

SOUND TESTS FOR THE SITE MUST COMPLY WITH THE FOLLOWING REGULATIONS FROM TECHNICAL BOOKLET G OF NI BUILDING REGULATIONS 2012

SETS OF TESTS IN DWELLINGHOUSES

1.20 Normally, one set of tests should comprise two individual sound insulation tests (two airborne tests) –
(a) a test of insulation against airborne sound between one pair of rooms (where possible suitable for use as living rooms) on opposite sides of the separating wall; and
(b) a test of insulation against airborne sound between another pair of rooms (where possible suitable for use as bedrooms) on opposite sides of the separating wall.

SETS OF TESTS IN FLATS AND MAISONNETTES WITH SEPARATING FLOORS BUT WITHOUT SEPARATING WALLS

1.21 Normally, one set of tests should comprise four individual sound insulation tests (two airborne tests, two impact tests) –
(a) tests of insulation against both airborne and impact sound between one pair of rooms (where possible suitable for use as living rooms) on opposite sides of the separating floor; and
(b) tests of insulation against both airborne and impact sound between another pair of rooms (where possible suitable for use as bedrooms) on opposite sides of the separating floor.

SETS OF TESTS IN FLATS AND MAISONNETTES WITH A SEPARATING FLOOR AND A SEPARATING WALL

1.22 Normally, one set of tests should comprise six individual sound insulation tests (four airborne tests, two impact tests) –
(a) a test of insulation against airborne sound between one pair of rooms (where possible suitable for use as living rooms) on opposite sides of the separating wall;
(b) a test of insulation against airborne sound between another pair of rooms (where possible suitable for use as bedrooms) on opposite sides of the separating wall;
(c) tests of insulation against both airborne and impact sound between one pair of rooms (where possible suitable for use as living rooms) on opposite sides of the separating floor; and
(d) tests of insulation against both airborne and impact sound between another pair of rooms (where possible suitable for use as bedrooms) on opposite sides of the separating floor.

TYPES OF ROOMS FOR TESTING

1.24 It is preferable that each set of tests contains individual tests in bedrooms and living rooms.
1.25 Where pairs of rooms on either side of the separating element are different (e.g. a bedroom and a study, a living room and a bedroom), at least one of the rooms in one of the pairs should be a bedroom and at least one of the rooms in the other pair should be a living room.
1.26 Where the layout has only one pair of rooms on opposite sides of the entire area of separating wall or floor between two dwellings or rooms for residential purposes then the number of airborne and impact sound insulation tests set out in paragraphs 1.20 to 1.22 may be reduced accordingly.
1.27 The approved procedure described in Appendix B includes requirements relating to rooms.

SETS OF TESTS IN ROOMS FOR RESIDENTIAL PURPOSES

1.28 To conduct a set of tests, the sound insulation between the main rooms should be measured according to the principles set out in this section for new buildings and material change of use, but adapting them to suit the circumstances.

ALL SOUND TEST RESULTS MUST BE RECORDED IN THE FOLLOWING MANNER AND ISSUED TO BUILDING CONTROL FOR APPROVAL

APPROVED MANNER OF RECORDING PRE-COMPLETION TESTING RESULTS

1.42 The test report of a set of tests must contain at least the following information, in the order below –
(a) Address of the building.
(b) Type(s) of property.
(c) Use the definitions in Part A of the Building Regulations: dwelling, flat, room for residential purposes. State if the building is of historic or architectural merit where the building would warrant sympathetic treatment and where advice from specialists (Northern Ireland Environment Agency) would be beneficial.
(d) Date(s) of testing.
(e) Organisation carrying out testing, including –
(i) name and address;
(ii) third party accreditation number (e.g. UKAS or European equivalent);
(iii) name(s) of person(s) in charge of test; and
(iv) name(s) of client(s).
(f) A statement (preferably in a table) giving the following information –
(i) the rooms used for each test within the set of tests;
(ii) the measured single-number quantity (DnT,w + Ctr for airborne sound insulation and L_{nT,w} for impact sound insulation) for each test within the set of tests;
(iii) the sound insulation values that should be achieved according to the values given in Tables 1a or 1b; and
(iv) an entry stating "Pass" or "Fail" for each test within the set of tests according to the sound insulation values given in Tables 1a or 1b.
(g) Brief details of test, including –
(i) equipment;
(ii) a statement that the test procedures in Appendix B have been followed. If the procedure could not be followed exactly then the exceptions should be described and reasons given;
(iii) source and receiver room volumes (including a statement on which rooms were used as source rooms); and
(iv) results of tests shown in tabular and graphical form for third octave bands according to the relevant part of the BS EN ISO 140 series and BS EN ISO 717 series, including –
(a) single-number quantities and the spectrum adaptation terms; and
(b) DnT and L_{nT} data from which the single number quantities are calculated.

