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This inspection report is to provide a report on the general state of repair of the property described below.
It is not a Full Structural Survey as it is not practical to examine unexposed or inaccessible areas of the property, but it is a report by the surveyor on those matters expressly set out in this report to establish the general state of repair and the structural condition of the property based on the visible elements as outlined in the report, together with valuation advice. This report will not detail defects of no structural significance or of a minor on unexposed or inaccessible areas as it is a report on the visible surface only.
The information set out below must be read in conjunction with the marginal notes which form an integral part of the report. You are advised to show a copy of this report to your solicitor.

Report No.41-11

Name of Client:

Address of property inspected: Balbriggan, Co. Dublin.

Date of Inspection:27th November, 2009.

Weather Conditions: Cold, Clear and Dry

Description:

This report has been prepared to ascertain the compliance with building and fire regulations in relation to an attic converted to 2no. habitable bedrooms, the stair access to same, and sundry items throughout the dwelling.
This report has been prepared due to an accident involving loose carpet on a stairs resulting in a fall by a family member, and our clients subsequent concerns relating to the future safety of him and his family if they continue to access the attic bedrooms, and the hazards relating to loose electrical cabling detailed in the latter part of this report.

Attic Bedroom 1 & 2

The attic has been converted to 2no. Bedrooms, with a joint access from a common stairwell/landing in the middle of the dwelling.
We note that no evidence of increased fireproofing e.g. Fire rated doorsets or ceilings was evident at the time of inspecton.

There are 2no. Large velux rooflights, one per bedroom, and examination of same concludes that the bottom of both rooflights are 1500mm above finished floor level.

The building regulations state that the maximum height of cill above floor level is 600mm, therefore the rooflights are not compliant, and do not provide an adequate means of escape in the event of fire.

Please see excerpt from Building Regulations Part B - Fire - page 54 - window cill heights on page 2 of this report.

house, including all circulation areas that form part of the escape route and in all rooms and areas in which a fire might start, other than toilets, bathrooms and shower rooms.

An LD2 system incorporates suitably located and interconnected detectors in all circulation areas that form part of the escape route and in all rooms or areas, such as kitchens and living rooms, that present a high fire risk.

An LD3 system incorporates suitably located and interconnected detectors in the circulation areas (normally hall-ways, corridors and staircases) that form the escape route. In stairways, alarms are provided at all storey levels. Typically, a two storey dwelling house would have alarms in the hall-way and above the first floor landing. In a typically single-storey dwelling house a single alarm may be adequate. However, if there are long hall-ways or corridors, additional alarms will be necessary.

Dwelling houses with up to three storeys above ground level should have at least an LD3 system. Dwelling houses with more than three storeys, large houses, or where the fire risk so warrants, should be provided with LD2 or LD1 systems as appropriate, which will provide a higher level of life safety. Guidance on system types for different situations is contained in BS 5839: Part 6: 1995.

1.5.5.3 Installation of smoke alarms - Two types of self-contained smoke alarm, an optical type and an ionisation type, which have differing smoke response characteristics, are available. A mixture of both types is recommended and in the case of a typical two storey dwelling house, an optical type on the ground floor storey and an ionisation type on the upper floor may be the most appropriate.

The number and location of smoke alarms will be determined by the system type (see 1.5.5.2). In circulation areas, no door to a habitable room should be further than 7.5 m from the nearest smoke alarm. The location of smoke alarms, particularly in relation to doorways to bedrooms and the spacing of units, should be such as to ensure that the audibility requirements specified in BS 5839: Part 6: 1995 will be achieved.

Smoke alarms should preferably be fixed to the ceiling, at least 300 mm from any wall or light fitting. The method of fixing and location/spacing should take into account instructions provided by the manufacturer of the alarms.

It should be possible to reach all smoke alarms to carry out, easily and safely, routine maintenance such as testing and cleaning. Instructions on maintenance requirements should be provided with all smoke alarm systems.

