

EXTERNAL WALL INSPECTION



PROPERTY: GROATHILL ROAD SOUTH EDINBURGH EH14 1TG

REF: DIA1716

DATE: OCTOBER 2021

CLIENT: CARMICHAEL HOMES

DIAMOND & COMPANY (SCOTLAND) LTD. CHARTERED BUILDING SURVEYORS

6A Dunnswood House Dunnswood Road Wardpark South Cumbernauld G67 3EN Ground Floor 177 West George Street Glasgow G2 2LB 1 St. Colme Street Edinburgh EH3 6AA

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Date of Inspection:

August 2021

Report prepared by:

Simon Roberts MRICS

James McCullock BSc (Hons)

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Chartered Building Surveyor

File Reference:

DIA1716

Report Issue & Date:

First issue - October 2021

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LIMITATIONS

This report is the property of Diamond & Company (Scotland) Ltd, Chartered Building Surveyors and is confidential to the client designated in the report. Whilst it may be shown to their professional advisers, the contents are not to be disclosed to, or made use of, by any third party, without our express written consent. Without such consent we can accept no responsibility to any third party.

The report is prepared as an aid to assessing compliance with the Scottish Government Advice note "Determining the fire risk posed by external wall systems in existing multi-storey residential buildings" dated August 2021, which now supersedes the MHCLG Guidance which was been adopted in Scotland dating from the 20th January 2020 and the RICS Guidelines dated March 2021. The Scottish Advice Note (SAN) is standalone Guidance and has no bearing on the Building Control / Completion Certificate process. The Guidance is utilised by the lending industry to determine whether the external walls are constructed utilising materials that would be regarded as being combustible.

We have been provided with a comprehensive package of drawings by the architects for the scheme and have checked the statutory consents via the Local Authorities online portal.

The Report solely comments on the compliance of the external walls with SAN Advice Note. It is assumed that the works identified on the Building Warrant Application are being constructed in in accordance with the Statutory Consents issued and that a Completion Certificate will subsequently be issued.

Our survey only encompasses the external walls no comments are made in respect to the roof, internal structure, fittings and finishes.

Diamond & Company (Scotland) Ltd, Chartered Building Surveyors certify that they have carried out the work contained herein with due care and diligence to their best belief and knowledge based on the time and information available.

This report is made on behalf of Diamond & Company (Scotland) Ltd, Chartered Building Surveyors. By receiving it and acting on it, the client – or any third party relying on it – accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).

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DIAMOND & COMPANY (SCOTLAND) LTD, CHARTERED BUILDING SURVEYORS



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1.0 INTRODUCTION

1.1 Scope of Instructions

In accordance with instructions received from Carmichael Construction (the client) Diamond & Company (Scotland) Ltd, Chartered Building Surveyors were requested to carry out an assessment of the development at the stated address in relation to the external wall cladding construction and the possible issue of Externa Wall Appraisal Certification.

1.2 Property Address

Groathill Road South Edinburgh EH4 2LS

1.3 Client's Name & Address

Carmichael Homes Challenge House 29 Canal Street Glasgow G4 0AD

1.4 Date of Survey

June 2021

1.5 Surveyor

James McCullock BSc (Hons)

1.6 Weather

The weather conditions at the time of our inspections were

1.7 Orientation

For the purposes of our inspection, we consider the front elevation of the building facing on to the South Groathill Avenue be orientated due East. All directions are given within the report as if standing externally facing the site. All left hand and right-hand designations are based on this.



