



SENATE HOUSE LIBRARIES, UNIVERSITY OF LONDON

2015204 / SS Mar 17

STRUCTURAL STRATEGY FOR LIGHTWELL ENCLOSURES

The existing lightwells around the front of the lower Ground floor are to be enclosed in a number of locations by the addition of a glass and concrete roof system at Ground floor and gable ends with the outer leaf in stone, all matching the existing. The slabs themselves will be comprised of hollow glass and concrete and will be designed by specialist contractors. The slabs will be supported on the existing main elevation on their internal edge and the existing retaining wall on their outer edge. In either case, the intrusions into the existing fabric will be sympathetic, minimising the disturbance to the existing brickwork and stone cladding. The new roof will be supported on shelf angles resin anchored into the existing main elevation and on steel brackets which will also be resin anchored into the existing retaining wall. Please see drawing No 2015204-04 and 2015204-17, which show the structural proposals in plan and section, respectively.

All works throughout will be designed and constructed with the intent of minimising any disturbance to the existing fabric of Senate House.



Symmetry's Limited
Consulting Structural Engineers

ANNEX – LIGHT WELLS PLAN AND DETAILS

ALL LEVELS, DIMENSIONS AND SETTING OUT TO BE CONFIRMED FOLLOWING SITE SURVEY



FOR LOCATION OF LIGHTWELLS, SEE DRG. No. 2015204-01

STEELWORK TO BE COATED WITH SHERWIN WILLIAMS TWO PACK EPOXY PRIMER REFERENCE C400 V3 WITH DRY FILM THICKNESS OF 200 MICRONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SUPPORTS, TANKING DETAILS AND FOR STABILITY OF THE STRUCTURE DURING THE WORKS

