

Omid Trust
Change of Use of Vacant Offices/Cafe into 8no Flats
First & Second Floors
67 High St & 2-12 Cole St
Scunthorpe
DN15 6QZ

29 MAR 2015

2nd. November 2015

BUILDING SPECIFICATION

Demolitions & Alterations

Generally

Existing main roof finish to be checked to ensure no broken and/or missing slates etc and repaired as necessary prior to internal works beginning.

Check existing pitched roof & ensure adequate cross ventilation – if not present then introduce slate vents or other suitable system to give equivalent to 25mm continuous airgap at eaves and also 5mm continuous airgap at apex.

Strip out all redundant sanitary-ware, cart away & seal off services.

Strip out all redundant cupboards, shelving & kitchen units & cart away.

Strip out redundant chimney breasts as indicated (all chimneys already removed).

Strip out unwanted internal non load-bearing partitions as indicated on the drawings.

Take out doors & frames where indicated & block up redundant openings in internal walls with matching materials.

Form new door openings in internal masonry walls where indicated including new precast concrete lintols over with min 100mm end bearing.

Remove all external timber single glazed windows, cart away & prepare openings to receive new white double glazed upvc windows as specified later.

Make good to walls, ceilings & floors as necessary.

Ground Floor Vacant Shop

Strip out existing staircase as indicated, cart away & infill floor to match existing joisting/boarding etc.

Provide new wc, discharging by macerator into existing drain at front of building as indicated. New wc to be ambulant disabled with 2no supporting grab rails.

Existing External Walls (To achieve “U” value of 0.30W/m²K)

The existing external walls of the newly formed flats is 215mm solid masonry – this is below the threshold “U” value of 0.70 acceptable for a change of use. Therefore all **exposed** external walls to be dry-lined with 72.5mm th “Celotex PL4060” insulated plasterboard on plaster dabs with 3mm th plaster skim finish. This achieves an acceptable “U” value of 0.30 as per Celotex U value calculation attached.

Existing Pitched Roof (To achieve “U” value of 0.16W/m²K)

Ensure all new & existing party walling in loft spaces are taken up to underside of existing roof structure & fire-stopped.

To all existing pitched roof voids install 100mm th “Crown Wool” insulation laid between ceiling joists with 170mm th “Crown Wool” insulation laid crossways over.

Ensure suitable cross ventilation to roof to prevent condensation.

Replacement External Doors

New replacement external doors to have low level thresholds to give level access and single action release for fire escape.

Replacement External Windows (To Achieve “U” Value of 1.6W/m²K)

Generally

Renew all windows in white upvc by specialist supplier, double glazed to BS6262 with 16mm cavity filled argon, 1982 with safety glass to BS 6206 where applicable & “K” glass to all units. Provide opening vents to 1/20th floor area.

Trickle vents to be fitted to give min 8000mm² ventilation per room.

First Floor Habitable Rooms

All first floor habitable rooms (i.e. bedrooms and lounge areas) to have opening sash min 450mm wide x 750mm high to provide emergency fire escape.

Height of window cills to be no more than 1100mm from finished floor level.

Communal Lobby Windows

The communal lobby windows to first floor serving flats 2-4 & to second floor serving flats 6-8 shall have “automatic opening vent” minimum 1.5m² linked to smoke alarm to open in the event of fire.

Communal Stairwell Windows

The stairwell landing window to first floor to have opening sash min 1m² with manual opening accessible by persons from landing.

The stairwell landing window to second floor to have “automatic opening vent” minimum 1m² linked to smoke alarm in adjacent lobby to open in event of fire.

New Internal Stud Partitions

Min 75 x 50mm s/w studding with 12.5mm th plasterboard (min density 10kg/m²) & skim finish both sides. Infill all partitions with 25mm th “Supaglass” partition mat (min density 24kg/m²).

New Stud Party Walls (Minimum value of 43DnTw+CtrdB)

Form new party walling between flats where indicated in red to comply with Part E, section 2.141, wall type 4.1 & diagram 2-37(b) with 2no timber frames constructed of min 75 x 50mm s/w studding faced with 2no layers of 12.5mm th plasterboard (min density 10kg/m² per sheet) laid staggered joints with plaster skim finish. Minimum distance, between inner faces of linings, to be 200mm. Provide 50mm th un-faced mineral wool batts or quilt, min density 10kg/m³ fixed to one frame only - see appendix 1 attached.

Care to be taken to ensure wall passes flanking sound insulation test at abutment of external wall, check with sound consultant!