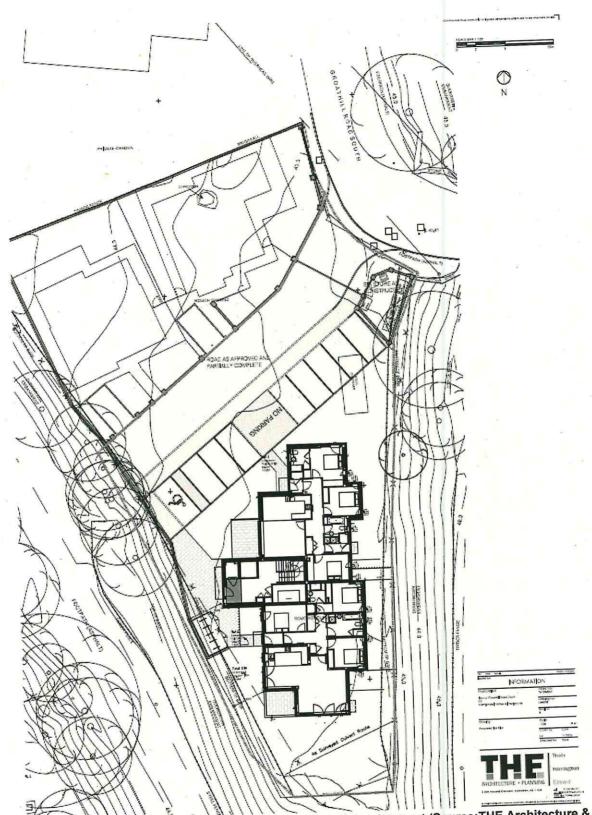


Figure 1: Indicative site plan of the Groathill Road South development (Source:THE Architecture & Planning)



2.0 BRIEF DESCRIPTION OF PROPERTY

2.1 General Description

The development is located approximately three miles West of Edinburgh City Centre in the Craigleith locale. The site is bounded by South Groathill Avenue to the East and a mixture of urban wooded areas and residential accommodation elsewhere.

The former brownfield site was previously vacant for a number of years before being earmarked for development in the 2010's. Carmichael Homes intend to provide ten luxury three-bedroom apartments on the site, including two duplex apartments with terraces to the top floor.

External elevation walls have been designed with facing brickwork as the principal finish with the inclusion of a zinc, standing seam cladding external finish to the top floor apartments.

Stacked balconies are present throughout the property and comprise of steel frames with glass balustrades. The decking material is still to be specified. Apartments at fifth and sixth floor level feature terraces and again the decking material is still to specified.

Windows throughout comprise of aluminium clad, timber framed double glazed units.



3.0 OBSERVATIONS AND FINDINGS

3.1 External Elevations Generally

- 3.1.1 Our instructions are in relation to the external wall construction of the properties exclusively, and therefore examination or surveys of other external or internal elements of the buildings or site have not been undertaken.
- 3.1.2 Formal inspections will be undertaken throughout the course of construction. All areas of detailing to the external wall construction will be observed from ground level and at high level via any scaffolding in place as part of the ongoing works.
- 3.1.3 The properties, and wider site, will be at the early stages of development during our inspections, with practical completion aiming to be achieved in late 2021 / early 2022.
- 3.1.4 The finishes to the external elevations of the development are as follows:
 - Facing brickwork
 - Zinc standing seam cladding (Top floor only)

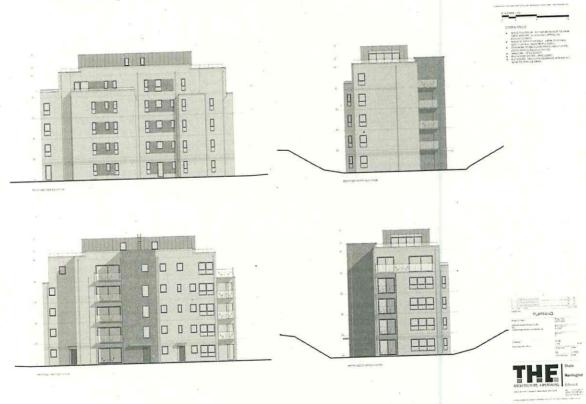


Figure 2: Proposed elevations of the South Groathill Road development (Source: THE Architecture & Planning)



- 3.1.5 We have been provided with the Architect's construction details for the external elevation wall construction and for the purpose of this report we assume that the Design Team have been working to ensure compliance with the specification.
- 3.1.6 The construction details indicate that the development utilises lightweight steel framing construction techniques.