BOLTS RESIN ANCHORED INTO EXISTING RETAINING WALL TO RESIST 12KN SHEAR LOAD

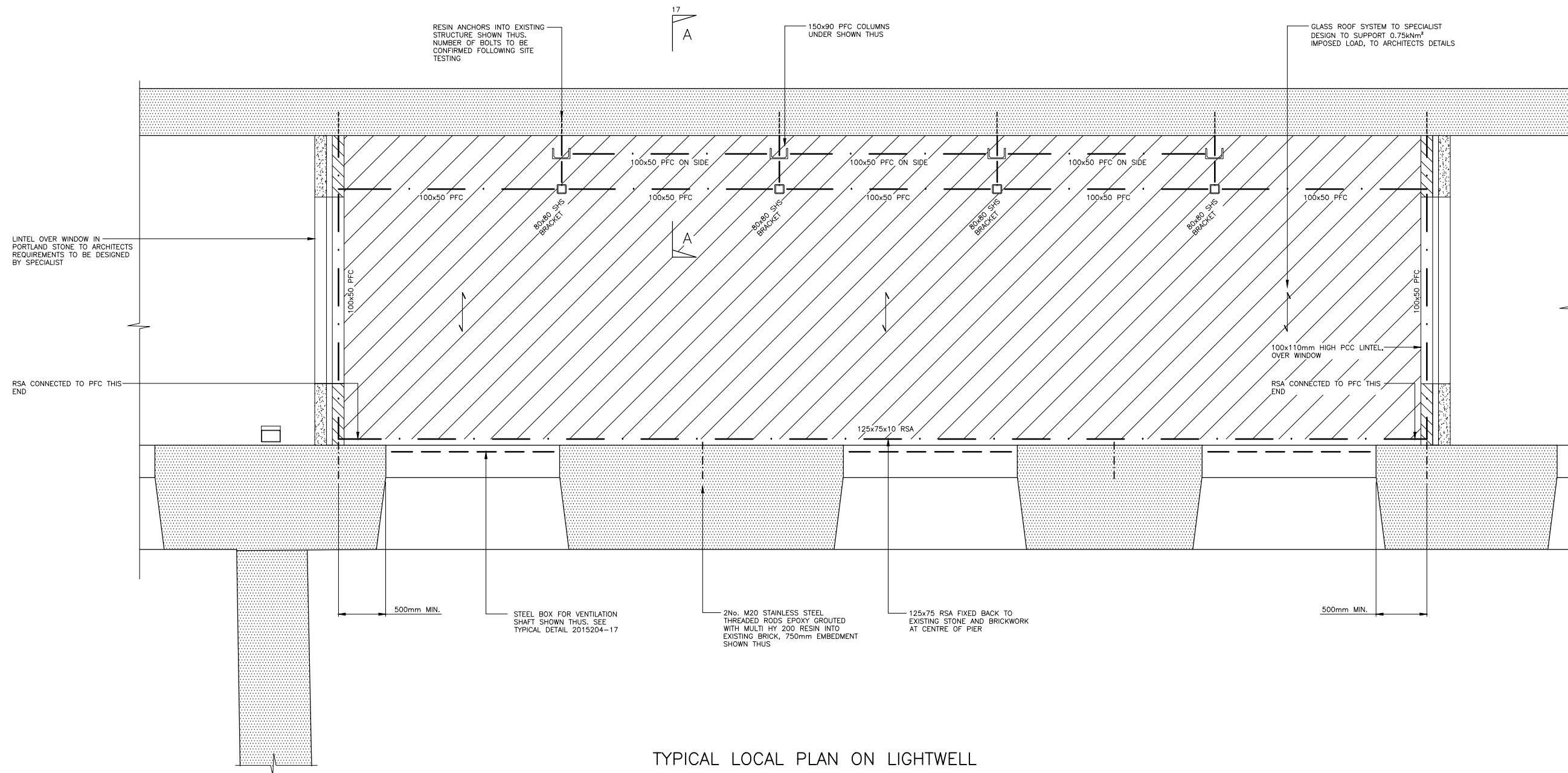
LEGEND

-  DENOTES NEW BLOCKWORK WITH 7N/mm² COMPRESSIVE STRENGTH AND GRADE iii MORTAR U.N.O.
-  DENOTES SOLID PORTLAND STONE WALL TO SPECIALIST REQUIREMENTS AND TO ARCHITECT DETAILS

CONNECTION DESIGN LOADS			
SIZE	SHEAR (kN)	AXIAL (kN)	MOMENT
100x50 PFC	15	10 (TENSION)	-
150x90 PFC	15	-	-
80x80 SHS	20	15 (COMPRESSION)	10

Notes

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS & ENGINEERS DRAWINGS AND SPECIFICATIONS
2. DO NOT SCALE FROM THIS DRAWING
3. PLEASE REFER TO ARCHITECTS DRAWINGS FOR ALL INSULATION AND VENTILATION DETAILS. DAMP PROOF COURSES AND ALL TANKING DETAILS
4. CONTRACTOR SHOULD ALSO REVIEW MECHANICAL ENGINEER DRAWINGS FOR EXACT LOCATION OF SERVICE PENETRATION PRIOR TO CUTTING
5. ALL DIMENSIONS IN mm. DO NOT SCALE FROM THE DRAWINGS
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SUPPORTS AND RESPONSIBLE FOR STABILITY OF THE STRUCTURE DURING THE WORKS
7. SERVICE PENETRATION 250mm SQUARE OR SMALLER ARE NOT SHOWN. REFER TO M & E ENGINEERS DRAWINGS



TYPICAL LOCAL PLAN ON LIGHTWELL

Rev	Date	By	Amendments
B	03.03.17	SAV	ISSUED FOR COSTING
A	06.10.16	SAV	ISSUED FOR CONSTRUCTION
T2	11.03.16	SAV	ISSUED FOR TENDER
T1	10.03.16	SAV	ISSUED FOR TENDER