Upgrading Existing Party Walls

215mm th Masonry

Existing party walls that are 215mm th dense masonry are deemed to be suitable by default without remedial work.

100mm th Masonry

100mm th masonry walls where indicated in green should be upgraded in accordance with Part E, section 4.22 & diagram 4-2 to resist flanking transmission & to provide the required sound insulation.

Provide independent panel on one side of the masonry wall formed in min 75 50mm s/w studding faced with 2no layers of 12.5mm th plasterboard (min density 10kg/m² per sheet) laid staggered joints with plaster skim finish. Minimum distance between stud framing and existing walling to be 10mm. Provide 35mm th un-faced mineral wool batts or quilt, min density 10kg/m³ fixed in the cavity between the panel and the existing wall - see appendix 2 attached.

Sound Insulation to New Party Floor between – First Floor & Second Floor

Work to be carried out from below existing floor construction.

New party floor to be upgraded in accordance with Part E, Section 4.26-4.30, Floor Treatment 1 & diagram 4-3 with independent timber ceiling joists (see list below for sizes & max spans) with 2no layers of 12.5mm th plasterboard (min density 10kg/m² per sheet) to soffit laid staggered joints with plaster skim finish. Insert 100mm th mineral wool insulation min density 10kg/m³ laid in the cavity between joists – see appendix 3 attached.

Ceiling joists to be C24 @ 450mm centres:

47 x 120mm deep – max span 2.60m.

47 x 145mm deep – max span 3.26m.

47 x 170mm deep – max span 3.93m.

47 x 195mm deep – max span 4.60m.

47 x 220mm deep – max span 5.27m.

Sound Insulation to New Party Floor between – Ground Floor & First Floor

Work to be carried out from above existing floor construction.

Take up existing floor boarding where necessary and cart away.

New party floor to be upgraded in accordance with Part E, Section 4.31-4.34, Floor Treatment 2 & diagram 4-6.

Provide 100mm th mineral wool insulation min density 10kg/m³ laid in the cavity between joists.

Create floating floor with minimum 2 layers of minimum 8mm th board material (minimum mass 25kg/m² per layer) laid staggered joints, fixed together either by spot bonding, gluing or screwing. This floating floor shall then be laid loose on a resilient layer of mineral wool with minimum thickness of 25mm th & with minimum density of between 60-100 kg/m³. The mineral wool may be paper faced to the underside – see appendix 4 attached.

Ensure first floor has min 1 hour fire resistance on completion of works.

Ducts Passing Through Party Floors/Walls

All ducts & pipes penetrating through separating elements shall be treated in accordance with Part E, section 4.45-4.50 & diagram 4-9, to include boxing in & lagging of pipes etc with mineral wool – see appendix 5 attached.

New Internal Doors

All doors undercut by 10mm to allow cross ventilation.

FR30SC indicates doors with min 30 mins fire resistance, self-closing & complete with smoke seals & intumescent strips.

FR20 indicates doors with min 20 mins fire resistance, complete with smoke seals & intumescent strips.

Internal Staircases To Proposed Flats

All staircases to remain as existing.

All floors in common internal parts of the building to have carpet finish to reduce reverberation.

Electrics

HD – Indicates interlinked mains wired heat detector with battery back up to BS5839, Part 6.

SD – Indicates interlinked mains wired smoke detectors with battery back up to BS5839, Part 6.

Note that each flat shall have an autonomous interlinked alarm circuit.

All new lighting to have a luminous efficiency greater than 40 lumens/circuit watt.

All sockets to be located between 450 – 1200mm from finished floor level.

Provide new extract fans min:

60 litres/sec to kitchens to discharge to external air.

15 litres/sec to bathrooms to discharge to external air.

6 litres/sec to toilets discharging to external air.

Mechanical ventilation to have a specific fan power no worse than 0.5 W/(l/s).

Where bathrooms & toilets have no natural ventilation then fans shall be light operated with min 15 minutes over-run.

All electrical work to be carried out in accordance with Part P (Electrical Safety) and must be designed, installed, inspected & tested by a competent person.

On completion an appropriate BS7671 certificate shall be issued to prove compliance.

Plumbing

Note – that all new heating & hot water systems to comply with the “domestic building services compliance guide”.

Provide individual electric instantaneous water heaters to each flat and retail unit to provide hot water to bathrooms and kitchen sinks.

Provide adequate intumescent fire collars to all wastes over 40mm dia where passing through compartment walls & floors.

