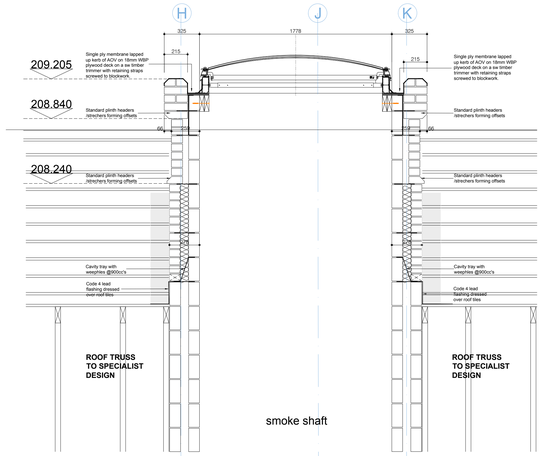
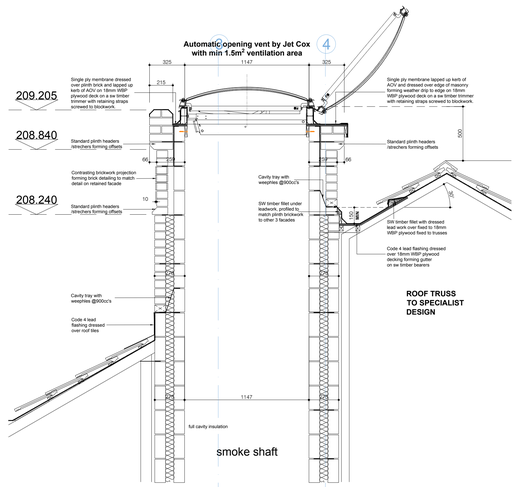


Section A-A

scale 1:20



Section B-B

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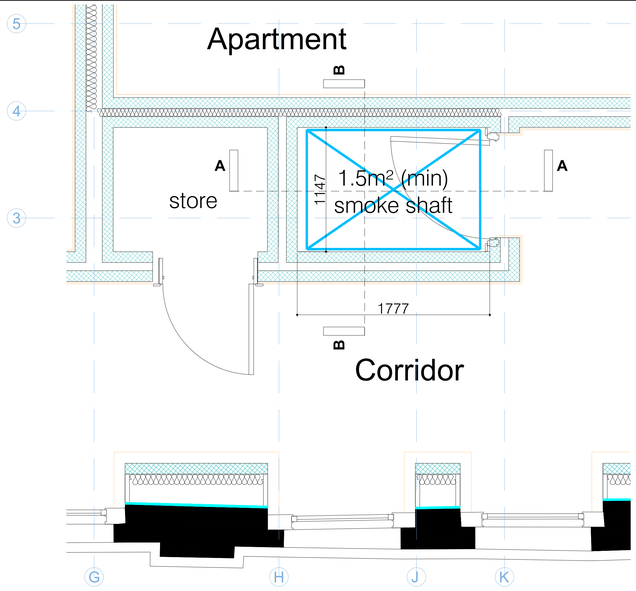

First Floor

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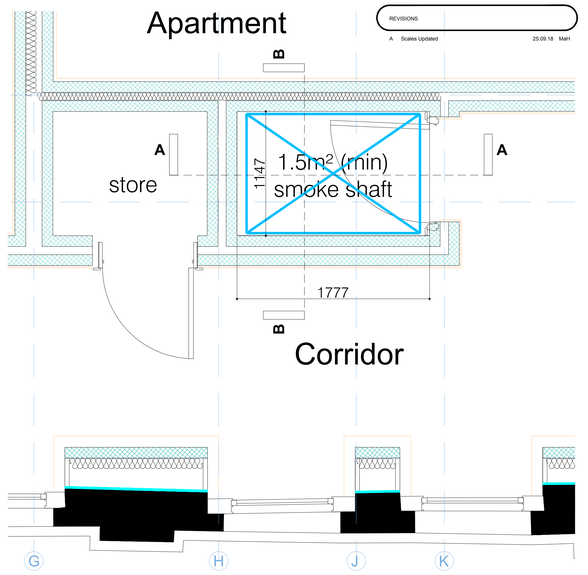
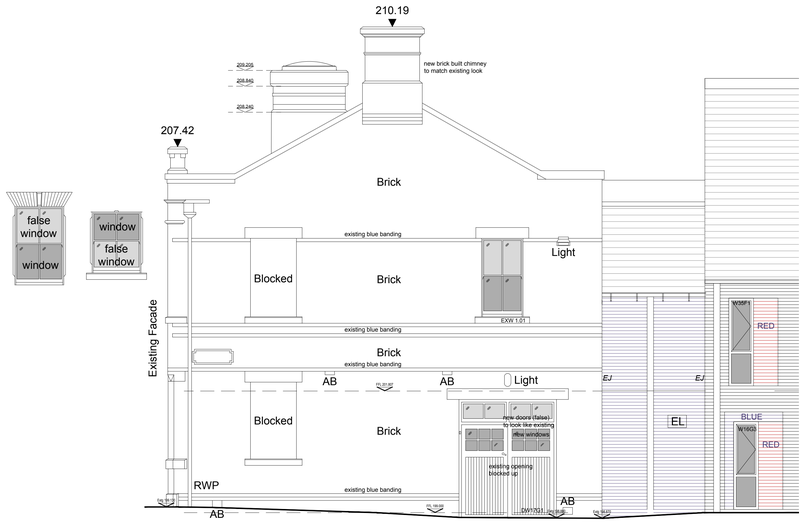


