FIRE DETECTION

Smoke alarm to be located in principal habitable room so that no point in the room is greater than 7.5m from the nearest smoke detector.
(smoke alarms to comply with bs5446-1:2000)

Heat alarm to be located in kitchen so that no point in the kitchen is more than 5.3m from the nearest alarm.
(heat detectors to comply with BS5446-2:2003)

Every habitable room on an upper floor level not more than 4.5m above ground level to that does not have an alternative fire escape route shall have an emergency egress window complying with paragraph 1.9 for the escape purposes.

a smoke alarm is to be placed on the upper landings within 3m of every habitable room and connected to the dedicated circuit

CARBON MONOXIDE detector to be positioned within 1-3m horz from appliance and in full compliance with B.C technical booklet L section 2.51-2.53

carbon monoxide alarm to comply with BS EB50291. Alarms to incorporate a warning device to alert users when the working life is due to pass, or mains-powered BS EN 50291 Type A, carbon monoxide alarm wall fixed wiring fitted with a sensor failure warning device.

NEW SMOKE ALARM
(with battery back up) .

Provide and install proprietary mains powered smoke detectors/alarm devices to BS 5446 part 1:2000

The self contained smoke alarm units shall be permanently wired to a circuit (a) is seperatly fused at the distribution board(b) to which no other equipment is connected and (c) which, where a RCD is to be used in connection therwith, is not connected to a RCD which is also used in connection with any other circuit.

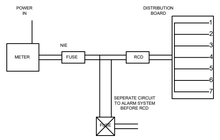
See connection diagram for regulation EE4(5)

ALL alarms to be interlinked.

All electrical work to be in accordance with latest edition IEE Regulations and to NIE requirements.

HD — DENOTES HEAT DETECTOR LINKED TO SMOKE ALARM SYSTEM.

SA — DENOTES SMOKE ALARM



SELF CONTAINED SMOKE ALARMS
(REGULATION EE4 (5)) SCHEMATIC (NTS)

DENOTES BREAK GLASS ALARM SOUNDER

EL — EMERGENCY LIGHTING WITH DEDICATED PROTECTED CIRCUIT
emergency lighting to comply with BS5266-1-90