All baths, sinks & whb's to have hot tap installed on the left & to be fitted with device to limit hot water temperature to max 48° C.

Upvc waste pipework to be to BS5254 & BS5572 & all fittings to have min 75mm deep seal traps. Waste pipe sizes to be min 32mm dia to whb's & 40mm to baths & showers.

Provide anti-siphonic traps to all long drainage runs as necessary.

A water calculation to demonstrate that each newly formed dwelling has the potential to limit the use of wholesome water to a maximum of 125 litres per day is enclosed.

Heating

Provide electric convector heaters to all new flats & communal stair/lobby areas as necessary.

Fire Safety to Communal Areas To Flats

Install new fully maintained emergency lighting to BS 5499, all as indicated on the drawings.

Provide fire signage as indicated to conform to BS 5266, 2002.

“Fire Action” notices to be displayed in all retail units, min size 200 x300mm and fixed in a prominent position.

Fire fighting equipment and location to be agreed with fire officer.

Drainage

Surface Water

As existing.

Foul Water

Provide new foul water drainage as indicated connected to existing soil & vent pipes.
Provide rodding access to the head of long waste runs and new soil & vent pipe as necessary. New wc in ground floor vacant shop to discharge into existing drainage point via macerator.

General

All work to be carried out in accordance with the “Robust Construction Manual”.

PART E – It is recommended that a suitably qualified sound/noise consultant be engaged prior to commencement of works to ensure that the completed structure will meet the minimum required standard for sound reduction.

On completion a sound test will be required in accordance with annex B, and shall be carried out by a UKAS accredited person.

Provide “EPC” certificate for each flat & retail unit on completion of works.

Project Information

Date 24 September 2015
 Client James Mumby, JEM Management Services Project Omid Trust
 45 Oswald Road 67 High St & 2-12 Cole St
 Scunthorpe Scunthorpe
 DN15 7PN

Construction Type

Element : Wall - 0Solid Wall - Internal Insulation - Internal Dry Lining - Solid Brickwork

Solid Wall - Internal Insulation - Internal Dry Lining - Solid Brickwork

	Internal surface emissivity	: High	External surface emissivity : High			
			Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Pitch Bridge Details (°)
Outside surface resistance	-	-	-	-	0.040	
Brickwork	-	-	215.0	0.770	0.279	17.2% Mortar (215.0mm)
Plaster Dabs Cavity	-	-	15.0	-	0.170	20.0% Plaster Dabs (15.0mm)
Celotex PL4060 (60 + 12.5mm) joints taped as VCL	-	-	72.5	-	2.793	
Board joints sealed as VCL + Air Leakage Barrier	-	-	-	-	0.000	
Plaster, lightweight skim	-	-	3.0	0.220	0.014	
Inside surface resistance	-	-	-	-	0.130	

U-value = 0.30W/m²K

U-value, Combined Method : 0.297W/m²K (upper/lower limit 3.390 / 3.342m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000, dUrc0.0000)

(Correction for mechanical fasteners, Delta Uf = 0.000W/m²K)

(Correction for air gaps, Delta Ug = 0.000W/m²K)

(Based on the combined method for determining U-values of structures containing repeating thermal bridges)

Wall type 4: Framed walls with absorbent material

2.141 In this guidance only a timber framed wall is described. For steel framed walls, seek advice from the manufacturer.

2.142 The resistance to airborne sound depends on the mass per unit area of the leaves, the isolation of the frames, and the absorption in the cavity between the frames.

Construction

2.143 The construction consists of timber frames, with plasterboard linings on room surfaces and with absorbent material between the frames.

2.144 One wall type 4 construction (type 4.1) is described in this guidance.

2.145 Details of how junctions should be made to limit flanking transmission are also described in this guidance.

2.146 Points to watch

Do

- a. Do ensure that where fire stops are needed in the cavity between frames that they are either flexible or fixed to only one frame.
- b. Do stagger the position of sockets on opposite sides of the separating wall, and use a similar thickness of cladding behind the socket box.
- c. Do ensure that each layer of plasterboard is independently fixed to the stud frame.
- d. Do control flanking transmission from walls and floors connected to the separating wall as described in the guidance on junctions.