The core lightweight steel frame structure has been designed using the following components:

Lightweight Steel Frame

- 150mm light gauge steel frame system which acts with heavier individual steel members to support both the internal and external linings.
- The frame is constructed on a floor-by-floor basis and is designed to support profiled metal decking which form the permanent formwork to support the cast in situ concrete floors.
- The internal face of the system is to be lined with 2 No. layers of Gyproc Wallboard incorporating a vapour control layer with 100mm of non-combustible stone wool insulation fitted between the steel studs.
- The external face of the of the steel frame is lined with a 9mm fibre cement particle board over which lies a breather membrane.
- 40mm of rigid phenolic foam insulation, identified as Kingspan Kooltherm K112 framing board, is fitted over the external sheathing to form a partially filled cavity after external finishes are applied.
- At fifth floor level non-combustible mineral wool is introduced as the means of insulation.
- 3.1.7 The core framework will be finished externally in various materials with the following build ups:

External Leaf Build Up

- Facing brickwork: 102.5mm facing brick with a 60mm wide cavity. The brickwork will be tied back to the underlying core structure using brick ties slotted into vertical channels fixed back to the core structure.
- 2) Zinc standing seam cladding: 0.7mm zinc coated steel secret fixed to metal carrier rail system. The carrier rail system is then in turn mechanically fixed back to the underlying core structure.



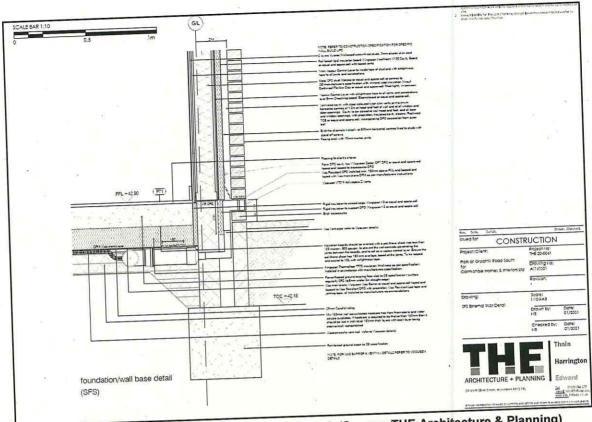


Figure 3: Typical section through facing brickwork (Source: THE Architecture & Planning)



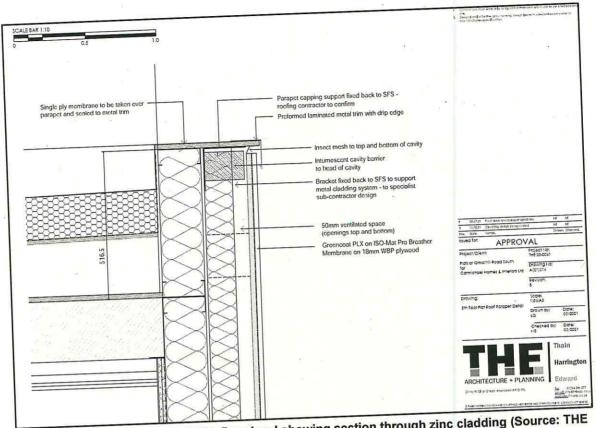


Figure 4: Typical wall detail at fifth floor level showing section through zinc cladding (Source: THE Architecture & Planning)

3.1.8 A review of the information provided to us by THE Architecture & Planning indicates that cavity barriers have been included within the design of the building.

Several detail drawings show cavity barriers as being present within the design of the building. We would anticipate that these should be located at all compartment lines, around all openings, at all corners and at junctions of walls, floors, ceilings as well as at roof level.

The specification information provided refers to a Fire Engineer's report which we would anticipate includes detailed recommendations in relation to cavity barriers and fire stopping.



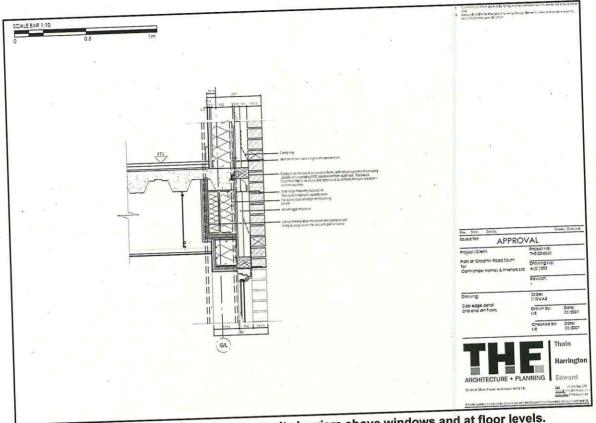


Figure 5: Sectional detail showing cavity barriers above windows and at floor levels.