SOUND REQUIREMENTS (AS PER BLDG REGS TECHNICAL BOOKLET G (TB G))

SOUND TESTING (AS TB G SECTION 1 & APPENDIX B):

contractor to carry out sound testing between dwellings and achieve current required performance standards in accordance with part g ni building regulations 2012. contractor will be responsible for the design / testing to current regulations and be responsible for any additional / remedial work required. additional testing to be undertaken, as required, until such times as current regulations are fully complied with.

PARTY WALLS - WALL TYPE 2.1 (as to g 2.67):

- (1) - 7n block to meet sound requirements with min. density of 1900kg/m³ (mass per unit area inc. plaster of min. 415kg/m²), contractor to provide details (manufacturer's datasheet) of proposed block in advance.
- (2) - junction to external wall: (1) as per tb g 2.72 - party wall should be "bonded to inner leaf of external wall in such a way that the separating wall contributes at least 50% of the bond at the junction (see diagram 2.67); (2) as per tb g 2.71 - proprietary vertical cavity stop to suit cavity width in external cavity - "rockwool acoustic party wall dpc" or equal and approved.
- (3) - party cavity wall ties - to be "wall tie type a" as per tb g 2.19 - wire type butterfly ties as described in bs en 845-1 to suit cavity widths (between ~90mm & ~102mm), spacing at 600mm centres horizontally and 450mm centres vertically (unless recommended otherwise by manufacturer), ties to external cavities are "wall tie type b" as specified.
- (4) - insulation to party wall cavity (only) of mineral fibre insulation fully filling all voids and tightly abutting external cavity wall insulation / barrier (as per tb g 2.71b).
- (5) - junction to internal floors: ground floors should not bridge cavity, first floor joist hangers at junction with party walls only (as per tb g para 2.82), steel beams built into party walls at first floor to be fully built in with all gaps fully closed and sealed.
- (6) - junction to ceilings / roofs: as per tb g para 2.87 - party wall should be continuous to the underside of the roof, and as per para 2.88 the junction between the separating wall and the roof should be closed with a proprietary flexible closer (see diagram 2.25) such as rockwool.
- (7) - back to back tracking / recesses for services and sockets should be avoided.

INTERNAL STUD WALLS - INTERNAL WALL TYPE B (AS TB G 5.17):

- (1) - min 75mm cavity, with all joints / penetrations well sealed.
- (2) - all internal stud walls of bedrooms and wc / bathrooms to be acoustically insulated with 25mm isowood age 1200 between studs - excluding lengths of walls with doors and walls between ensuites & associated bedrooms.

INTERNAL SOLID WALLS - INTERNAL WALL TYPE C (AS TB G 5.18):

- (1) - min. mass per unit area excl finish of 120kg/m² with all joints / penetrations well sealed.