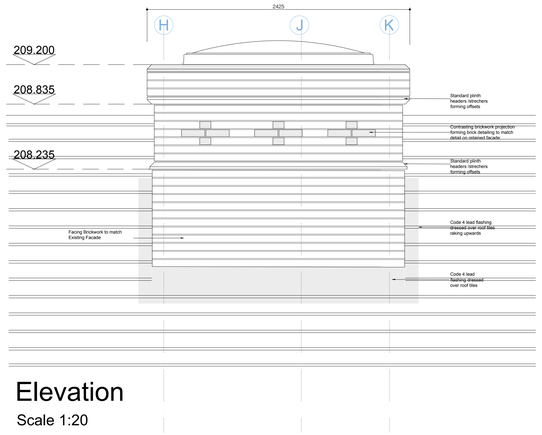
Ground Floor

Scale 1:20



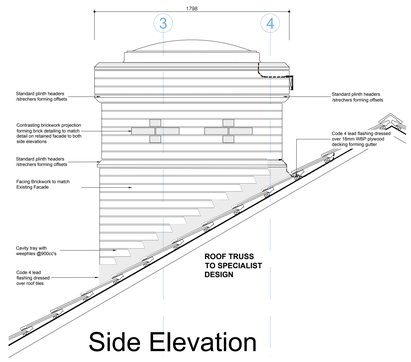
Brunswick Street Elevation

Scale 1:50



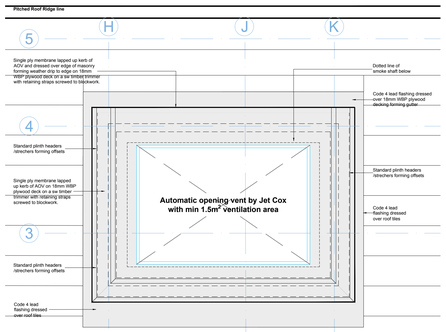
Elevation

Scale 1:20



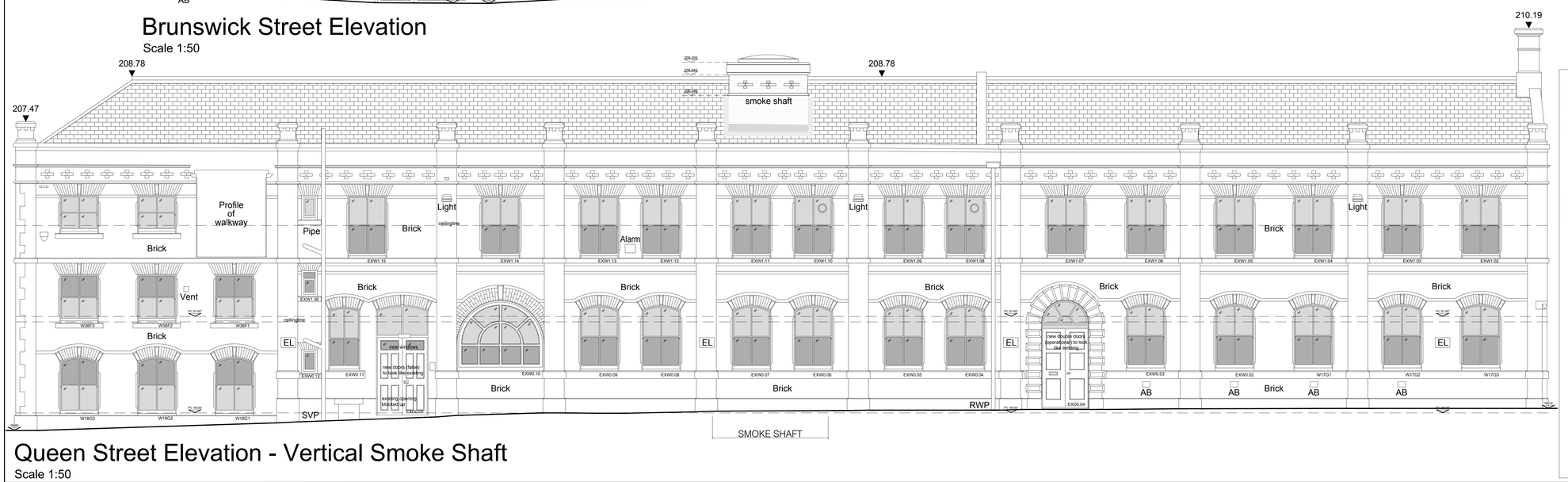
Side Elevation

Scale 1:20



Roof Plan

scale 1:20



Queen Street Elevation - Vertical Smoke Shaft

Scale 1:50

ALL DIMENSIONS TO BE CHECKED ON SITE
WORK TO FIGURED DIMENSIONS ONLY
REPORT DISCREPANCIES TO THE ARCHITECT AT ONCE BEFORE PROCEEDING