Windows for Escape or Rescue

1.5.6 Windows may provide an alternative means of escape or may be used for rescue purposes in dwelling houses of limited height. Any window which is required by this sub-section for these purposes should comply with the following:

(a) The window should provide an unobstructed opening not less than 850 mm high and 500 mm wide. The opening section of the window should be secured by means of fastenings which are readily openable from the inside;

(b) The bottom of the window opening should be not more than 1100 mm and not less than 800 mm (600 mm in the case of a rooflight) above the floor of the room in which it is situated;

(c) In the case of a dormer window or roof light, the distance from the eaves of the roof to the cill or vertical plane of the window or cill of the roof-light should not exceed 1.5 m, measured along the roof;

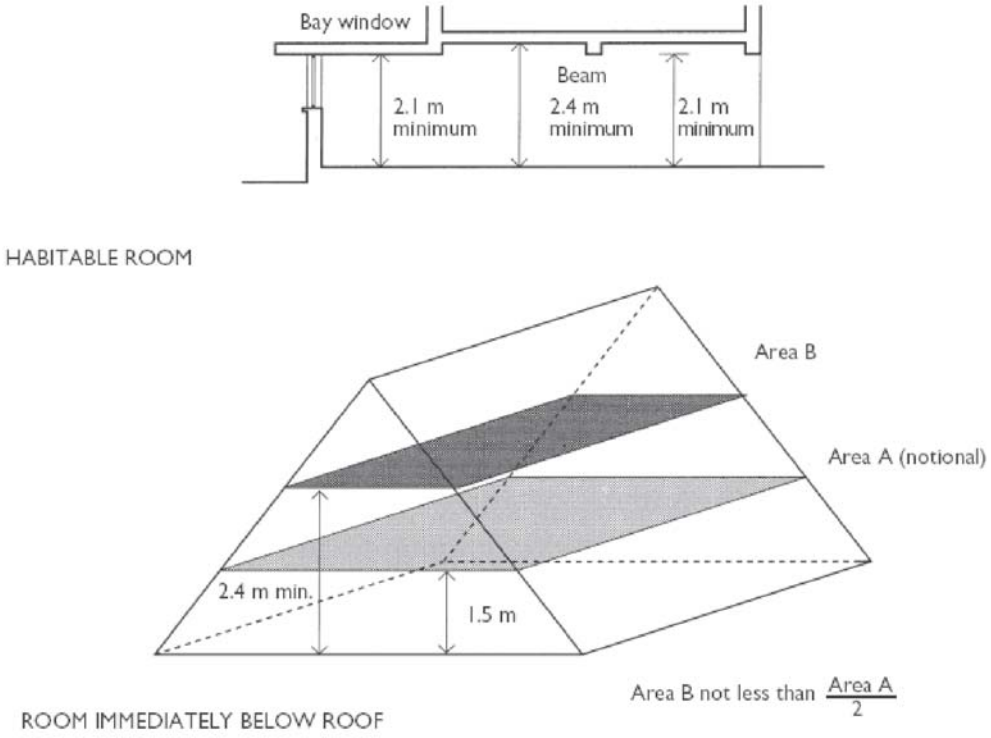
(d) The ground beneath the window should be clear of any obstructions, such as railings or horizontally hung windows, and should be suitable for supporting a ladder safely. The area should be of sufficient size to provide a place of safety from a fire in the house;

(e) A french window or a patio window (doors) should lead to a balcony which is protected with a barrier or railings in accordance with the requirements of Technical Guidance Document K.

Excerpt - Page 54 Part B building regulations - windows

The floor to ceiling height of the attic bedrooms too is not compliant having been measured at 2370mm as the minimum floor to ceiling height for a compliant habitable room is 2400mm as per Diagram 5 taken from Building Regulations Part F indicated below.

Diagram 5 **Suggested height of habitable rooms** *Par. 1.13*



In order to establish compliance with the building regulations, we conducted a measured survey of the stairwell to the attic area of the house.