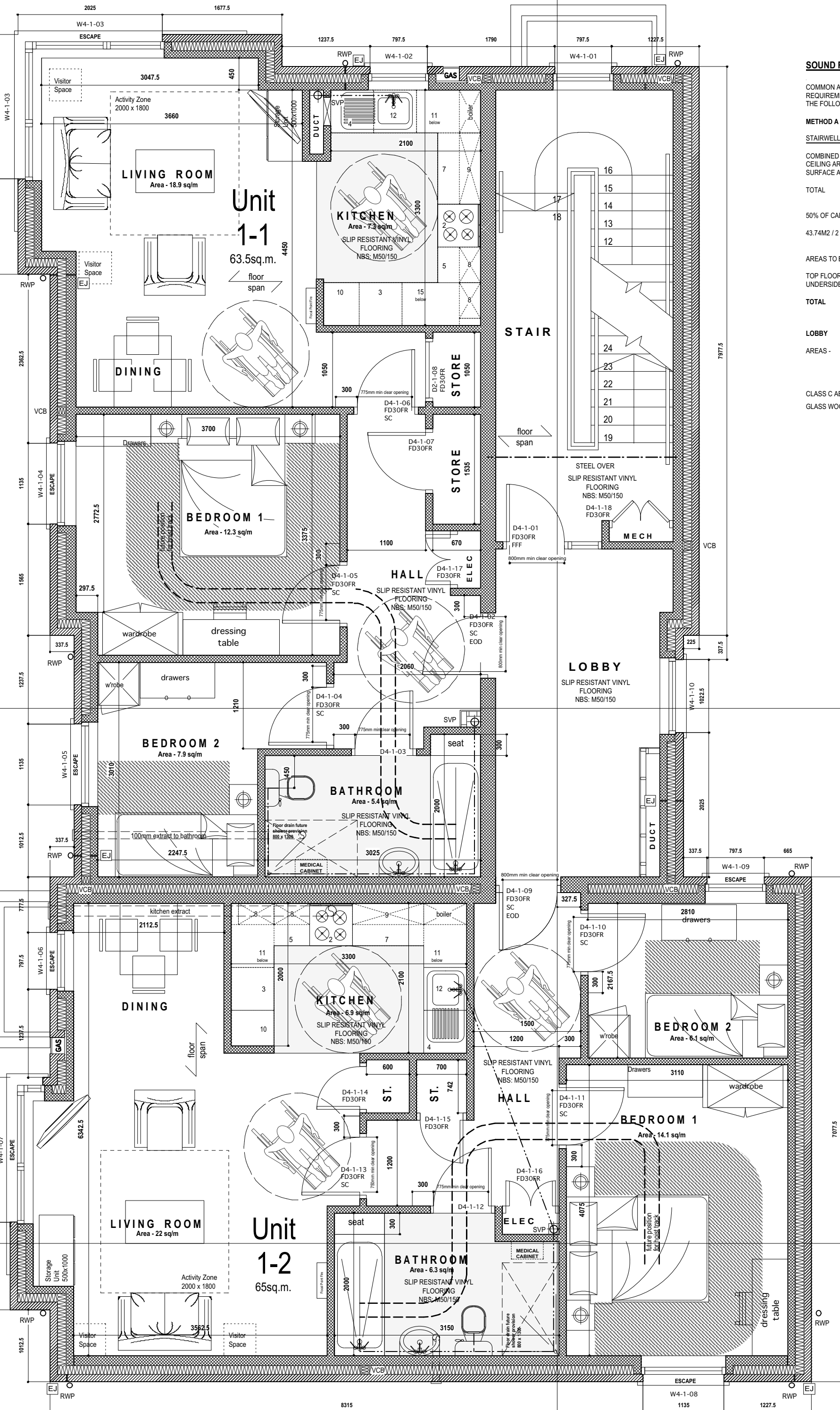
INTERNAL TIMBER FLOORS - INTERNAL FLOOR TYPE C (AS TB G 5.22) - REFER TO '2145-AA-2-23':

- (1) - floor surface - 22mm 18g plywood flooring glued and screwed - min. mass per unit area excl finish of 15kg/m² with all joints / penetrations well sealed.
- (2) - absorbent layer of mineral wool (min. thickness 100mm, min. density 10kg/m³) laid in the cavity - contractor to coordinate with precautions to be taken with m&e services, for example, to prevent overheating of lights / cables etc. methodology to be agreed with architect / m&e engineer in advance.
- (3) all timber joist sizing and specification to be as per albert hys & associates drawings, all to be confirmed by structural engineer.
- (4) 12.5mm plasterboard ceiling with skim finish to underside of joists (min. mass per unit area of 10kg/m²) with all edges / penetrations well sealed.