Do not

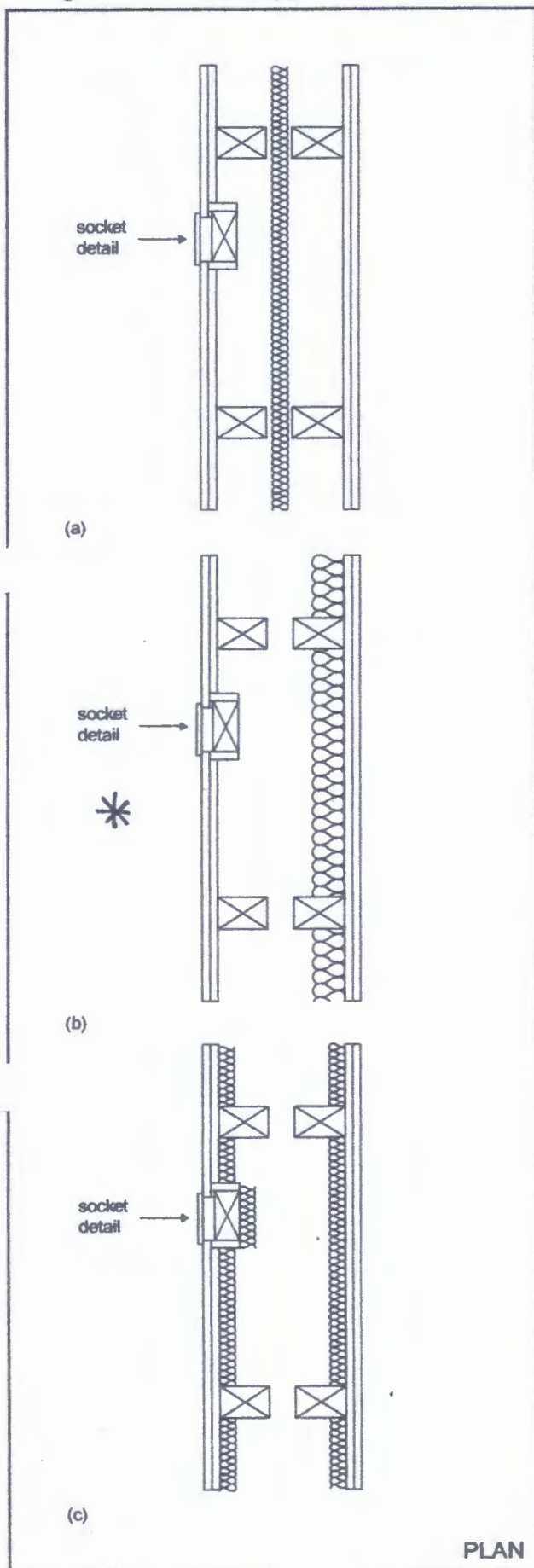
- a. Where it is necessary to connect the two leaves together for structural reasons, do not use ties of greater cross section than 40mm x 3mm fixed to the studwork at or just below ceiling level and do not set them at closer than 1.2m centres.
- b. Do not locate sockets back to back. A minimum edge to edge stagger of 150mm is recommended. Do not chase plasterboard.

2.147 Wall type 4.1 Double leaf frames with absorbent material (see Diagram 2-37)

- minimum distance between inside lining faces of 200 mm
- plywood sheathing may be used in the cavity as necessary for structural reasons
- each lining to be two or more layers of plasterboard, each sheet of minimum mass per unit area 10 kg/m², with staggered joints
- absorbent material to be unfaced mineral wool batts or quilt (which may be wire reinforced), minimum density 10 kg/m³
- minimum thickness of absorbent material:
 - (a) 25 mm if suspended in the cavity between frames,
 - (b) 50 mm if fixed to one frame,
 - (c) 25 mm per batt (or quilt) if one is fixed to each frame.

Note: A masonry core may be used where required for structural purposes, but the core should be connected to only one frame.