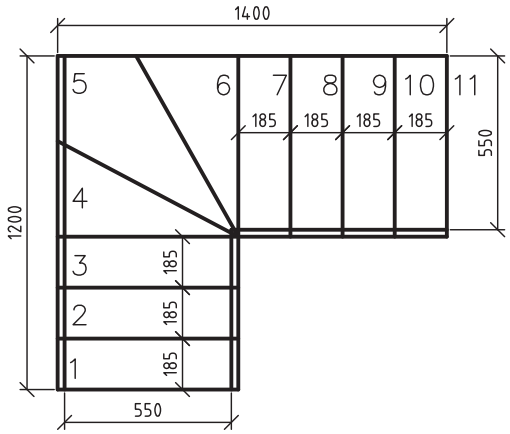
We then cross referenced the survey with the relevant data pertaining to a compliant staircase to a habitable room taken from Part K - building regulations - stairs, ramps, ladders & guards.
(The relevant data from Part K has been condensed and is contained later in this report)

The minimum internal width of a compliant stairs should not be less than 800mm
(surveyed width = 550mm)

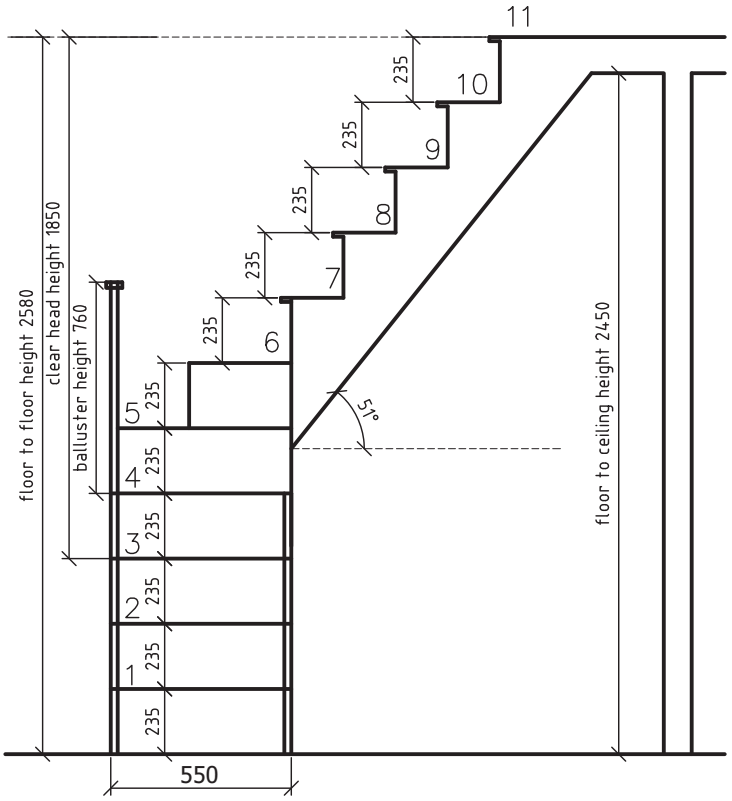
The maximum rise, and the minimum going of a compliant staircase is 220mm (rise) and 220mm(going).
The measured staircase is 235mm (rise) and 185mm (going)
The calculated pitch of the stairs is 51degrees which exceeds the maximum pitch(42degrees)

It was also noted that the maximum clear head height was 1850mm(minimum 1900mm)

The handrail on the LHS of the initial flight had a height of 1000mm, 770mm and 520mm above the respective treads.
(The minimum continuous handrail height should be 840mm therefore less than half the handrail is at the required minimum height.)



