

40613 VICTORIA SQUARE ROOF VENTILATION

Thomas Kramer

NORTHWARDS HOUSING 06/05/2021

Contents

Contents.....	1
Table of Figures.....	1
Victoria Square Loft Compartmentation	2
Background of the Scheme	2
The Works	2
Victoria Square Building Control.....	3
Background	3
Building Control	4
Proposal	6
Listed Building Consent Planning (Listed Building and Conservation Areas) Act 1990	7
Asset Management	7
Extension of Time.....	7
Disruption.....	7
Commercial Considerations.....	8
Proposal Costs.....	8
Extension of Time Costs	9
Conclusion.....	10

Table of Figures

Figure 1 Building Regulation 2010 Requirements.....	4
Figure 2 Building Regulations 2010 Requirements	4
Figure 3 Pitched Cold Roof Ventilation Requirements	4
Figure 4 Cold Roof Ventilation Requirements	4

Victoria Square Loft Compartmentation

Background of the Scheme

There are 385 low and medium rise blocks in the Northwards wards that contain 2066 individual addresses. Savills were appointed to carry out Fire Risk Assessment surveys to all low and high rise blocks in the Northwards wards, and a circa 4000 action FRA schedule was produced. On receipt of the FRA surveys and associated actions via Savills, they were split into priority A, B, C's, and Management actions. The decision was made to split the FRA schedule based on priority into two separate projects – 'Phase One' and 'Phase Two' – in order to allow us to complete the higher priority actions, whilst the considerably larger pre-contract and procurement work relating to 'Phase Two' was being undertaken.

The Works

This project is being undertaken to remediate all of the outstanding actions from the Savills FRA survey that were not included in the FRA Phase One project, to all of the North Manchester low rise, medium rise, and sheltered housing blocks.

The main elements of work are as follows:

- Replacement of riser / single store FD30 door sets;
- Replacement of FD30S flush plywood flat entrance door sets;
- Compartmentation works;
- Signage works;
- Supply and fitting of overhead door closers;
- Renewal of LD1 and LD2 alarm systems;
- Renewal of fan lights and side panels;
- Surveying, designing, proposing and undertaking of compartmentation work;
- Various minor works to rectify miscellaneous actions.

Victoria Square Building Control

Background

The Building Regulations 2010 cover the construction and extension of buildings; the work we are carrying out is covered by Fire safety: Approved Document B.

Part of the compartmentation work identified by Savills was to carry out loft compartmentation work the roof space. The building contains original Solid Parapet Walls which acted as the original firebreak. The flats below have been modified in the past creating new compartment lines. Savills have identified this as a risk as fire can spread into the roof space and into the neighbouring flats below.

The specification was agreed to create a Rockwool Insulation double barrier to the compartment lines of the below flats and to firestop the original parapet wall following on from past maintenance and installations, we are also to replace any damaged fire doors and hatches. This method splits the roof space into many smaller compartments.

Building Control

As part of the Building Control Inspection process by Manchester City Council Building Control, the inspector has identified flaws in the roofs construction. The roof is a Pitched Cold Roof Construction, covered with an impermeable bituminous underlay, covered with slate, there is a Ridge Ventilator to the centre of each Parapet Wall. Most have been blocked during the installation of the roofing felt. The roof construction method is covered under Part C - Site preparation and resistance to contaminants and moisture and is covered in British Standard BS 5250: 'Code of practice for control of condensation in buildings'.

The roof is above a 15° pitch and has a high water vapour-resistant (type HR) underlay. Ventilation is needed at the ridge or high level equivalent to a continuous opening of 5mm and eaves or low level ventilation should be provided on opposite sides of the roof to permit cross ventilation equivalent to a 10mm opening.

We would have no requirement to carry out this work under the building regulations if we were not carrying out any other work to the roof space.

We will not receive final Building Regulation Approval until the Roof Ventilation work is completed. A letter will be issued to approve the Fire Stopping Elements of the Building Control Application.