3.1.9 Balconies are arranged in a vertically stacked configuration and are present throughout and comprise of steel frames with glass balustrades. The decking material is still to be specified.

Similarly terraces at fourth and fifth floor levels have been designed with glazed balustrades but again the decking material has still to be specified.

3.1.10 Windows throughout the development are aluminium clad, timber framed double-glazed units.

3.2 Building Overall Height

The Scottish Advice Note requires all buildings to be assessed irrespective of height. Where materials could be regarded as having an element of combustibility, these require to be assessed in accordance with the guidance.



4.0 SUMMARY AND CONCLUSION

4.1 Summary

- 4.1.1 The external wall structure has been designed using a lightweight steel framing system.
- 4.1.2 The elevations throughout the development will be constructed using the following materials:
 - Facing brickwork
 - Zinc standing seam cladding (Top floor only)
- 4.1.3 From the available information, we understand that the development has been designed with the appropriate fire stopping / cavity barriers in situ. The primary means of insulation is a combustible phenolic foam insulation up to and including fourth floor with a non-combustible mineral wool being introduced at fifth floor level. Whilst the use of a combustible insulation is a concern, the material is effectively encapsulated within the structure and as such represents a low risk in terms of fire.

The vertically stacked balconies to the property will pose a high risk should timber boards be specified as the decking material in these areas, additionally, a similar risk could be posed by timber decking to the terraced areas. In this instance early consideration should be given to the use of a non-combustible product in these areas i.e., non-combustible A2 rated or above (To BS EN 13501:1) aluminium decking boards or similar.

4.2 Conclusion

The properties have been designed to comply with the prevailing Building Regulations at the time of construction and a Building Warrant has been granted by Edinburgh City Council. We assume that the Design Team will be monitoring the Contractors worked to ensure compliance with the original design and that a Completion Certificate will be issued to reflects this.

Having considered the initial information provided by the Design Team we can conclude that the external walls on this development are constructed utilising techniques that **would** comply with the Scottish Government Guidance, provided that our recommendation of non-combustible decking is implemented then External Wall Assessment documentation, could be provided upon completion of the development.



We trust this report meets your requirements and if any further information is required, please contact our Mr. Simon Roberts.

Simon Roberts MRICS

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Chartered Building Surveyor for

Diamond & Company (Scotland) Ltd, Chartered Building Surveyors

Email: simon@diamondandco.net

DIA1716 Groathill Road South, Edinburgh EH4 2LS



APPENDIX A – Statutory Consent Information



Statutory Consent Information

The below table lists all Planning Applications and Building Warrants relating to the property as detailed on Edinburgh City Council's Planning Portal.

Property	Application Type	Application No.	Description
Address	Name to the last		14/00026/FUL Erect 9 flats and 1
Land 30 Metres South Of 31 Groathill Road South Edinburgh	Planning	14/00026/FUL	detached house on site previously used for housing (as amended) Land 30 Metres South Of 31 Groathill Road South Edinburgh
1		19/01333/FUL	Application to amend the design of
	Planning	19/01333/FOL	the consented and commenced development of 9 flats on the site at the south end of Groathill Road South, Edinburgh (planning ref 14/00026/FUL). The proposal aims to provide further amenities to the penthouse apartment through the addition of a room to the roof. Land 30 Metres South Of 31 Groathil
	-		Road South Edinburgh
	Planning	20/05478/FUL	Amend the design of the consented and commenced development of flatted building (14/00026/FUL and 19/01333/FUL) to split the
e e			penthouse apartment into two flat to create one additional univextension to 5th floor an alterations to building elevations. Land 30 Metres South Of 3 Groathill Road South Edinburgh
	Building Warrant	16/04033/WARF	of 31 Groathill Road South, STAG A Warrant Application
			Underground Drainage, Roads External Works. (Future Stages cover substructure ar superstructure.) Land 30 Metre South Of 31 Groathill Road Sou Edinburgh