ONLINE VERSION

MEANS OF ESCAPE FROM FLATS B1

There should therefore be some means of ventilating the common corridors/lobbies to control smoke and so protect the common stairs. This offers additional protection to that provided by the fire doors to the stair. (The ventilation also affords some protection to the corridors/lobbies.)

This can be achieved by either natural means in accordance with paragraph 2.26 or by means of mechanical ventilation as described in paragraph 2.27.

Smoke control of common escape routes by natural smoke ventilation

2.25 In buildings, other than small ones complying with Diagram 9, the corridor or lobby adjoining the stair should be provided with a vent. The vent from the corridor/lobby should be located as high as practicable and such that the top edge is at least as high as the top of the door to the stair.

There should also be a vent, with a free area of at least 1.0m², from the top storey of the stairway to the outside.

In single stair buildings the smoke vents on the fire floor and at the head of the stair should be actuated by means of smoke detectors in the common access space providing access to the flats. In buildings with more than one stair the smoke vents may be actuated manually (and accordingly smoke detection is not required for ventilation purposes). However, where manual actuation is used, the control system should be designed to ensure that the vent at the head of the stair will be opened either before, or at the same time, as the vent on the fire floor.

Vents should either:

a. be located on an external wall with minimum free area of 1.5m² (see Appendix C); or

b. discharge into a vertical smoke shaft (closed at the base) meeting the following criteria:

i. Minimum cross-sectional area 1.5m² (minimum dimension 0.85m in any direction), opening at roof level at least 0.5m above any surrounding structures within a horizontal distance of 2.0m. The shaft should extend at least 2.5m above the ceiling of the highest storey served by the shaft;

ii. The minimum free area of the vent from the corridor/lobby into the shaft and at the opening at the head of the shaft and at all internal locations within the shaft (e.g. safety grilles) should be at least 1.0m² (see Appendix C);

iii. The smoke shaft should be constructed from non-combustible material and all vents should have a fire/smoke resistance performance at least that of an EI30S, fire door. The shaft should be vertical from base to head, with no more than 4m at an inclined angle (maximum 30°); and

iv. On detection of smoke in the common corridor/lobby, the vent(s) on the fire floor, the vent at the top of the smoke shaft and to the stairway should all open simultaneously. The vents from the corridors/lobbies on all other storeys should remain closed.

Smoke control of common escape routes by mechanical ventilation

2.27 As an alternative to the natural ventilation provisions in paragraph 2.26, mechanical ventilation to the stair and/or corridor/lobby may be provided to protect the stair(s) from smoke. Guidance on the design of smoke control systems using pressure differentials is available in BS EN 12101-6:2005.

Sub-division of common escape routes

2.28 A common corridor that connects two or more storey exits should be sub-divided by a self-closing fire door with, if necessary, any associated fire-resisting screen (see Diagram 8). The door(s) should be positioned so that smoke will not affect access to more than one stairway.

2.29 A dead-end portion of a common corridor should be separated from the rest of the corridor by a self-closing fire door with, if necessary, any associated fire-resisting screen (see Diagram 7a and Diagram 8b and 8c).

Ancillary accommodation, etc.

2.30 Stores and other ancillary accommodation should not be located within, or entered from, any protected lobby or protected corridor forming part of the only common escape route from a flat on the same storey as that ancillary accommodation.

Reference should be made to paragraphs 5.54 to 5.57 for special provisions for refuse chutes and storage areas.

Escape routes over flat roofs

2.31 If more than one escape route is available from a storey, or part of a building, one of those routes may be by way of a flat roof provided that it complies with the provisions in paragraph 5.35.

Note: Access to designs described in paragraph 2.48 may also be via a flat roof if the route over the roof complies with the provisions in paragraph 5.35.

Common stairs

Number of common stairs

2.32 As explained in paragraph 2.19 and paragraph 2.20 a single common stair can be acceptable in some cases, but otherwise there should be access to more than one common stair for escape purposes.

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Client

McCarthy & Stone
Retirement living to the full

Project Title

Proposed retirement Living Development
Buxton Road
Leek

Drawing Title

Smoke Shaft Details to Retained Facade Area

Scale 1:20 & 1:50 @ A0 Date Sept 18
Drawn AR Checked IDP
Drawing No. NW-2416-05-AC-136 Rev. A