The screenshot displays the UK Legislation website interface. At the top, the Royal Coat of Arms is followed by the text 'legislation.gov.uk'. To the right, a 'delivered by' section includes buttons for 'THE', 'NATIONAL', and 'ARCHIVES'. Below this, a red 'Cymraeg' link is visible. The main navigation bar contains links for 'Home', 'Understanding Legislation', 'EU Legislation and UK Law', 'Browse Legislation', 'Changes To Legislation', and a 'Search Legislation' button. A search bar is located below the navigation bar, with fields for 'Title:', 'Year:', 'Number:', and 'Type:' (set to 'All UK Legislation (excluding originating from the EU)'). A 'Search' button and an 'Advanced Search' link are also present. The main content area is titled 'The Building Regulations 2010' and includes a breadcrumb trail: 'UK Statutory Instruments ► 2010 No. 2214 ► PART 2 ► Regulation 4'. Below the title, there are tabs for 'Table of Contents', 'Content', 'Explanatory Memorandum', 'Impact Assessments', and 'More Resources'. A 'Figure 2 Building Regulations 2010 Requirements' label is overlaid on the 'Content' tab. The 'Content' tab is active, showing the text of Regulation 4. On the left side of the content area, there is a 'What Version' section with two radio buttons: 'Latest available (Revised)' and 'Original (As made)'. Below this is an 'Opening Options' section and a 'More Resources' section. The main text of Regulation 4 is displayed, starting with 'Requirements relating to building work' and '4.—(1) Subject to paragraph (2) building work shall be carried out so that—'. It lists two sub-paragraphs: (a) 'it complies with the applicable requirements contained in Schedule 1; and' and (b) 'in complying with any such requirement there is no failure to comply with any other such requirement.' It then states '(2) Where—' and lists two sub-paragraphs: (a) 'building work is of a kind described in regulation 3(1)(g), (h) or (i); and' and (b) 'the carrying out of that work does not constitute a material alteration, that work need only comply with the applicable requirements of Part L of Schedule 1.' It then states '(3) Building work shall be carried out so that, after it has been completed—' and lists three sub-paragraphs: (a) 'any building which is extended or to which a material alteration is made; or' (b) 'any building in, or in connection with, which a controlled service or fitting is provided, extended or materially altered; or' and (c) 'any controlled service or fitting,'. The text concludes with 'complies with the applicable requirements of Schedule 1 or, where it did not comply with any such requirement, is no more unsatisfactory in relation to that requirement than before the work was carried out.' At the bottom of the content area, there are 'Previous: Provision' and 'Next: Provision' buttons. A 'Back to top' button is located at the bottom right of the content area. The footer of the website contains links for 'Help', 'About Us', 'Site Map', 'Accessibility', 'Contact Us', 'Privacy Notice', and 'Cookies'. It also includes the 'OGL' logo and a statement about the Open Government Licence v3.0, and a copyright notice for the Crown and database right.

legislation.gov.uk

delivered by
THE NATIONAL ARCHIVES

Cymraeg

Home Understanding Legislation EU Legislation and UK Law Browse Legislation Changes To Legislation Search Legislation

Title: Year: Number: Type: All UK Legislation (excluding originating from the EU) Search

Advanced Search

The Building Regulations 2010

UK Statutory Instruments ► 2010 No. 2214 ► PART 2 ► Regulation 4

Table of Contents Content Explanatory Memorandum Impact Assessments More Resources

Figure 2 Building Regulations 2010 Requirements

Previous: Provision Next: Provision Plain View Print Options

What Version

Latest available (Revised)
Original (As made)

Opening Options

More Resources

Status: This is the original version (as it was originally made).

Requirements relating to building work

4.—(1) Subject to paragraph (2) building work shall be carried out so that—

(a) it complies with the applicable requirements contained in Schedule 1; and

(b) in complying with any such requirement there is no failure to comply with any other such requirement.

(2) Where—

(a) building work is of a kind described in regulation 3(1)(g), (h) or (i); and

(b) the carrying out of that work does not constitute a material alteration,

that work need only comply with the applicable requirements of Part L of Schedule 1.

(3) Building work shall be carried out so that, after it has been completed—

(a) any building which is extended or to which a material alteration is made; or

(b) any building in, or in connection with, which a controlled service or fitting is provided, extended or materially altered; or

(c) any controlled service or fitting,

complies with the applicable requirements of Schedule 1 or, where it did not comply with any such requirement, is no more unsatisfactory in relation to that requirement than before the work was carried out.

Previous: Provision Next: Provision

Back to top

Help About Us Site Map Accessibility Contact Us Privacy Notice Cookies

OGL All content is available under the Open Government Licence v3.0 except where otherwise stated. This site additionally contains content derived from EUR-Lex, reused under the terms of the Commission Decision 2011/833/EU on the reuse of documents from the EU institutions. For more information see the EUR-Lex public statement on re-use