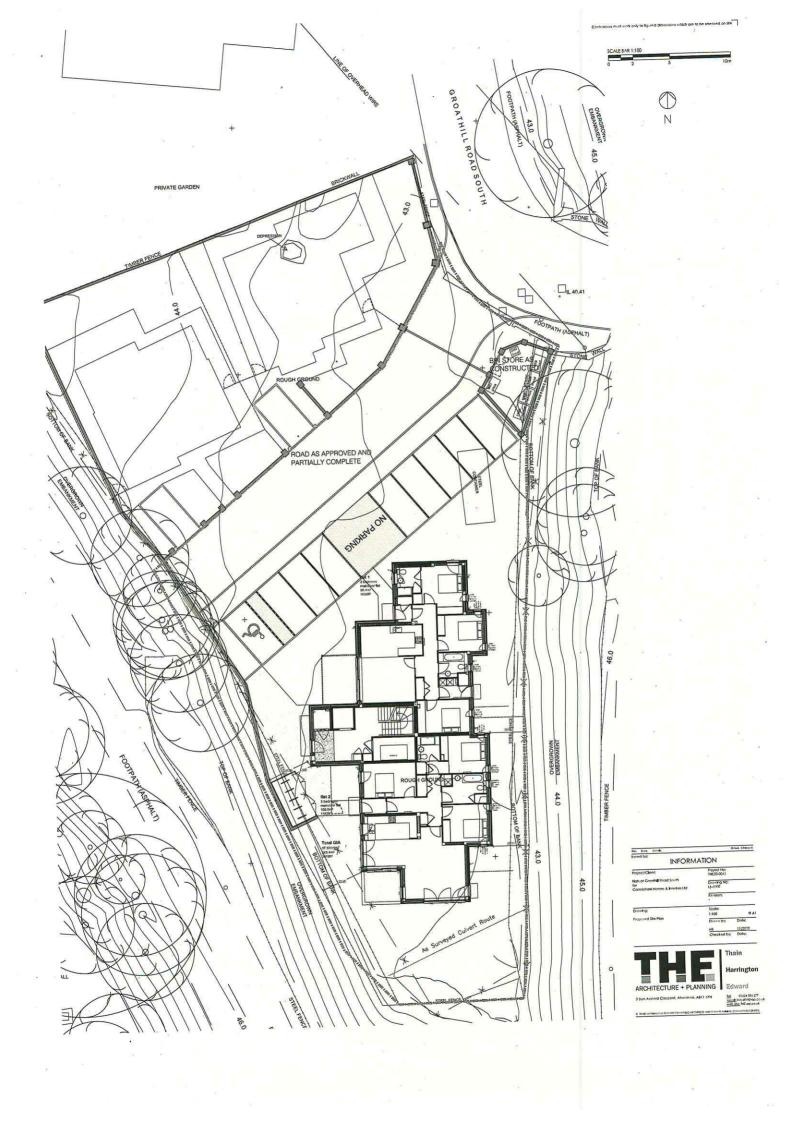


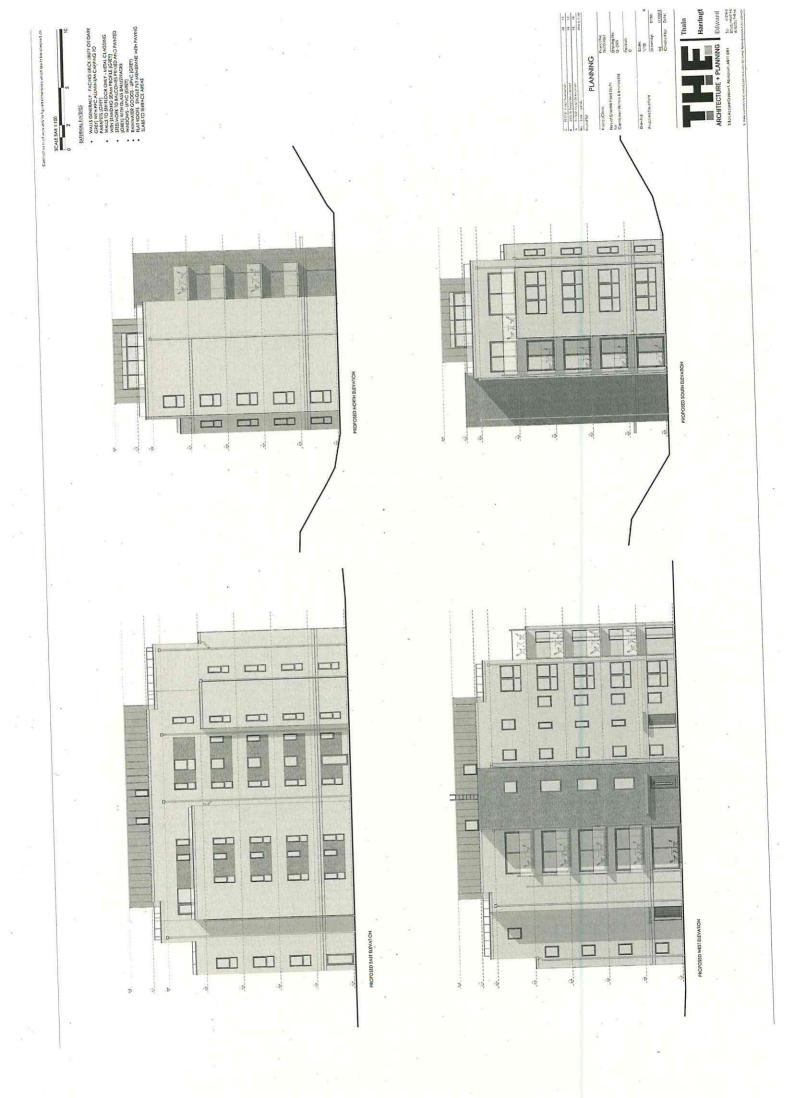
		e "	and south
	Building Warrant	16/04033/WARR/	Erect block of 9 flats on land south of 31 Groathill Road South. STAGE
			B Warrant Application - Sub-
			structure, Foundations and Ground Floor Slab. (Previous Stage A
		· -	Application covered drainage and
25 KS			application to cover superstructure.)
		1	FORM Q REQUIRED. Land 30
		100	Metres South Of 31 Groathill Road South Edinburgh
*	Building Warrant	16/04033/WARR/	This application covers Stage C
	Building Warrang	2	Superstructure Future stag submissions to cover structura