Diagram 2-37: Wall type 4.1



Junction requirements for wall type 4

Junctions with an external cavity wall with masonry inner leaf

2.148 No guidance available (seek specialist advice).

Junctions with an external cavity wall with timber frame inner leaf

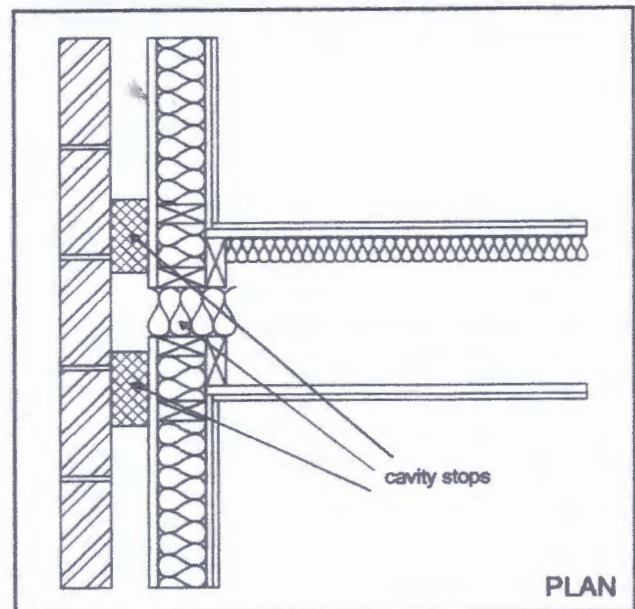
2.149 Where the external wall is a cavity wall:

- (a) the outer leaf of the wall may be of any construction, and
- (b) the cavity should be stopped between the ends of the separating wall and the outer leaf with a flexible closer. See Diagram 2-38.

2.150 The wall finish of the inner leaf of the external wall should be:

- (a) one layer of plasterboard, or
- (b) two layers of plasterboard where there is a separating floor
- (c) each sheet of plasterboard of minimum mass per unit area 10 kg/m^2 , and
- (d) all joints should be sealed with tape or caulked with sealant.

Diagram 2-38: Wall type 4 – external cavity wall with timber frame inner leaf



Junctions with an external solid masonry wall

2.151 No guidance available (seek specialist advice).

Junctions with internal framed walls

2.152 There are no restrictions on internal walls meeting a type 4 separating wall.

Junctions with internal masonry walls

2.153 There are no restrictions on internal framed walls meeting a type 4 separating wall.

Junctions with internal timber floors

2.154 Block the air paths through the wall into the cavity by using solid timber blockings or continuous ring beam or joists.

Junctions with internal concrete floors

2.155 No guidance available (seek specialist advice).

Junctions with timber ground floors

2.156 Block the air paths through the wall into the cavity by using solid timber blockings or a continuous ring beam or joists.

2.157 See Building Regulation Part C - Site preparation and resistance to moisture, and Building Regulation Part L - Conservation of fuel and power.

Junctions with concrete ground floors

2.158 The ground floor may be a solid slab, laid on the ground, or a suspended concrete floor. A concrete slab floor on the ground may be continuous under a type 4 separating wall. A suspended concrete floor may only pass under a wall type 4 if the floor has a mass per unit area of at least 365 kg/m².

2.159 See Building Regulation Part C - Site preparation and resistance to moisture, and Building Regulation Part L - Conservation of fuel and power.

Junctions with ceiling and roof space

2.160 The wall should preferably be continuous to the underside of the roof.

2.161 The junction between the separating wall and the roof should be filled with a flexible closer.

2.162 The junction between the ceiling and the wall linings should be sealed with tape or caulked with sealant.

Where the roof or loft space is not a habitable room and there is a ceiling with a minimum mass per unit area 10 kg/m² and with sealed joints, either:

- (a) the linings on each frame may be reduced to two layers of plasterboard, each sheet of minimum mass per unit area 10 kg/m², or
- (b) the cavity may be closed at ceiling level without connecting the two frames rigidly together and then one frame may be used in the roof space provided there is a lining of two

layers of plasterboard, each sheet of minimum mass per unit area 10 kg/m², on both sides of the frame.

2.163 Where there is an external wall cavity, the cavity should be closed at eaves level with a suitable material.

Junctions with separating floors

2.164 There are important details in Section 3 concerning junctions between wall type 4 and separating floors.

Wall treatment 1: Independent panel(s) with absorbent material

Diagram 4-2: Wall treatment 1 **APPENDIX 2**

4.22 The resistance to airborne sound depends on the form of existing construction, the mass of independent panel(s), the isolation of the panel(s) and the absorbent material.

Construction

4.23 The independent panel may be used on one side of the existing wall only where the existing wall is masonry, and has a thickness of at least 100 mm and is plastered on both faces. With other types of existing wall the independent panels should be built on both sides.