E.O.D — EASY OPENING DEVICE

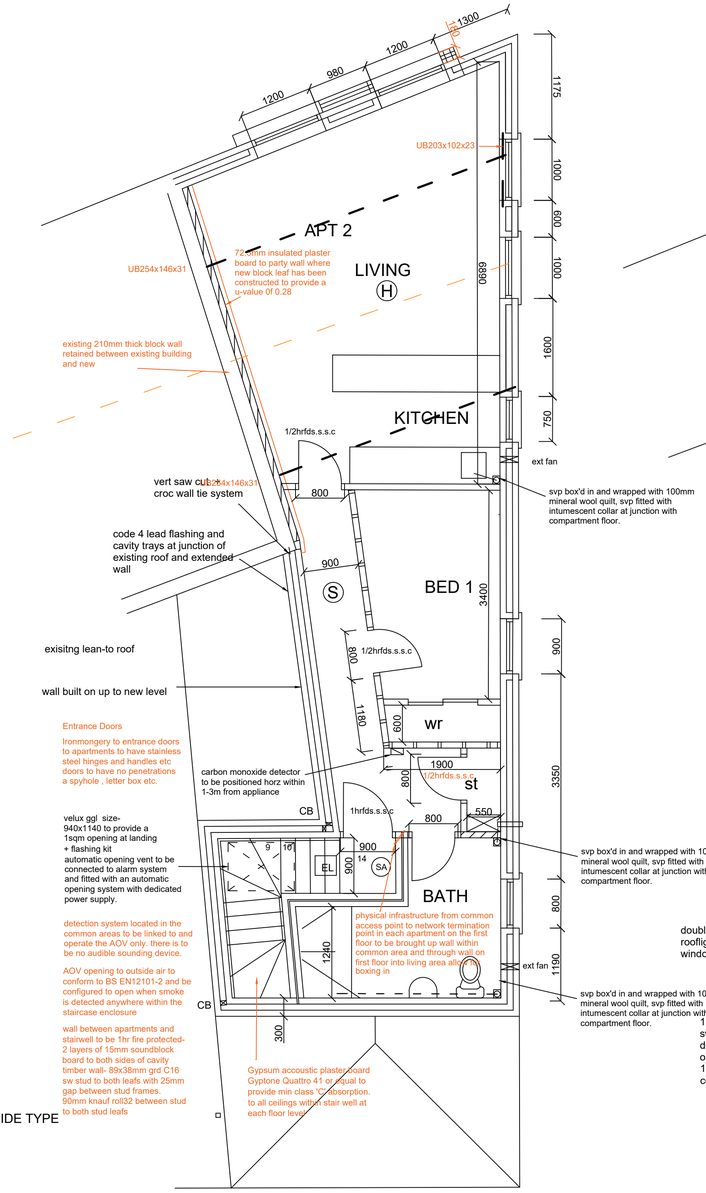
ILLUMINATED EXIT SIGN

CO 2 — FIRE EXTINGUISHER CARBON DIOXIDE TYPE

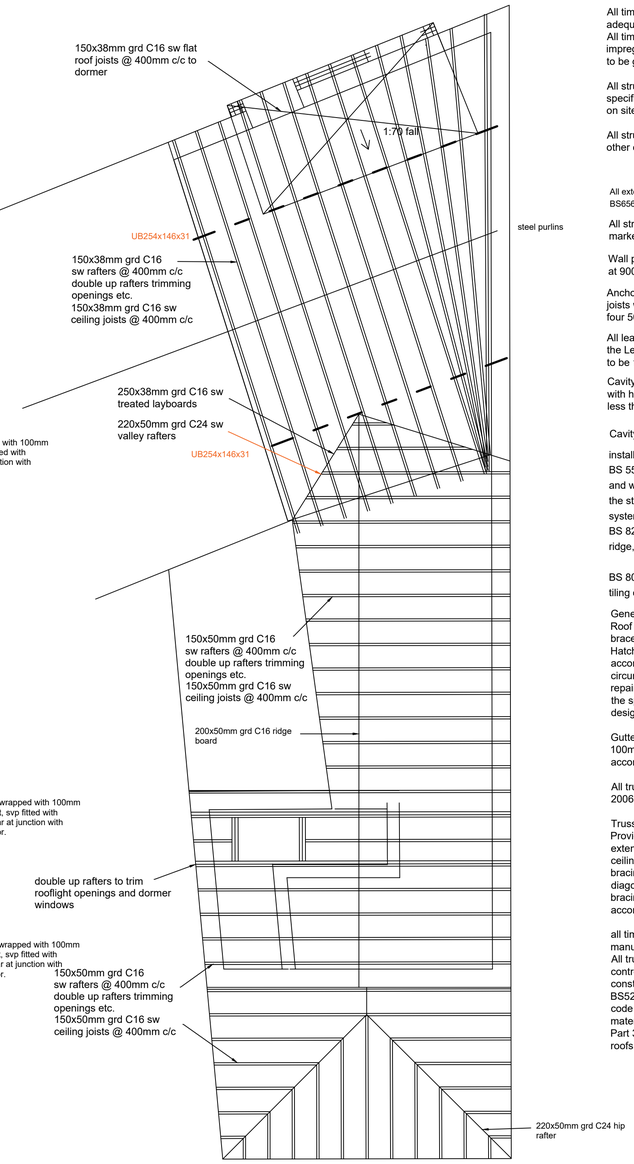
W — FIRE EXTINGUISHER WATER TYPE

N5 — emergency exit keep closed sign

N2 — staff emergency sign



PROPOSED SECOND FLOOR



TIMBER/ ROOF STRUCTURE

Roof trusses/ rafters to manufacturers full detail and spec.

FLAT ROOF JOISTS

All tiles in the eaves course , top course and verges and tiles adjacent to hips, valleys and abutments must be clip fixed with 9246 Redland clip.

All timber where built into brickwork shall be adequately coated with approved preservatives. All timbers where hidden are to be pressure impregnated, with Tanalith or equal. All cut ends to be given 2No coats of the same preservative.

All structural timbers to be grd C16 or |C24 (as specified) to BS5268:part 2 2002 and timbers on site maked 'dry' or 'kiln dry'.

All structural timber to treated with 'Cuprinol' or other equal approved preservative.