		2:	design of SFS, glazing, handrail
			and balustrades following design be specialist subcontractors / supplied
		5 27	as can longer be SER certificat
8 *		,	Form Q items under revised SE system. Land 30 Metres South 0
			31 Groathill Road South Edinburg

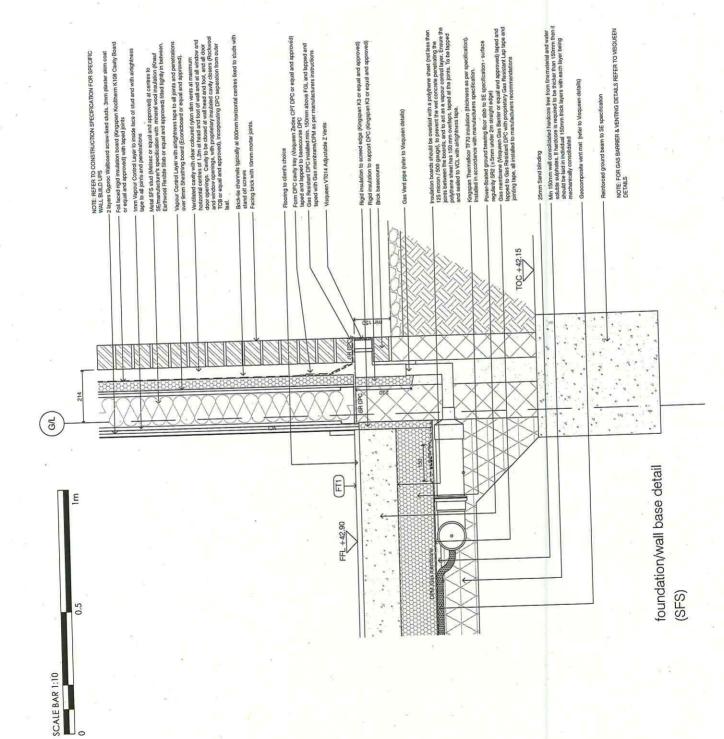
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APPENDIX B – THE Architecture & Planning Drawings







Contractors must work only to figured dimensions which are to be othecked on 2. Design leading test he gost / lonking design lies with sub-contractor-refer to manufactures specification.