4.24 Independent panel(s) with absorbent material (see Diagram 4-2)

- minimum mass per unit area of panel (excluding any supporting framework) 20 kg/m²
- each panel should consist of at least 2 layers of plasterboard with staggered joints
- if the panels are free-standing they should be at least 25 mm from masonry core
- if the panels are supported on a frame there should be a gap of at least 10 mm between the frame and the face of the existing wall
- mineral wool, minimum density 10 kg/m³ and minimum thickness 35 mm, in the cavity between the panel and the existing wall

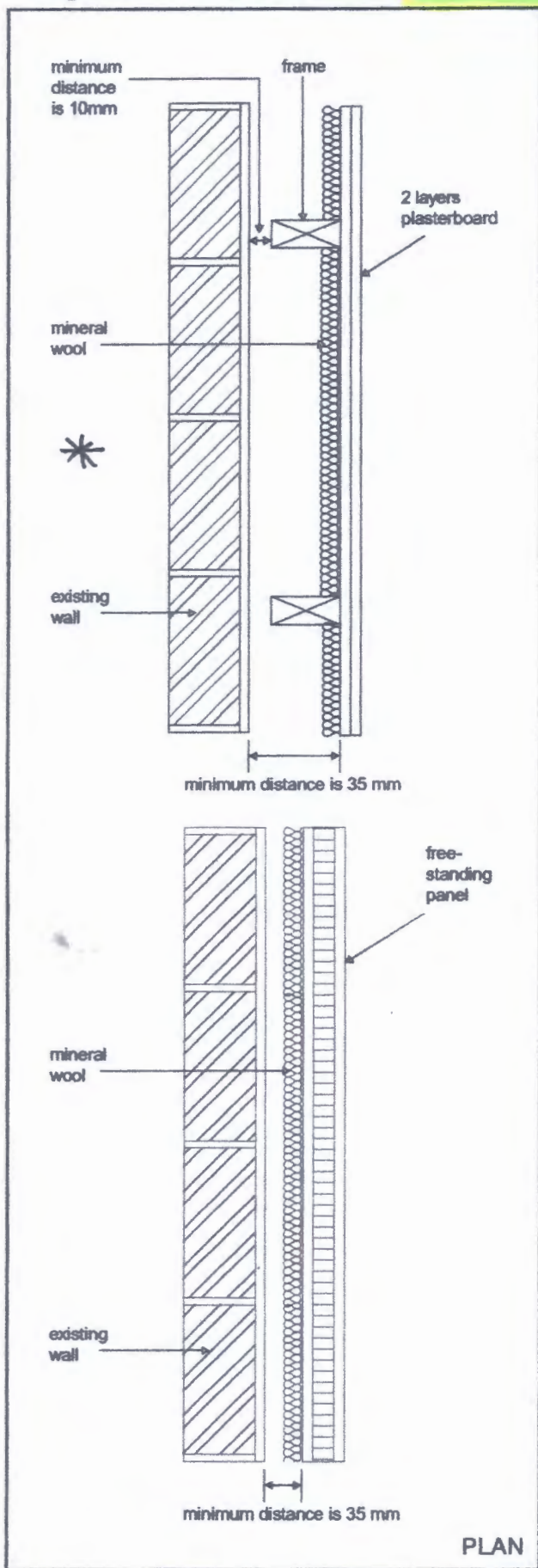
4.25 Points to watch

Do

- a. Do ensure that the independent panel and its supporting frame are not in contact with the existing wall.
- b. Do seal the perimeter of the independent panel with tape or sealant.

Do not

Do not tightly compress the absorbent material as this may bridge the cavity.



Floor treatment 1: Independent ceiling with absorbent material

4.26 The resistance to airborne and impact sound depends on the combined mass of the existing floor and the independent ceiling, the absorbent material, the isolation of the independent ceiling and the airtightness of the whole construction.

4.27 Independent ceiling with absorbent material (see Diagram 4-3)

- at least 2 layers of plasterboard with staggered joints, minimum total mass per unit area 20 kg/m²
- an absorbent layer of mineral wool laid on the ceiling, minimum thickness 100 mm, minimum density 10 kg/m³.

The ceiling should be supported by one of the following methods:

- independent joists fixed only to the surrounding walls. A clearance of at least 25 mm should be left between the top of the independent ceiling joists and the underside of the existing floor construction, or
- independent joists fixed to the surrounding walls with additional support provided by resilient hangers attached directly to the existing floor base.

Note: This construction involves a separation of at least 125 mm between the upper surface of the independent ceiling and the underside of the existing floor construction. However, structural considerations determining the size of ceiling joists will often result in greater separation. Care should be taken at the design stage to ensure that adequate ceiling height is available in all rooms to be treated.

4.28 Where a window head is near to the existing ceiling, the new independent ceiling may be raised to form a pelmet recess. See Diagram 4-4.