Drawing Status: TENDER

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Job Title:
**UNIVERSITY OF LONDON
 SENATE HOUSE
 MALET STREET
 WC1**

Drawing Title:
**LIGHTWELL INFILL ROOF
 TYPICAL PLAN DETAILS**

Job No.	Drawing No.	Revision
2015204	04	B

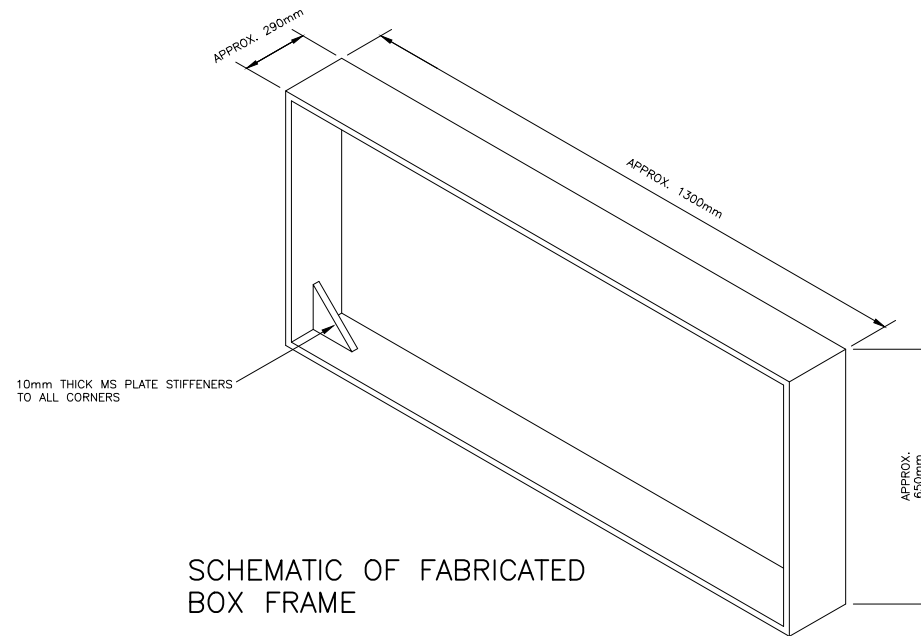
Scales: AS SHOWN AT A1 Original Size A1
 Drawn By: SAV Date: MARCH 2016 Checked: RT