Harrington Drawn by: Date: NE 01/2021 Checked by: Date: NE 01/2021 ARCHITECTURE + PLANNING | Edward Thain CONSTRUCTION for Carmichael Homes & Interiors Ltd A(18)001 Project No: THE 20-0061 Scale: 1:10@A3 24 North Silver Street, Aberdeen AB10 1RL Flats at Groathill Road South SFS External Wall Detail Rev. Date. Details. Project/Client: Drawing:

Tel: 01224 586 277 email: Info aTHE-ap.co.uk web site: THE-ap.co.uk



V	19.02.21	Revised per feedback from window manufacturer	window manufacturer	NE
Rev.	Date.	Defoils.	Dro	Drawn, Checked.
Issue	Issued for:	CONSTR	CONSTRUCTION	
Proje	Project/Client:	#	Project No: THE 20-0061	
Flats for Carr	at Groo	Flats at Groathill Road South for Carmichael Homes & Interiors Ltd	Drawing No: A(31)002	
		¥	Revision:	
Dra	Drawing:		Scale: 1:5@A3	
₹ d	ical Win	Typical Window Head Detail	Drawn by: NE	Date: 01/2021
			Checked by:	Date: 01/2021



Harrington

Thain

24 North Silver Street, Aberdeen ABIO 1RL

Tet: 01224 586 277 email: Info@THE-ap.co.uk web site: THE-ap.co.uk

Edward

Cavity to be closed at separating floors, with proprietary insulated cavity openings, with proprietary insulated cavity closers, incorporating DPC separation from outer leaf. closers, incorporating DPC separation from outer leaf, (Rockwool FIREPRO PWCB or equal and approved) to achieve medium duration / Cavity to be closed at wall head and foot, and all door and window Plasterboard ceiling to be resiliently hung or using resilient bars EPDM sealed to face of sheathing board and to window frame Rigid insulation to reveal per accredited construction details Mineral wool insulation fitted tightly in to web of edge beam. Dense mineral wool insulation and plasterboard lining to edge beam for acoustic performance Single leaf lintel to engineer's specification VCL sealed against window frame Sealant to back of frame Face of column behind 40mm rigid insulation 60mins duration. DPC 102.5 100 177.5 G/L .95 69



Brick to window returns

102.5

100

177.5

380

63.5

G/L

Openable window specification as per notes on plans fitted in window opening and suitably sealed to manufacturers recommendations Face of column behind providing support to Catnic lintel

Window sill in 22mm pre finish MDF or to client choice. Air tightness tape and sealant to back of window frame

PPC aluminium cills in colour to match with DPC lapped behind cill and below window

openings, with proprietary insulated cavity closers, incorporating DPC Cavity to be closed at wall head and foot, and all door and window separation from outer leaf.

Weep hole

EPDM sealed to face of sheathing board and to window frame

Facing brick with 10mm mortar joints.

horizontal centres of 1.2m at head and foot of wall and at all window and Ventilated cavity with clear coloured ryton slim vents at maximum

Brick-tie channels typically at 600mm horizontal centres fixed to studs with stand off screws - refer to structural engineer's specification door openings.

Vapour Control Layer with airtightness tape to all joints and penetrations 40mm Foil faced rigid insulation board with taped joints

Metal SFS stud (Metsec or equal and approved) to design and at centres to manufacturer's specification with mineral wool insulation fitted tightly in on sheathing board between.