DOOR LEGEND

EOD EASY OPENING DEVICE
VP VISION PANEL
FF FREE FROM FIXINGS
FD30SC FIRE DOOR 30 MINS INTEGRITY, COMBINED SMOKE & COLD SMOKE SEAL, SELF-CLOSER
FD60SC FIRE DOOR 60 MINS INTEGRITY, COMBINED SMOKE & COLD SMOKE SEAL, SELF-CLOSER

Kitchen units and appliance spaces - Ref: N11-310, 320, 340, 350 - Apartment 0-1																
Required	KITCHEN UNITS / APPLIANCES REQUIRED BY DSD										ADDITIONAL UNITS					
	Stove Unit 600 x 700 (1)	Cooker 600 x 600 (2)	Fridge 600 x 600 (3)	Washing Machine 600 x 600 (4)	Dishwasher 600 x 600 (5)	Sink Unit 600 x 600 (6)	Tap Unit 600 x 600 (7)	Washing Machine 600 x 600 (8)	Dishwasher 600 x 600 (9)	Sink Unit 600 x 600 (10)	Stove Unit 600 x 700 (11)	Cooker 600 x 600 (12)	Fridge 600 x 600 (13)	Washing Machine 600 x 600 (14)	Dishwasher 600 x 600 (15)	Total length of worktop for Stove & Cooker
0-1 - 3PB	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	2500
0-1 - 3PB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3600



SOUND REQUIREMENT TO COMMUNAL AREAS:

COMMON AREAS (LOBBIES AND STAIRWELLS) SHOULD COMPLY WITH THE SOUND REQUIREMENTS SET OUT IN TECHNICAL BOOKLET G SECTION 7. THE FOLLOWING AREAS SHOULD HAVE A "CLASS C" SOUND ABSORBING ACOUSTIC BOARD.

METHOD A CALCULATION

STAIRWELL

COMBINED AREA OF STAIR TRENDS = 9.14M²
CEILING AREA OF TOP FLOOR = 19.8M²
SURFACE AREA OF LANDINGS = 19.8M²
TOTAL = 48.74M²