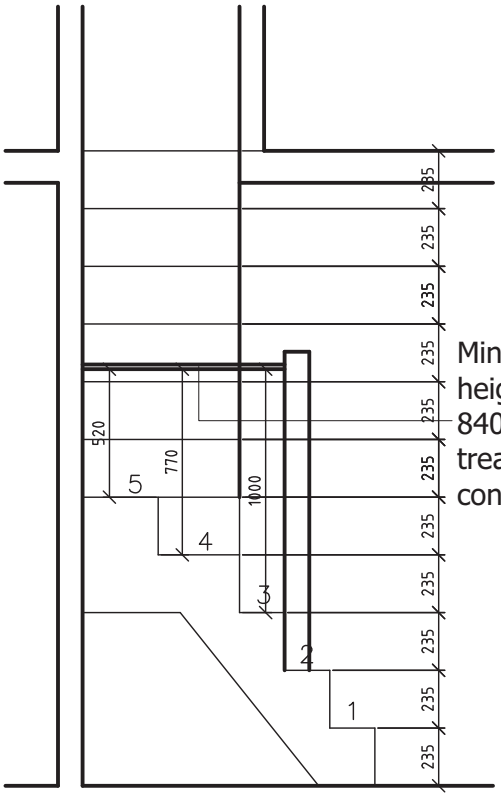
EXISTING STAIR PLAN



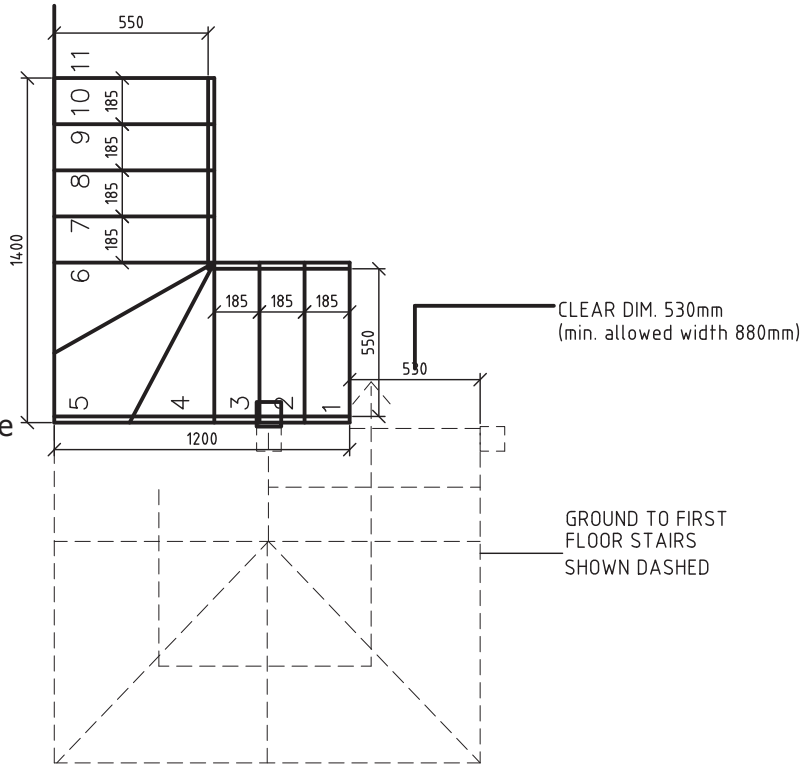
EXISTING STAIR ELEVATION

Width of stairwell (550mm)

Rise of stair (235mm)



EXISTING STAIR SIDE ELEVATION



EXISTING STAIR PLAN

The new stairwell is also partially constructed across the existing ground to first floor stairs, and reduces the usable width to 530mm (min.required is 800mm)