1mm Vapour Control Layer to inside face of stud and with airtightness tape to all joints and penetrations

2 layers wallboard screw-fixed studs. 3mm plaster skim coat

4	19.02.21	Revised perfeedback from window manufacturer	window manufacturer	퓓
Rev.	Date.	Details.	Dro	Drawn. Checked.
Issue	Issued for:	CONSTR	CONSTRUCTION	
Proje	Project/Client:	Hr.	Project No: THE 20-0061	
Flats Can	at Groc michael	Flats at Groathill Road South for Carmichael Homes & Interiors Ltd	Drawing No: A(31)003	
			Revision: A	
Pro	Drawing:		Scale: 1:5@A3	
Z.	ical Win	Typical Window Cill Detail	Drawn by: NE	Date: 01/2021
			Checked by:	Date: 01/2021



Harrington

Thain

24 North Silver Street, Aberdeen AB10 1RL

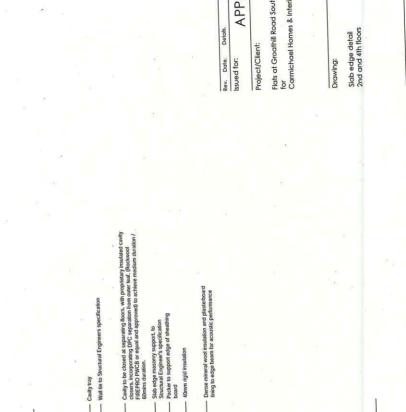
Tej: 01224 586 277 email: Info@THE-ap.co.uk web site; THE-ap.co.uk Edward

102.5

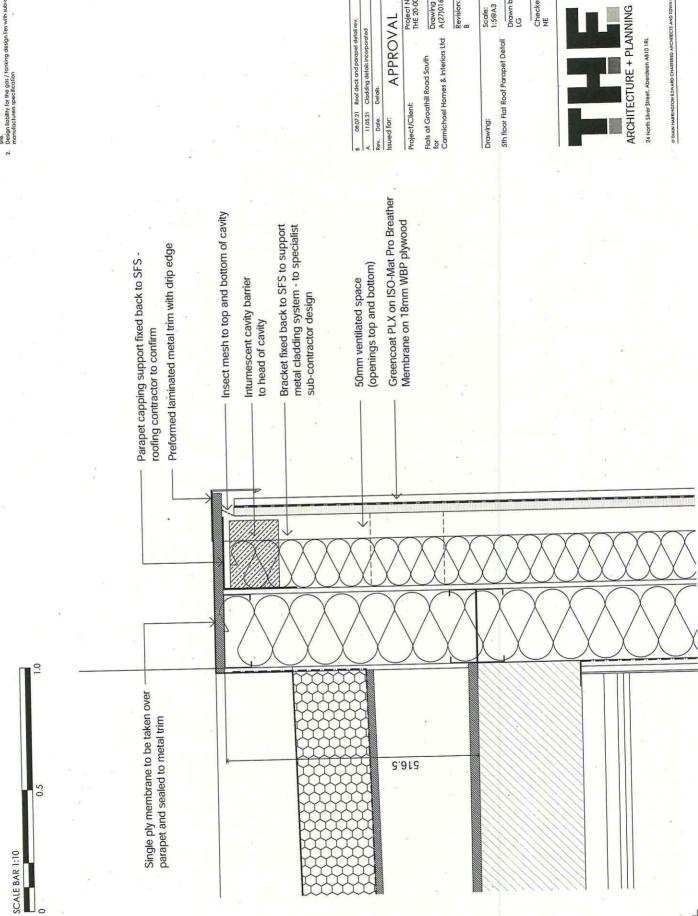
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SCALE BAR 1:10



Rev. Date. Details.		
Issued for: APPROVAL	AL	
Project/Client:	Project No: THE 20-0061	
Flats at Groathill Road South for Carmichael Homes & Interiors Ltd	Drawing No: A(21)003	
	Revision:	
Drawing:	Scale: 1:10@A3	58.
Slab edge detail 2nd and 4th floors	Drawn by: NE	Date: 03/2021
	Checked by:	Date: 03/2021
	F	Thain
		Harrington
ARCHITECTURE + PLANNING		Edward
24 North Silver Street, Aberdeen AB10 1RL	ems web	Tel: 01224 586 277 email: Info@THE-ap.co.uk web site; THE-ap.co.uk



NE NE Drawn. Checked.

APPROVAL

Drawing No: A(27)016

Tel: 01224 586 277 email: info@THE-ap.co.uk web site: THE-ap.co.uk

Edward

Harrington

Thain

Date: 03/2021 Date: 03/2021

Drawn by: LG Scale: 1:5@A3

Checked by: NE

Controctors must work only to figured dimensions which one to be checked on 316.
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