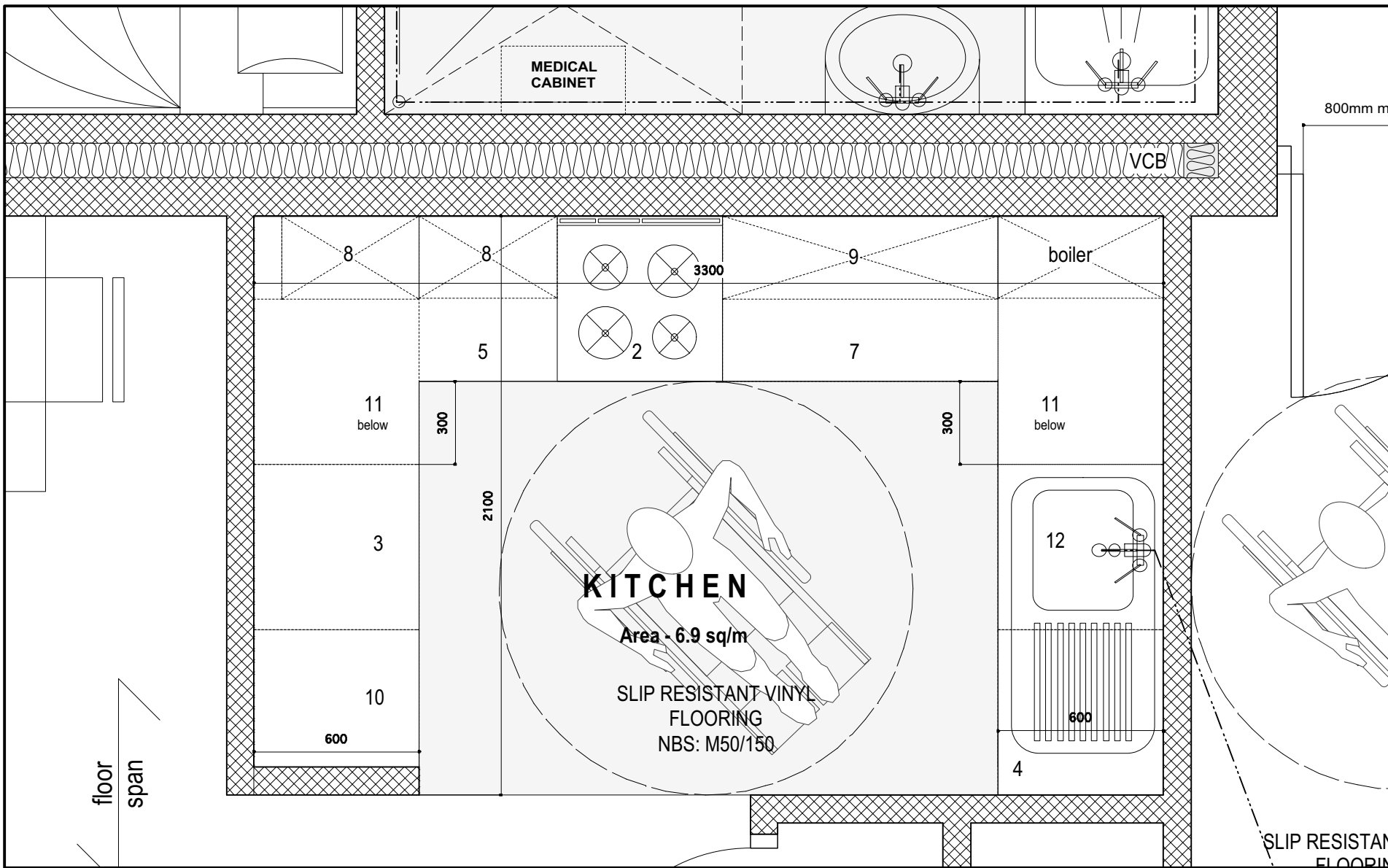
50% OF CALCULATED AREA TO BE CLASS C ABSORBER
48.74M² / 2 = 24.37M²