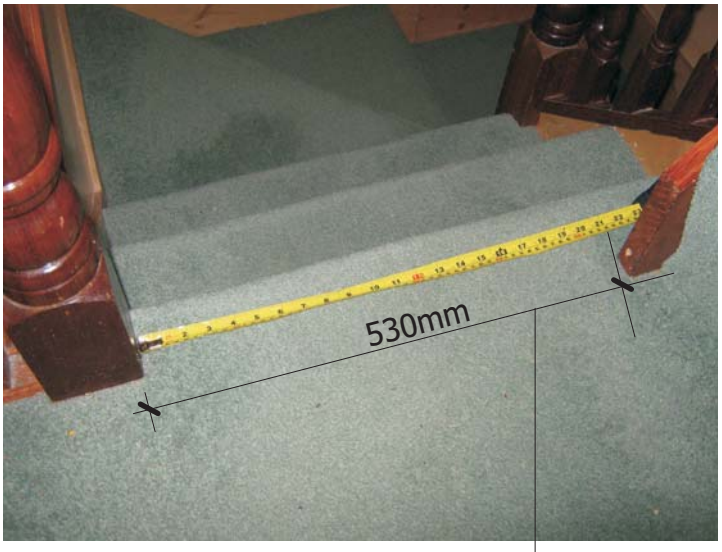
The existing handrail illustrated above is also short of the required minimum of 840-900mm above the tread of the staircase.

It is evident from the above data that every measurement used to construct the staircase does not comply with Part K of the building regulations.

Widths of Stairs

1.1.10 Private stairs should have a clear width of not less than 800 mm. In the case of semi-public and public stairways, the guidance contained in Technical Guidance Documents B - Fire Safety and M - Access for People with Disabilities applies.

Excerpts - building regulations Part K



Existing stairwell usable width reduced to 530mm - (Min. Stair width allowed - 800mm)

Min. Handrail height - 840mm above tread - continuous

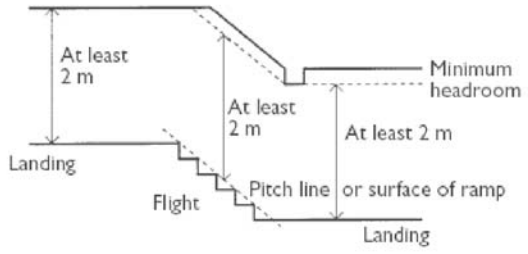
Table 1 **Rise, going and pitch**

Stairs	Rise (mm)		Going (mm)		Pitch (degrees)	
	optimum	maximum	optimum	minimum	optimum	maximum
Private	175	220	250	220	35	42
Semi-public	165	190	275	250	31	38
Public	150	180	300	280	27	33

Note:
1. Private stairs means stairs used by a limited number of people who are generally very familiar with the stairs, e.g. the internal stairs in a dwelling.
2. Semi-public stairs means stairs used by larger numbers of people, some of whom may be unfamiliar with the stairs, e.g. in factories, offices, shops, common stairs serving more than one dwelling.
3. Public stairs means stairs used by large numbers of people at one time, e.g. in places of public assembly.
4. In stairs, which are intended to satisfy the needs of ambulant disabled people (see Technical Guidance Document M, Paragraphs 1.14 and 1.30), the rise should not be greater than 175 mm and the going should not be less that 250 mm.

Headroom

Diagram 2 **Measuring headroom** *Par. 1.1.9*



1.1.9 Headroom over the whole width of any stairs, measured as shown in Diagram 2, should generally be not less than 2 m. In the conversion of a loft where space is limited, headroom measured at the centre of the stairs should be not less than 1.9 m but may reduce to not less than 1.8 m at the side of the stairs if there is a minor projection.

Widths of Stairs

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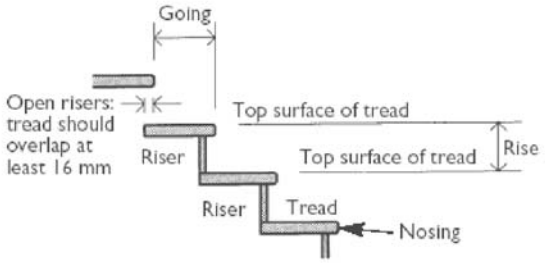
and going



Note:
The sum of twice the rise plus the going (2R+G) should be between 550 mm and 700 mm with an optimum of 600 mm.

