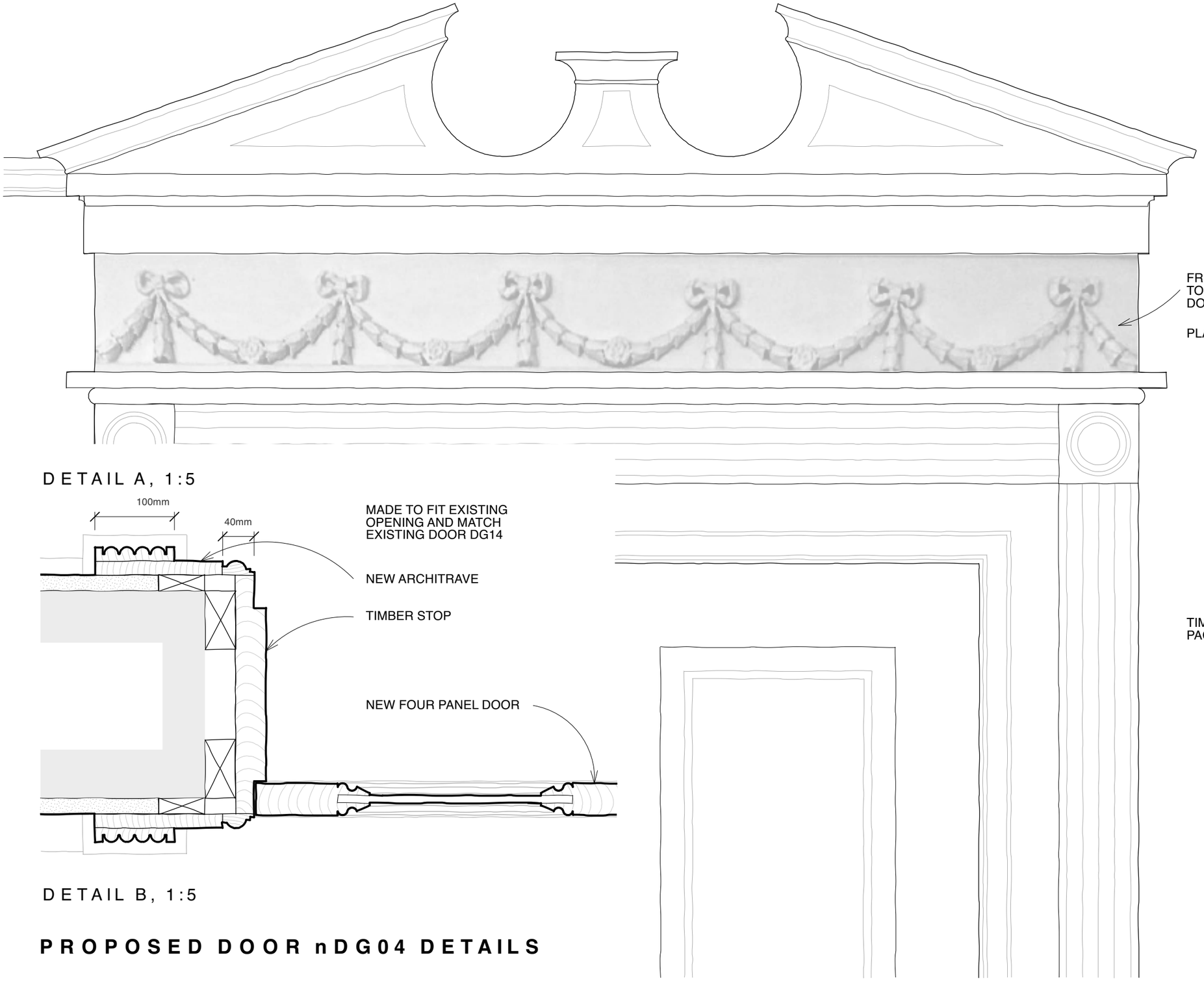
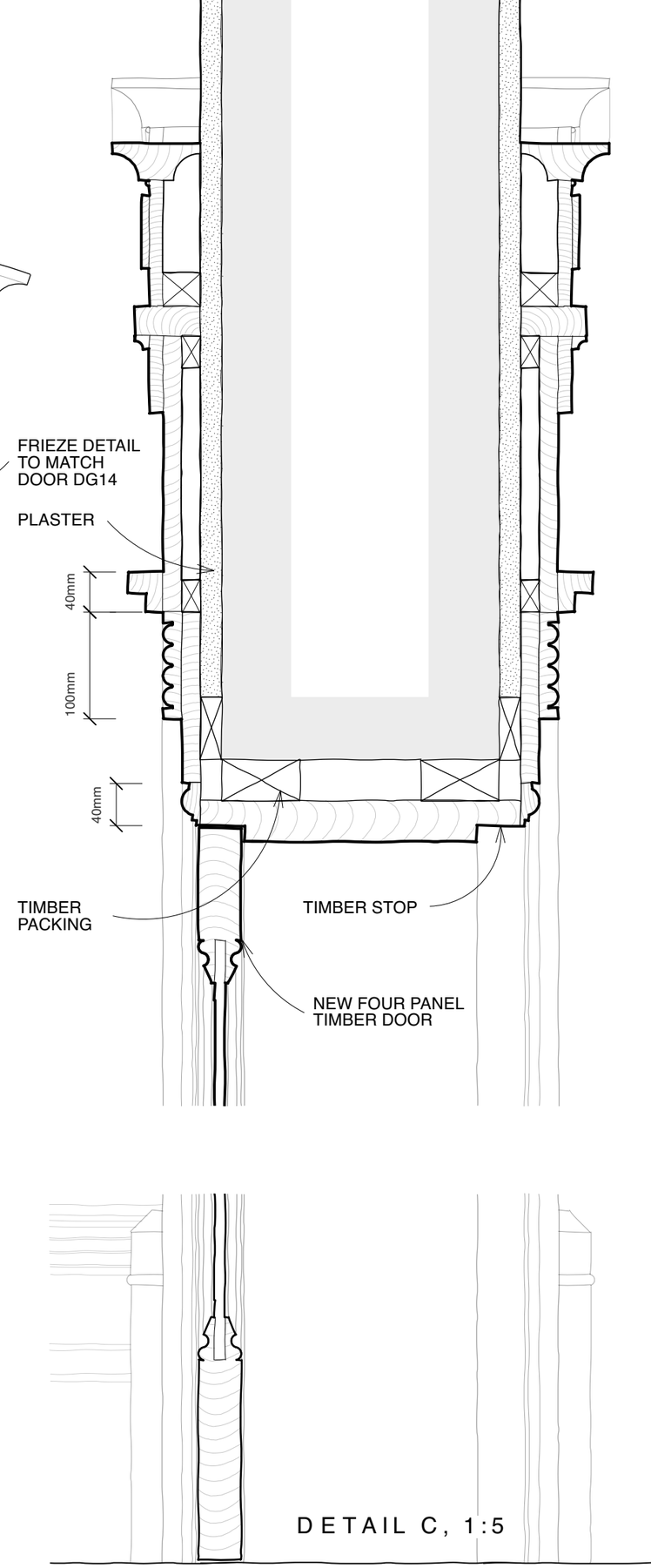
DO NOT SCALE

16 St. Peters Road
Title: Proposed Door nDG04 Plan Section & Elevation
Drawing No: 0122823-**Sk133** Scale 1:20 @ A3





D E T A I L A, 1:5

D E T A I L B, 1:5

D E T A I L C, 1:5

P R O P O S E D D O O R nD G 0 4 D E T A I L S

0 100mm 0.5m Scale 1:5

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D O N O T S C A L E

16 St. Peters Road
Title: Proposed Door nDG04 Details
Drawing No: 0122823-**Sk134** Scale 1:5 @ A3