All external plywood to be 19mm ext grd ply to BS6566 grd 1-1, type WBP with standard finish.

All structural timber to be kiln dried and clearly marked so.

Wall plates to be tied down with galv. metal straps at 900mm crs. built into wall min. of 900mm below wall

Anchor straps- stainless steel. Fix securely to timber joists with 3.75mm galv. nails and to masonry with four 50x80mm guage sheradised screws evenly spaced.

All lead work to be carried out in accordance with the Lead Association handbook. Max length of lead to be 1500mm.

Cavity trays lead code 4 fully coated on both sides with high-build. Bitumen based paint. Lap joints not less than 50mm on bed of wet mortar.

Cavity walls to be closed with 1no 12.5mm thk supalux.

installation of roof to fully comply with BS5534-
BS 5534:2014 + A2:2018 FOR security, durability and weather-tightness and BS8612:2018 setting the standard for dry fix roofing products and systems
BS 8216, covering the specification of dry-fixed ridge, hip and verge systems for slating and tiling;

BS 8000-6:2013, covering workmanship of slating and tiling on site

General Trussed Rafter Notes:
Roof trusses to be manufactured, erected and braced to comply with BS5260: Part 3: 2006
Hatch, chimney and other openings to be in accordance with BS5266:part 3:2006. In no circumstance should any modifications or repairs be made to any trussed rafters without the specific approval of the trussed rafter designer

Gutter notes:
100mm square gutter and fitting in accordance with manufacturers instructions.

All trusses to comply with BS5268 part 3 : 2006

Trussed rafters Bracing Notes:
Provide longitudinal bracing and binders to extend over the whole length of the roof at ceiling and rafter levels. providing diagonal bracing at ceiling and rater levels. provide diagonal bracing on internal members. all bracing to be 100x25mm Grd C16 and to be in accordance with BS 5268: part3: 2006

all timber trusses to be installed to manufacturer guidance and recommendations. All truss information to be supplied to building control from the manufacturer before roof construction begins. Design to comply with BS5268: structural use of timber. Part 2:2002 code of practice for permissible stress design, materials and workmanship.
Part 3 2006 Code of Practice for trussed rafter roofs. AMD 16541, AMD 16972.

all internal hallways to be fire protected with 1 layer of 12.5mm fireline board to both sides of stud frame to provide 1/2hr protection

any low level glazing below 800mm above ffl or to doors shall be capable of withstanding a min horz force of 0.76kn/m frame and glazing

all services to be provided and in compliance with the 'Domestic Building services Compliance guide'

All fire stopping to be compliant with TBE (refer to dia 4.2 for guidance)

1/2hr proprietary cavity barriers around all door and window openings

any concealed flues to be fitted with an assess hatch

sound tests and notice of results to be carried out in accordance with the procedures as set out in TBG (See Appendix B of TBG)

Pre-completion- a sound test shall be carried out and the results to be provided to building control within 5 days of test completion. walls and floor to be tested.

DOORS ON ESCAPE ROUTE TO COMPLY WITH TBE PARAGRAPH 2.87-2.92.

2.87 In general doors on escape routes, whether fire doors or not, should only be fitted with locks or fastenings which are readily operated from the side approached by a person making an escape. The operation of such a lock or fastening should not involve the use of a key or the manipulation of more than one mechanism.
However, a door to a room may be locked when the room is not occupied provided that –
(a) it is not an access room to an inner room; or
(b) it is not part of an escape route for people in other parts of the

Where a door on an escape route has to be secured against entry when the building or part of the building is occupied, it should only be fitted with a lock or fastening which is readily operated, without a key, from the side approached by people making their escape. Similarly, where a secure door is operated by a code, combination, swipe or proximity card, biometric data or similar means, it should also be capable of being overriden from the side approached by people making their escape. Electrically powered locks should return to the unlocked position –