© Crown and database right

Figure 1 Building Regulation 2010 Requirements

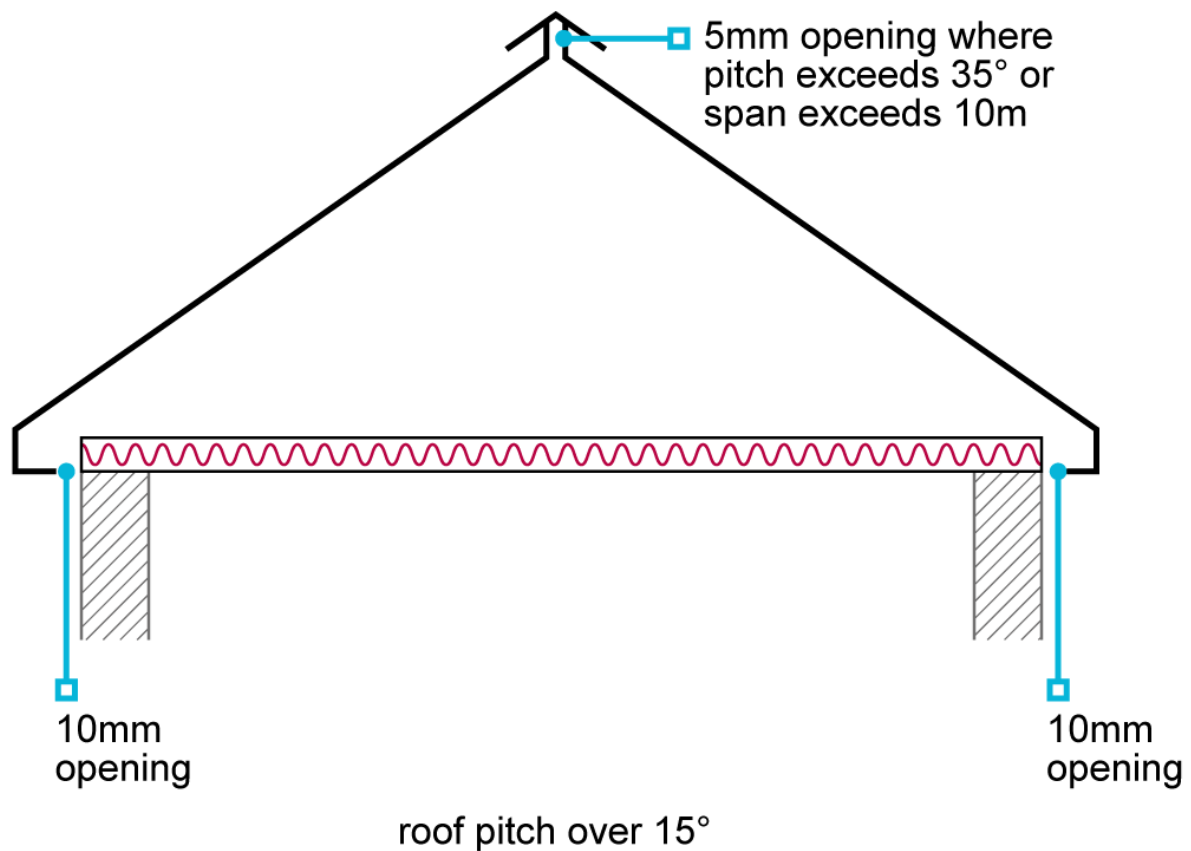


Figure 2 Cold Roof Ventilation Requirements

Considerations

This work has been identified as required as a non-ventilated cold roof offers the perfect conditions for a Dry Rot Outbreak.

The cold roof construction contains warm heating pipework, an impermeable membrane and is non ventilated. If a leak is to occur from the roof or any services, the warm humid conditions with no ventilation are ideal.

Building Control have recommended this work be carried out as soon as possible, I agree with this statement.

I do also believe due to this being a fire stopping scheme it is not the best way to deliver this work.

Asset Management have identified a suitable scheme to deliver this work within the future Capital Programme see the section titled Asset Management.

The costed proposals we have receive are non-competitive as we are already under contract. This will be discussed further under the Commercial Considerations section of this report.

Proposal

Victoria Square has four sides each approximately 100m in length, they are arranged to form a central courtyard. A Location Plan will be attached to this report.

To meet the requirements of Part C of the Building Regulations I have proposed to install 500mm x200mm Nature Vents. To meet the requirements of the Building Regulations they are to be installed at the following centres:

- High Level every 2m
- Low level every 1m

Due to the Roofs construction we cannot install ventilation to the eaves or to the ridge due to the buildings Listed Building Status. The above proposals meet the requirements and have been agreed with Manchester City Council Building Control.

The above proposals allow for a total of 300 vents per elevation giving a total of 1200 vents.



Figure 3 Proposed Nature Vent

Listed Building Consent Planning (Listed Building and Conservation Areas) Act 1990

Victoria Square is a Grade II Listed Building.

In general terms Listed building consent is required for all works of demolition, alteration or extension to a listed building that affect its character as a building of special architectural or historic interest.