4.29 For the junction detail between floor treatment 1 and wall treatment 1, see Diagram 4-5.

4.30 Points to watch

Do

- Do remember to apply appropriate remedial work to the existing construction.
- Do seal the perimeter of the independent ceiling with tape or sealant.

Do not

- Do not create a rigid or direct connection between the independent ceiling and the floor base.
- Do not tightly compress the absorbent material as this may bridge the cavity.

APPENDIX 3

Diagram 4-3: Floor treatment 1

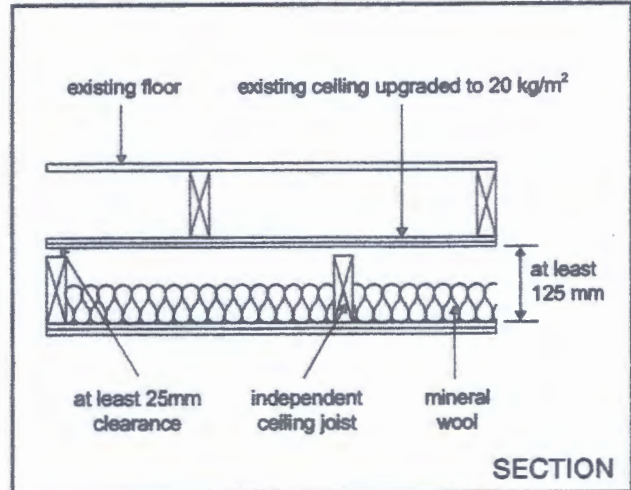


Diagram 4-4: Floor treatment 1 - high window head detail

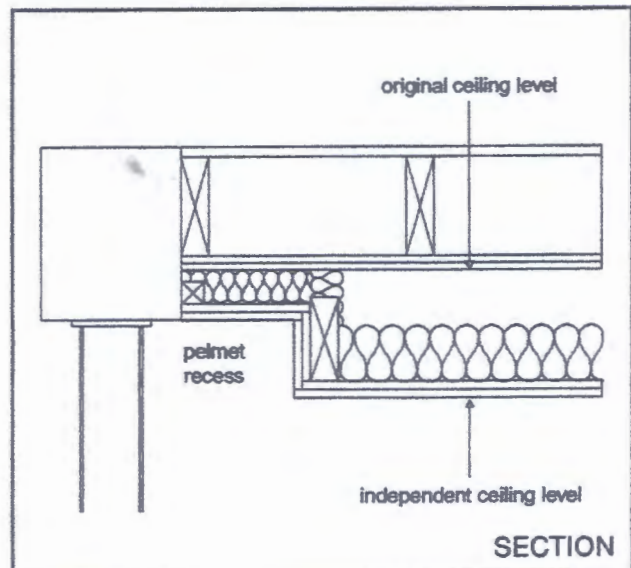
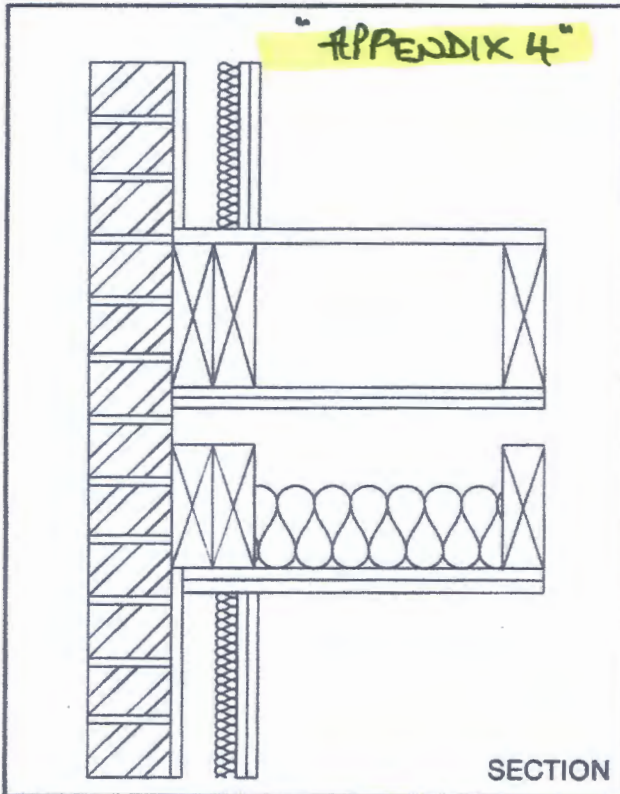


Diagram 4-5: Floor treatment 1 - wall treatment 1



Note: The lower figure of density for the resilient layer gives the best insulation but a 'softer' floor. In such cases additional support can be provided around the perimeter of the floor by using a timber batten with a foam strip along the top attached to the wall.