ALL LEVELS AND DIMENSIONS AND SETTING OUT TO BE CONFIRMED FOLLOWING SITE SURVEY

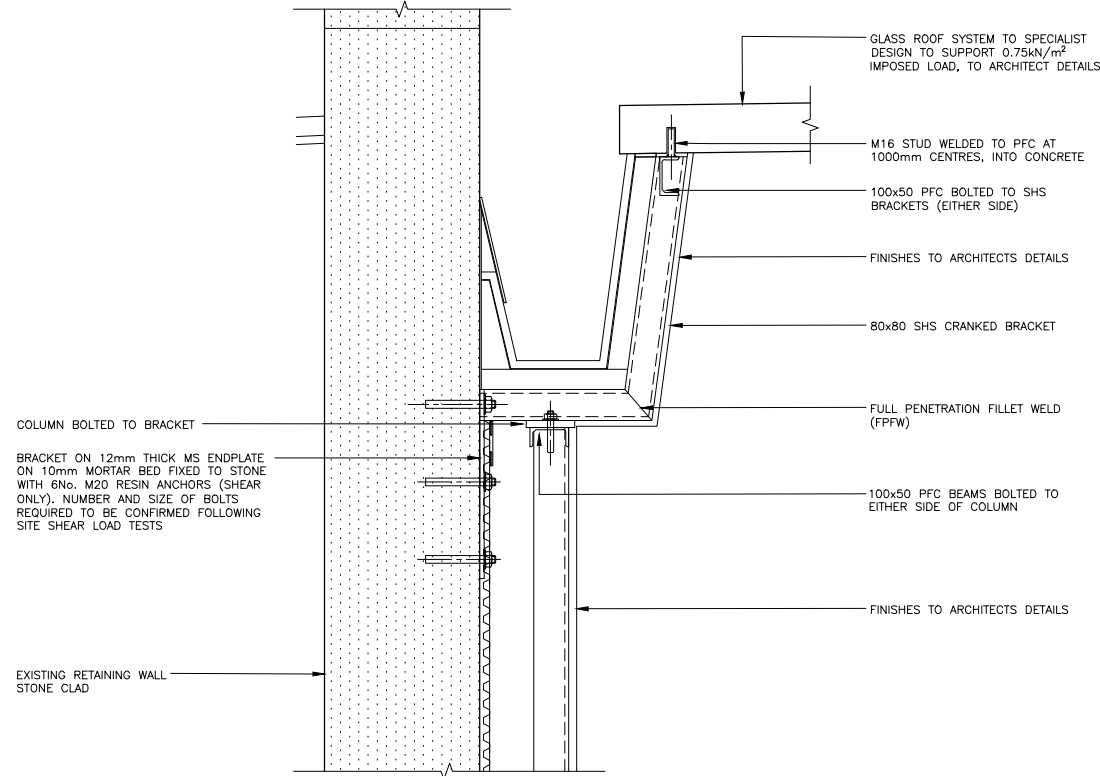
SEE ARCHITECTS DRAWINGS FOR ALL SETTING OUT

FINISHES AND WATERPROOFING TO ARCHITECT DETAILS

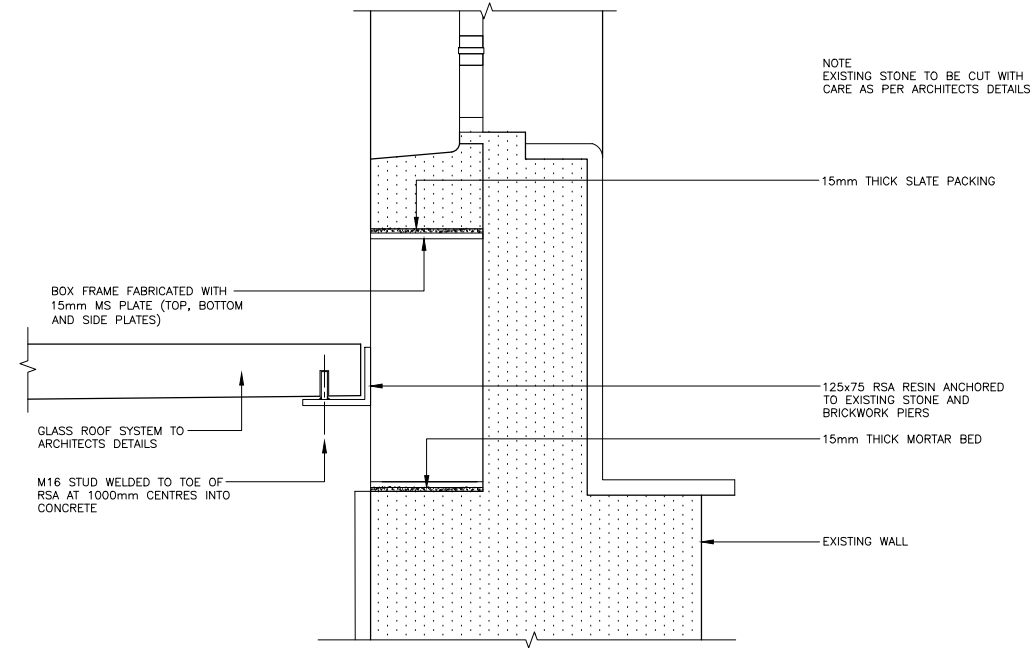
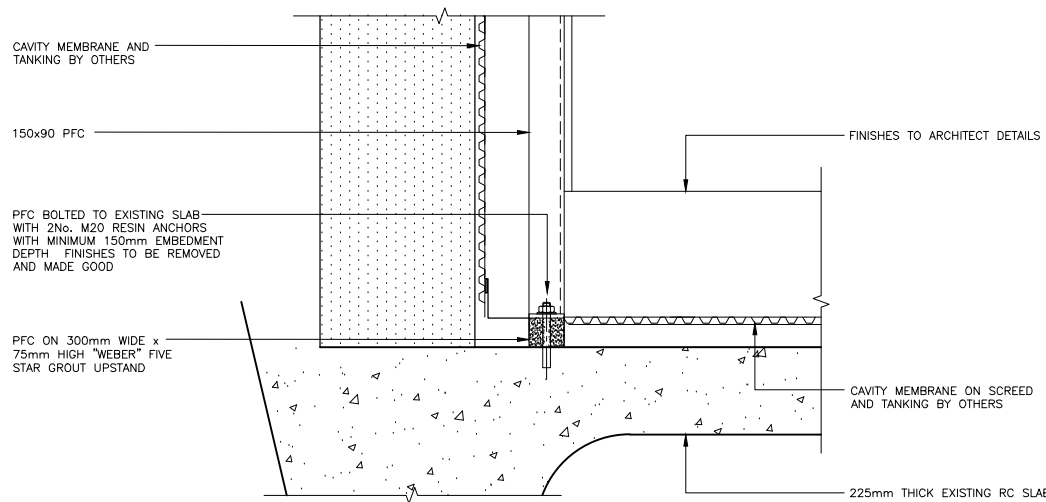
PORTLAND STONE WALL, PARAPET AND LINTEL TO ARCHITECTS AND SPECIALISTS REQUIREMENTS