(ii) on loss of power or system failure; and
66 Fire safety Technical Booklet E: 2012
(iii) on activation of a manual door release unit (Type A) to BS EN 54-11 positioned at the door on the side approached by people making their escape. Where the door provides escape in either direction, a unit should be installed on both sides of the door.
2.88 In the case of places of assembly, shop and commercial buildings, doors on escape routes from rooms with an occupant capacity of more than 60 should either not be fitted with lock, latch or bolt fastenings, or be fitted with panic fastenings in accordance with BS EN 1125.
Direction of opening of doors
2.89 Doors on escape routes should, as far as practicable, open in the direction of escape. Doors should always open in the direction of escape in the following situations –
(a) from a place of special fire hazard;
(b) in the case of a building of Purpose Group 6 or 7 – where the number of occupants is more than 10; and
(c) in the case of a building of any other purpose group – where the number of people likely to use the door in the event of a fire is more

Doors on escape routes should open through not less than 90° and swing clear of any change in floor level, other than a threshold or single step (with a rise of not more than 170 mm) on the line of the doorway. At no point of its swing should a door reduce the effective width of any escape route across a

A door that opens towards a corridor should be recessed to prevent its swing from encroaching on the effective width of the corridor.
2.90 Revolving doors, automatic doors and turnstiles should not be permitted across escape routes unless –
(a) they have non-automatic swing doors of the required width immediately adjacent;
(b) they are of the required width and easily openable in an emergency; or
(c) where the doors are automatic –
(i) they are of the required width and fail safe to the open position;

(ii) they are of the required width and are provided with a monitored failsafe system for opening the doors if the main electricity

Technical Booklet E: 2012 Fire safety 67
Vision panels in doors
2.91 A glazed vision panel, or panels of not less than 0.1 m2, should be provided in a door that subdivides a corridor, or where a door swings both ways. The vision panel or panels should include –
(a) a lower zone of visibility not more than 500 mm to not less than 800 mm; and
(b) an upper zone of visibility not more than 1150 mm to not less than 1500 mm,
measured from the floor and located towards the leading edge of the door. See Diagram 2.14.
Height and width of escape routes
2.92 All escape routes should have a clear headroom of not less than 2 m and there should be no projections below this height, except for door frames. The width of an escape route should be measured at 1.5 m above floor level or pitch line. The projection of handrails, if less than 100 mm, and stringers, skirtings and architraves if less than 30 mm, on either or both sides should

The width of an escape doorway from a room should be taken as the clear width when the door is open (see Diagram B.6).

access to retail unit to fully comply with technical booklet R 2012 parag 3.2-3.22.
Doorways to accessible entrances
3.8 Doors to the principal entrance or alternative accessible entrance should be accessible to all, particularly wheelchair users and people with limited physical dexterity. Entrance doors may be manually operated without powered assistance, or power operated under manual or automatic control. Once open, all doors to accessible entrances should be wide enough to allow unrestricted passage for a variety of users, including wheelchair users, people carrying luggage, people with assistance dogs, and people with pushchairs and small children.
3.9 An accessible entrance doorway should contain a leaf which provides an effective clear width of not less than that given in column (2) of Table 3.1. This effective clear width applies to a single leaf door or one leaf of a double leaf door. However, where a double leaf door is power operated, the effective clear width may be incorporated between both leaves provided those leaves operate simultaneously. Where a building is to be altered or undergo a material change of use and the effective clear width given in column (2) of Table 3.1 cannot be achieved,an accessible entrance doorway may contain a leaf which provides an effective clear width of not less than that given in column (3) of Table 3.1.The effective clear width of a doorway should be measured in accordance with Diagram 3.1.

3.13 The force required to open a manually operated entrance door should be not more than –
(a) 30 Newtons between 0º (door closed) and 30º of the opening arc of the door; and
(b) 22.5 Newtons from a point greater than 30º of the opening arc of the door,
measured at the leading edge of the door leaf during the opening action. See Diagram 3.2.

Manually operated entrance doors to accessible entrances
3.12 Self-closing devices on manually operated non-powered swing doors can create difficulties for many people who have limited upper body strength, are pushing prams or are carrying heavy objects.The force needed to open a door and pass through the doorway, against a closing device, should therefore be limited.
A space alongside the leading edge of a door, on the pull side, will enable a wheelchair user to reach and grip the door handle, then open the door without releasing hold on the handle and without the footrest colliding with the return wall.
Door furniture on manually operated non-powered doors should be easy to operate by people with limited manual dexterity, and be readily apparent to assist visually impaired people.