AREAS TO BE COVERED -

TOP FLOOR CEILING, UNDERSIDE OF HALF LANDINGS = 19.8M²
TOTAL = 3.45 x 2 = 6.9M²
TOTAL = 21.9M²

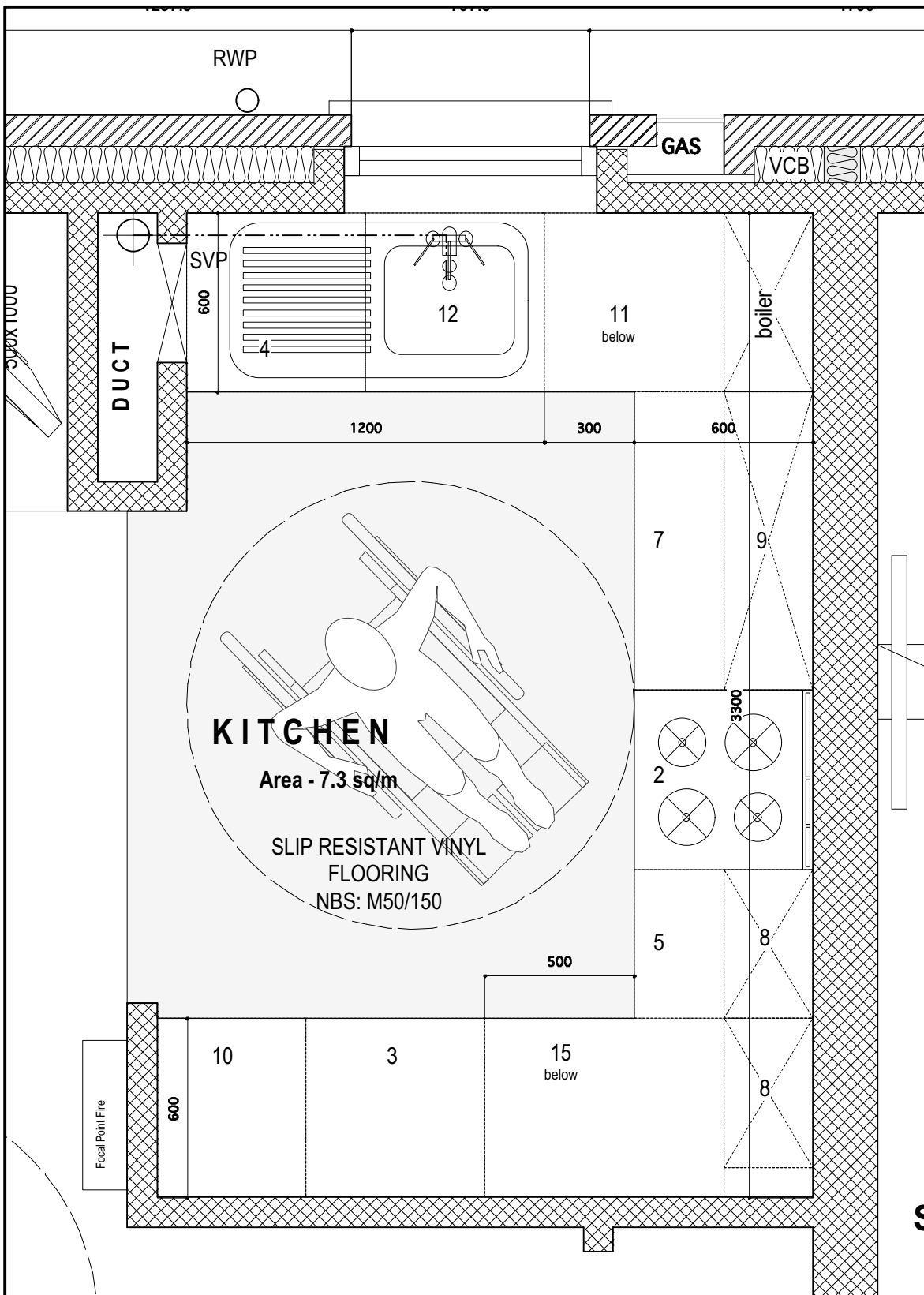
LOBBY

AREAS - GROUND FLOOR = 6.1M²
FIRST FLOOR = 12.3M²
SECOND FLOOR = 13.3M²
TOTAL = 31.7M²
CLASS C ABSORBER PRODUCT TO BE VOGL ACOUSTIC BOARD 1252Q2 (QUADRAT) WITH 30MM GLASS WOOL INSULATION OVER - REFER TO DATA SHEET.



UNIT 1-2 - KITCHEN

PLAN 1:20



UNIT 1-1 - KITCHEN

PLAN 1:20

TENDER

LETTER	DATE	TEXT
F	19/09/16	Additional M&E cupboards / risers added
E	05/08/16	Sound testing requirements added
D	26/11/12	TENDER ISSUE
C	23/11/12	Additional information for billing
B	28/09/12	DPG revisions. Drawing title revised.
A	10/08/12	Updated for DPG submission

JOB NO. 2148

PROJECT

CHOICE Housing
Donard Street, Newcastle

DRAWING	SCALE	DATE DRAWN	DRAWN BY	CHECKED BY	SHEET SIZE
Apartments - Site 4 First Floor Plan	1:50@A1	22-06-12	DMcC	HMCC	A1 L

155-157 DOWGALL PASS
BELFAST
BT7 1DT
T 028 9024 5777 F 028 9024 6864
71 CLARENDON ST
LONDON
E14 6TR
T 020 7136 2782 F 020 7126 9829

E INFO@RPPARCHITECTS.CO.UK
W RPPARCHITECTS.CO.UK

RPP
ARCHITECTS

SITE 4

FIRST FLOOR PLAN 1:50