4.33 For the junction detail between floor treatment 2 and wall treatment 1, see Diagram 4-7.

4.34 Points to watch

- Do**
- Do remember to apply appropriate remedial work to the existing construction.
 - Do use the correct density of resilient layer and ensure it can carry the anticipated load.
 - Do allow for movement of materials e.g. expansion of chipboard after laying (to maintain isolation).
 - Do carry the resilient layer up at all room edges to isolate the floating layer from the wall surface.
 - Do leave a small gap (approx. 5 mm) between skirting and floating layer and fill with a flexible sealant.
 - Do lay resilient materials in sheets with joints tightly butted and taped.
 - Do seal the perimeter of any new ceiling with tape or sealant.

- Do not**
- Do not bridge between the floating layer and the base or surrounding walls (e.g. with services or fixings that penetrate the resilient layer).**

Floor treatment 2: Platform floor with absorbent material

4.31 The resistance to airborne and impact sound depends on the total mass of the floor, the effectiveness of the resilient layer and the absorbent material.

4.32 Platform floor with absorbent material (see Diagram 4-6)

Where this treatment is used to improve an existing timber floor, a layer of mineral wool (minimum thickness 100 mm, minimum density 10 kg/m³) should be laid between the joists in the floor cavity.

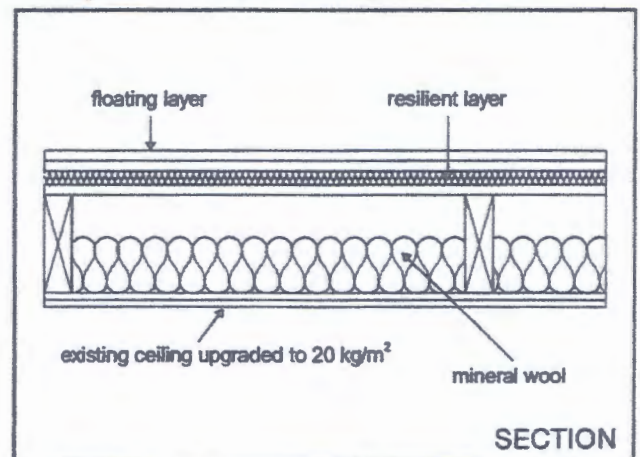
The floating layer should be:

- a minimum of two layers of board material
- minimum total mass per unit area 25 kg/m²
- each layer of minimum thickness 8mm
- fixed together (e.g. spot bonded or glued/screwed) with joints staggered

The floating layer should be laid loose on a resilient layer. The resilient layer specification is:

- mineral wool, minimum thickness 25 mm, density 60 to 100 kg/m³
- the mineral wool may be paper faced on the underside.

Diagram 4-6: Floor treatment 2



Junctions with floor penetrations

"APPENDIX 5"

4.45 Piped services (excluding gas pipes) and ducts which pass through separating floors in conversions should be surrounded with sound absorbent material for their full height and enclosed in a duct above and below the floor.

Do

- a. Do seal the joint between casings and ceiling with tape or sealant.
- b. Do leave a nominal gap (approx. 5 mm) between the casing and any floating layer and fill with sealant.

Construction

4.46 Pipes and ducts that penetrate a floor separating habitable rooms in different flats should be enclosed for their full height in each flat.

4.47 The enclosure should be constructed of material having a mass per unit area of at least 15 kg/m².

4.48 Either line the enclosure, or wrap the duct or pipe within the enclosure, with 25 mm unfaced mineral wool.

4.49 The enclosure may go down to the floor base if floor treatment 2 is used but ensure isolation from the floating layer.

4.50 Penetrations through a separating floor by ducts and pipes should have fire protection to satisfy Building Regulation Part B - Fire safety. Fire stopping should be flexible and also prevent rigid contact between the pipe and floor.

Note: There are requirements for ventilation of ducts at each floor where they contain gas pipes. Gas pipes may be contained in a separate ventilated duct or they can remain unducted. Where a gas service is installed, it shall comply with relevant codes and standards to ensure safe and satisfactory operation. See The Gas Safety (Installation and Use) Regulations 1998, SI 1998 No.2451.

Diagram 4-9: Floor penetrations