Glazed entrance doors and glazed screens to accessible entrances
3.21 Visually impaired people should be in no doubt as to the location of glass entrance doors, especially when the doors are within a glazed screen. The presence of the door should be apparent when it is shut and also when open. Where it can be held open, measures should be taken to avoid people being harmed by walking into the door.
In addition to meeting the requirements of Part R, glazed doors and screens must also comply with the relevant requirements of Part V.
3.22 Where an entrance door is manufactured from transparent or translucent materials and –
(a) forms part of, or is adjacent to, a glazed screen, it should have its top and side face edges distinguishable, through suitable visual contrast, from that of the glazed screen; and
(b) is designed and installed to be capable of being held open, the leading edge of the door should be protected by a suitable distinguishable barrier when in the held open position.

DRAINAGE

DRAINAGE TO BE DESIGN & BUILD ITEM

Min depth of cover for these pipes to be min 600mm in vehicular areas and 300mm in pedestrian. If this is less protected than diagram 11.
Pipes penetrating walls to be protected as a diagram 12.
Pipes running under building to be surrounded by at least 100mm flexible filling. Pipes to be first wrapped in polythene. Provide movement joints of polystyrene at 6m c/c and at connections.

inspection chamber and manholes to be built oe 215mm concrete blocks and built orr 150mm concrete base. Balloon cage to svp dia 110mm, terminating min 900mm vert above any window window head level.

Any new drainage below floor slab to be min 100mm dia.

Bedding for drainage pipes
class |E bedding
(i.e Type C granular material well compacted. 10mm single size stone up to 375mm dia pipe
20mm single size stone greater than 375mm dia pipe.

Balloon cage to 110mm dia upvc svp, min. 900mm above window head level.

gullies with connections over 2m to be roddable.

all drainage below floor slab to be 110mm dia.

All sanitary pipe work to have such means of access as is necessary to facilitate the clearance of any blockages

min cover to drainage to be no less than 400mm

pvc pipes below ground to be encased in150mm conc surrond, foul drainage 100mm dia pipe, storm 100mm dia
Provide precast concrete surrounds to gully traps. Gully traps to be Wavin bottle gullies with removable trap.
Provide rodding access at each change in direction of waste and deep seal traps to sanitary fittings
provide rodding access at each change in direction of wastes and deep seal traps to sanitary fittings
Any sewer that is less than 1m from the building the trench is to be filled with concrete yo within vertical distance below the bottom of the foundations not more than the horz distance from the foundation less 150mm .pipes to be 4660

Foul and storm drainage pipes to be upvc of sizes and gradient as shown to BS4660:1973 and BS 5481:1977

PARTY WALLS

2.242 double leaf frames with absorbent material (see digram 2.37) playwood sheathing may be used inside lining faces of 200mm: structural reasons; each lining to be 2 or more layers of plasterboard, each sheet of minimum mass per unit 10kg/2, with staggered joints; absorbent material to be unfaced mineral wool batts or quilt (which may be wire reinforced), min density 10kg/m3, minum thickness of absorbent material
(a) 25mm if suspended in cavity betwen frames
(b) 50mm if fixed to one frame: or
(c) 25mm per batt (or Quilt) if one is fixed to each frame.

1 layer of 12.5mm fireline board and 1 layer of 15mm gypsum sound block to both sides of 25mm cavity timber stud party wall. stud frame to be 89x38mm grd C16 sw @ 600mm c/c

FIRE ALARM CALL POINTS TO BS5839: PART 1: 2013

FIRE ALARM SYSTEM TO BS5839:PART 1: 2013 TO BE INSTALLED THRO-OUT BUILDING.

EXIT SINGAGE TO ALL ESCAPE ROUTES TO COMPLY WITH BS5499: PART 1: 2013

portable firefighting equipment to BSEN3 standard and to be sited in compliance with BS5306, Part8, to the satisfaction of Northern Ireland Fire & Rescue Service.

ELECTRICAL INTAKES TO BE 1/2HR
FIRE RESISTANT CONSTRUCTION WITH
CO EXTINGUISHER AND 'FIRE DOOR KEEP SHUT' NOTICE.

VENTILATION TO BE IN FULL COMPLIANCE WITH TECH BOOKLET K 2012.

Shops and retail premises
3.54 CIBSE Guide B: 2005, Section 2.3.20 and CIBSE AM10: 2005 if naturally ventilated or CIBSE AM13: 2000 if mixed mode (see para 1.10).