Protection from falling.	K2	In a building, the sides of every floor and balcony and every part of a roof to which people normally have access shall be guarded to protect users from the risk of falling therefrom.
Vehicle ramps, floors and roofs.	K3	In a building, the sides of every vehicle ramp and every floor and roof to which vehicles have access shall be guarded against the risk of vehicles falling therefrom.

2.6 Unless the building is unlikely to be used by children under five years old, guarding should be so constructed that a 100 mm diameter sphere cannot pass through any openings in the guarding and that it will not be readily climbable .

Handrails

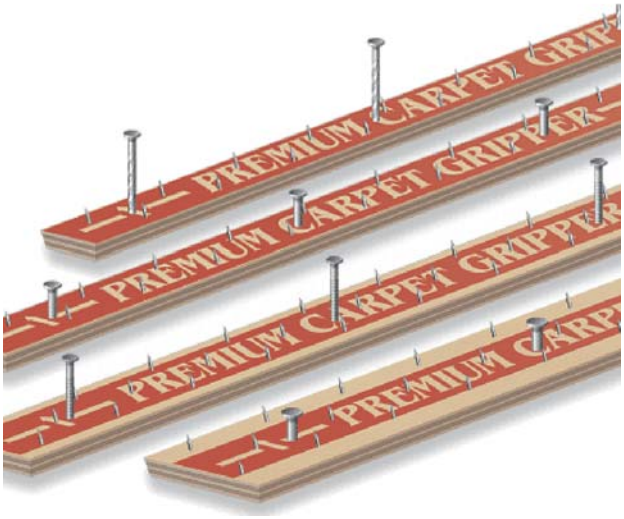
1.1.17 Stairs should have a handrail on at least one side if it is 1000 mm wide or less. It should have a handrail on both sides if it is wider. Handrails should be at a height of between 840 mm and 900 mm, measured vertically above the pitch line, and give firm support. A handrail may form the top of the guarding if the height is suitable. The handrail should be so constructed and fitted as to be capable of being readily gripped by hand and safely used. Handrails may not be necessary beside the two bottom steps of private stairs.

Excerpts - Part K building regulations - stairs,ladders,ramps & guards

Tread dimension including nosing (235mm)

No tack strip evident behind carpet

It was also noted that the carpet finish to the stairs has not been properly secured to the stairs with appropriate tack strips.(The strips have not been fitted).
The carpet has inappropriately been fitted using a staple gun, and our client has advised us that recently the carpet became loose resulting in a family member slipping and having a nasty fall.



Typical image of tack strip (note tacks designed to catch carpet firmly)

We also observed that the gap between the wall on the landing and the newel post exceeds the minimum 100mm required and a small child would be free to pass through this gap to the floor below.

Stairwell photos A,B, & C

Our client brought to our attention other concerns he had within the dwelling and these included electrical wiring protruding from the wall in the bathroom and the en suite, electrical wiring left hanging from an over head storage unit in the kitchen, and hazardous pull cords to the window blinds (15 in total throughout dwelling).
Another fault was a mis-wiring of the hob and oven in the kitchen allowing the hob to remain on with the master switch in the off position(repaired in July 2009.)

Electrical wiring in en suite

Electrical wiring in bathroom

Electrical wiring in kitchen

Hazardous pull cords to blinds

In summing up we feel our client has legitimate concerns relating to the continued safety of his family and their use of the dwelling in its current state, and that the matters outlined in this report be addressed urgently.

Finally, in accordance with our standard practice statement we confirm that this report is for the use only of the party to whom it addresses, and no responsibility is accepted to any third party for the whole or part of it's contents. The report is prepared on the basis of full disclosure of all relevant information and facts.

Signed

Roger Bell dip.arch.tech. Bsc. CAD. RIAI (arch.tech.) ACIAT Dated : 25th November, 2009.

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