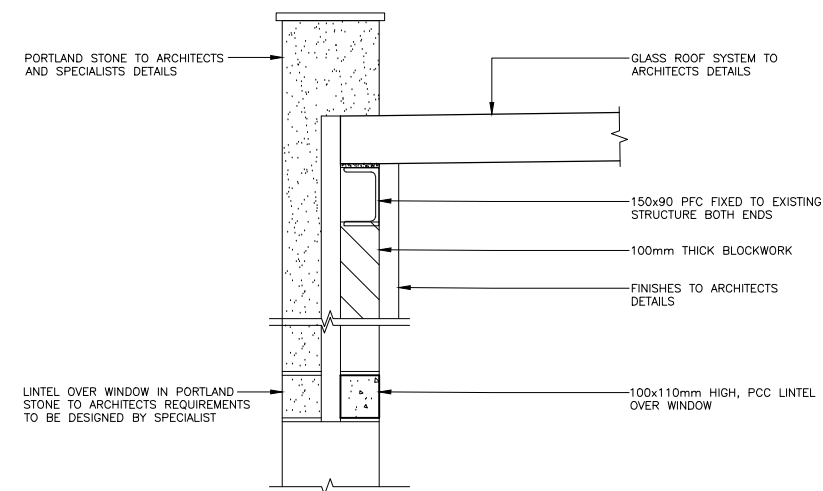
SCHEMATIC OF FABRICATED BOX FRAME



SECTION A - A
FOR LOCATION SEE DRG. No. 2015204-04



VENTILATION SHAFT TYPICAL DETAIL



GABLE ENDS TYPICAL SECTION DETAIL

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T1	03.03.17	SAV	ISSUED FOR COSTING
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Rev Date By Amendments

Drawing Status TENDER



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Job Title
**UNIVERSITY OF LONDON
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MALET STREET
WC1**

Drawing Title
**LIGHTWELL DETAILS AND
SECTIONS**

Job No. 2015204	Drawing No. 17	Revision T1
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Scales 1:10 AT A1 Original Size A1
Drawn By SAV Date MARCH 2017 Checked RT