Where fixed external lighting is installed, provide ***light fittings*** with the following characteristics:
a. Either:
i. lamp capacity not greater than 100 lamp-watts per light fitting; and
ii. all lamps automatically controlled so as to switch off after the area lit by the fitting becomes unoccupied; and
iii. all lamps automatically controlled so as to switch off when daylight is sufficient.
b. Or
i. lamp efficacy greater than 45 lumens per circuit-watt; and
ii. all lamps automatically controlled so as to switch off when daylight is sufficient; and
iii. light fittings controllable manually by occupants.

ABOVE GROUND DRAINAGE

9.2.2.2 PVCu Pipework and Fittings
Soil, waste and ventilating pipes and fittings shall be manufactured of PVCu to BS4514 with either neoprene ring joints or solvent welded.
9.2.2.3 Waste Pipes
Small diameter waste pipes and fittings shall be in MuPVC to BS5255 as manufactured by Polypipe, Marley or similar agreed. Traps shall be in Polypropylene to BS3943, 3" seal tubular type
Gradients for waste pipework shall be 2½o as standard unless noted otherwise.

TILE/ SLATE FIXING

All slates in the eaves course,top course and verges and tiles adjacent to hips,valleysand abutments must be clip fixed with 9246 Redland clip.

Ridge,hips,and verge tiles, All to be mechanically fixed.

Allow for nail fixing alternate diagonals but builder to provide computerised wid loading calculations and tile fixing spec to BS 5534, to Architect before tiling commences.

All timber where built into brickwork shall be adequately coated with approved preservative.

All timbers where hidden are to presure imp. with Tanalith or equal. All cut ends to be given 2no coats of the same preservative.

Underlay fixed with galv.s steel extra large head nails parallel to eaves so that water will drain freely. Vertical laps not less than 150mm wide.

Rafter vents to be FV 625 to provide 25000 sq mm ventilation and a minimum gap of 25mm in accordance with BS 5250:2011 +A1:2016

All structural timbers to be grd C16 or C24 (as specified) to BS 5268: part 2 2002 and timbers on site marked.

All external joinery to be treated with 'Cuprinol' or other equal approved preservative.

Battens moisture content not more than 14% at any time of fixing. Fixing battens to each support with round stainless steel nails 65mm long x 3.35mm.

Eaves- dress additional 300mm wide 500 guage polythene underlay over eaves and into gutter. Fix eaves filler to suit tiles.

Verge under cloak shall be mineral fibre sheet bed and point with coloured cement mortar.

Ridges- lay underlay over ridge lapping not less than 150mm. Tilling shall comply with BS5534. Keep tiles dry and clean until use. Fix roofing tiles to make the roof sound and watertight at the earliest opportunity. Repair any defects as quickly as practicable to minimise damage. Keep gutters and pipes free of debris and clean out at completion.

All external plywood to be 19mm ext grd ply to BS6566 grd 1-1, type WBP with standard finish.

All structural timber to be kiln dried and clearly marked so.

Wall plates to be tied down with galv. metal straps at 900mm crs. built into wall min. of 900mm below wall plate.

Anchor straps- stainless steel. Fix securely to timber joists with 3.75mm galv. nails and to masonry with four 50x80mm guage sheradised screws evenly spaced.

All lead work to be carried out in accordance with the Lead Association handbook. Max length of lead to be 1500mm.

Cavity trays lead code 4 fully coated on both sides with high-build. Bitumen based paint. Lap joints not less than 50mm on bed of wet mortar.

A-07/23- ADD. B.C NOTES

JWA
Architectural Design

Project
REPLACEMENT BUILDING
314 SHANKILL ROAD
BELFAST

Drawing
PROPOSED SEC FLOOR / ROOF PLAN

Drg.No: 002/23/102A

Scale: 1:50 @ A1 | Date: 01/2023

1 Brantde Grove, Newtownabbey
BT37 0QE
P/F. 028 90 853266
M. 07734318968
E. info@waidesign.co.uk

THIS DRAWING TO BE READ IN CONJUCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS. DRAWING NOT TO BE SCALED FROM. THIS DRAWING REMAINS THE COPYRIGHT OF JWA DESIGN