The requirement applies to all types of works and to all parts of those buildings covered by the listing protection (possibly including attached and curtilage buildings or other structures), provided the works affect the character of the building as a building of special interest.

It is a criminal offence not to seek consent when it is required. Not knowing a building is listed is not a defence to any criminal proceedings.

An application needs to be made through the Planning Portal and is decided by the Urban Design & Conservation Planning, Building Control & Licensing at Manchester City Council.

The product I have specified is the least visually intrusive, I have asked for some pre application advice before submitting the proposals with no response. They may decide the above proposals alter the architectural interest of the building and reject the proposals.

Asset Management

Asset Management have stated a scheme for Victoria Square is planned for the near future. This scheme includes Heating and Insulation upgrades. The Ventilation Upgrade work is more suited to this scheme and the work relating to the Roof Ventilation may affect that scheme depending on the Roof Insulation Type Required.

This scheme will be competitively tendered and should offer better value for money and less disruption to tenants as the work is grouped together and is similar in its nature.

Extension of Time

The proposed work is programmed to take 16 weeks. This will attract a 16 week claim for a contract extension and associated costs (See Commercial Section).

Disruption

The proposals require scaffold to the full length of each elevation externally and edge protection to the roof internally. This will cause significant disruption to tenants, this disruption can be managed by carrying out the work at the same time as the Heating and Insulation Scheme.

Commercial Considerations

Proposal Costs

The works are forecast to cost £203,431.80 without time related costs. Tile vent specification is subject to approval from the Conservation Officer.

	Quant	Unit	Rate	Sub Total	OH&P + Fee	Total	Comments
Scaffolding	1	Item	£94,200.00	£94,200.00	£13,564.80	£107,764.80	Price also includes for netting to balcony and external scaffold, beam works to shop entrance and court yard access, Permits, Herras Fencing to base, Protection fan and Inspections
Tile Vents	1200	Item	£69.00	£82,800.00	£11,923.20	£94,723.20	Price includes for installation of nature vents to match existing slates, size and colour to given locations to requirement of BS5250:2002
Ridge Vents	33	Item	£25.00	£825.00	£118.80	£943.80	Price includes for clean off existing mortar, slice breathable membrane to create air gap of 5mm, re-bed and point ridge to requirement of BS5250:2002

Total cost of works

£203,431.80

Extension of Time Costs

Dependant on when and if approval to instruct on the 40613 project is obtained, there is scope for additional time related costs to be collected in the overall programme. For the sake of this assessment, it is assumed that if these works are instructed it will result in a 16 week extension to the original programme, and attract full appropriate preliminary costs for this section.

Item Code	Item Description	UoM	Qty	Emanuel Whittaker	Emanuel Whittaker
PLM00001LOT2A	Contracts/Project Manager	Per Week	0.20	£1,300.00	£ 4,160.00
PLM00002LOT2A	Site Manager	Per Week	1.00	£1,100.00	£ 17,600.00
PLM00004LOT2A	Site Quantity Surveyor	Per Week	0.20	£1,000.00	£3,200.00
PLM00006LOT2A	Resident Liaison Officer	Per Week	0.00	£680.00	£ -
PLM00007LOT2A	Site Office Cabin 6.4mx2.4m	Per Week	1.00	£35.00	£ 560.00
PLM00008LOT2A	Canteen /Drying Room 6.4mx2.4m	Per Week	0.00	£35.00	£ -
PLM00009LOT2A	Toilets	Per Week		£35.00	£ -
PLM00010LOT2A	Storage Unit /Container 6.4mx2.4m	Per Week	4.00	£12.00	£ 768.00
PLM00011LOT2A	Deliver and Collection storage cabin	Item	1.00	£560.00	£ 560.00
PLM00013LOT2A	Site Hoarding (Heras Fencing) - 50 metres	Per Week	1.00	£25.00	£ 400.00
PLM00015LOT2A	c2.7m wide x c7m long Combi Cabin site welfare unit - To include a canteen, office, drying room, storage and two private WC. Must be a self contained unit including diesel generator and water tank - facilities to include fresh water, waste and fuel tanks, flushing WC, hot and cold water, heating, lighting and power generators	Per Week	1.00	£185.00	£ 2,960.00
PLM00016LOT2A	Weekly combi cabin service costs	Per Week	1.00	£100.00	£ 1,600.00
Prelim Weeks					16

Total for scheme based on proposed programme of properties			£ 31,808.00

Conclusion

The total forecast cost of the variation will be £235,239.80. There is scope for the preliminary costs to be reduced, dependant on when and if confirmation to complete on 40613 is received, and the length of the timescales relating to the listed building and building control requirements.

Due to these unknown factors, it is difficult to state which financial year the spend would be assigned to if completed on this project.