MERRIMAN SOLUTIONS
Chartered Building Surveyors
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Project Managers
Renewable Energy

10th September 2018

Application for a Fire Safety Certificate

for

Youth Service Centre

Scarriff , Co. Clare.
V94 W624

(Amended 08.11.2018)

Site Location:
The site is located at Drewsborough, Scarrif, County Clare **V94 W624**

Applicant:
The Applicant is Ard Aoibhin Community Initiatives Ltd.

Croi Lar, Main Street, Mountshannon, Co Clare. V94 D9X9

Agent:
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Application for a Fire Safety Certificate

Introduction:
The proposal comprises of a change of use, and renovation of, a single storey existing Co-op Shop premises to provide a Youth Service Centre comprising: an assembly hall, meeting room with Adjacent Kitchenette, two offices and toilet facilities.

See the attached Drawings:
17229-1F Site Location Map Scale 1:1000
17229-2F Site Layout Plan Scale 1:500
17229-3F GF Plan, Elevation, Section Scale 1:100
17229-4F Existing Elevations, Plan Scale 1:100

Basis of compliance:

The proposal shall comply with Technical Guidance Document B (TGB B) 2006 (the relevant sections are quoted in brackets after reference). The building in question is a Youth Centre falling under Purpose Group 5 (1) – building used for assembly and recreation, as specified in Table 0.1 of TGB B.

Section B1: Means of Escape in Case of a Fire

Travel Distance:

The Hall and meeting room have each have two means of escape one via the Main double door in the building's SW gable and the front door. The allowable maximum travel distance, where more than one escape route is available, is 45 m and for one direction of escape only is 18 m [Table 1.2].

Actual travel distance:(See Drawing 17229-03F **floor plan)**
Various travel distances have been marked on the floor plan and the maximum travel distance from any part of the premises is 14.5. As stated up to 45 m is permitted where more than one direction of escape is available. Thus the proposal complies.

Widths of Escape Routes:

No exit or escape route will be less than 1150 mm wide thus complying with Table 1.5 of TGB B, as amended.

Each unit has two means of escape.

Location	Occupancy Load Factor	Area (m^2)	No. of Persons	Exit Width Reqd. (mm)	Actual Exit Width (mm)
Hall	0.3	55	184	1050	1810 & 1150
Meeting room	1.0	37	37	750	1810 & 1150
Office 1	7.0	13.5	2	750	1810 & 1150
Office 2	7.0	8.5	1	750	1810 & 1150
			224	1150	1810 & 1150

Total					

With the total occupancy of 224 all exit door widths comply with Table 1.4 TGD Part B.

Inner rooms

The kitchenette is classified as an internal room and shall comply with section 1.2.5 of Technical Guidance Document B 'Fire Safety', 2006. The lounge/ dining area is thus as access room, as the kitchenette is entered directly from it. The maximum travel distance from the kitchenette is less than 18m to the Fire Exit. The access room is not a place of special fire hazard, and is protected by an automatic smoke detector linked to an alarm system, that is audible, or gives a visual indication in the inner room, in the event of a fire breakout in the access room, in accordance with BS999 2008 [17.3.4].
An openable roof window is also located in the kitchenette in the event of a fire starting here.

Vertical Means of Escape: None N/A

In General:

All exit doors shall be unlocked at all times that the premises is occupied and shall be easily opened from the inside by means of a push bar. In the case of Exit 2, we propose an inward opening swing door to be held open during opening hours, such that it is not possible to close the door while the building is in use. Please refer to Section 1.4.3.3 of Technical Guidance Document B 'Fire Safety', 2006.

All internal doors to be secured by twist levers open able easily from the inside without the use of a key.
Each door to open not less than 90 degrees with a swing that is clear of any change in floor levels [1.4.3.4].

All escape routes will have a clear headroom of 2m minimum at all points [1.4.5]. Floors of escape routes will have non-slippery, even surfaces [1.4.6].

All corridors shall comply with Section 1.2.5 of Technical Guidance Document B ''Fire Safety', 2006, and also with Table A1, Appendix A of the same document. All corridors to be to be carried up to the roof above. The direction of door swings along the corridors can be against the flow of egress.

Electrical Installation: **All electrics shall be installed in accordance with the ETCI's 'National Rules for Electrical Installations' [1.4.10].**

Heating and heat producing appliances : **All heating to be electrical. Hot water to be by electric immersion.**

Lighting of Escape Routes:

The emergency lighting system will be designed and installed to I.S. 3217: 2013 [1.4.8]. Exit signs will be installed over all exit door ways on escape routes as shown on drawings. Exit signs and markings will be in accordance with BS 5499: Part 1: 1990 and BS 5499: Part 2: 1986 [1.4.13].
Fire Safety Signs including Exit Signs and markings shall comply with the Safety, Health, and Welfare at Work (General Application) Regulations 2007.

Fire Detection and Alarm System:

A manual and automatic fire detection and alarm system, will be designed, installed and commissioned to I.S. 3218: 2013, Type L3 recommendations [1.4.14]. The circuits serving the emergency lighting and fire detection and alarm systems and any other electrical system which requires to be maintained operable in a fire situation will be protected circuits employing cable which will meet the requirements for classification as CWZ in accordance with BS 6387: 1983 [1.4.10].

Fire Extinguishers
The installation of Fire Extinguishers shall comply with IS 291:2015 'Selection, commissioning, installation, inspectionand maintainance of portable fire extinguishers'.

Fire Doors:

Fire doors where required are identified on the floor plan by notation FD60S/ FD30S.
All fire door assemblies shall be certified in accordance with BS 476: Part 20, 22, 31 and Section 31 of BS 476: Part 8. Each door will be identified with a small metal plate indicating the period of fire resistance, manufacturer, year of manufacture and the certificate number.

All fire doors shall be fitted in accordance with the specifications of Appendix B of TGB B. They will be fitted with hydraulic or positively mechanical self-closing devices, which are capable of closing the door against any latch fitted to the door and from any angle. They shall be fitted with the appropriate fire safety signs complying with BS 5499: Part 1: 1990.

Final Exits

Final exits shall comply with Section 1.2.3.1 of Technical Guidance Document B 'Fire safety', 2006. There are 2 No. Final Exits in this proposal. The main one leads out to a level access area at the gable end of the building. In the case of the second final exit, to the main street, it is proposed that a footpath with a protective guard railing will facilitate safe egress from the building. This is contingent on the proposal receiving planning permission for this footpath.

Section B2: Internal **Fire Spread (Linings)**

All proposed internal wall linings to be Class O (plastered, tiled or face block) [2.1].
The ceilings shall be 15mm fire slabs, giving a half- hour fire resistance for the ceilings.

Furnishings:

All upholstery in seating shall, when tested in accordance with IS 254: 1983, pass the smouldering cigarette test and Ignition Source Grade No. 5 Test. Foam filling materials shall comply with IS 419: 1988: Clause 2. Non-foam and composite filling materials shall comply
with IS 419: 1988: Clause 3.1.
There will be no Curtains or drapes.

Floor Coverings:

Concrete Tile floor coverings shall comply with the performance requirements of "a low radius of effects of ignition" as define in BS 5287: 1976.

Section B3: Internal Fire Spread (Structure)

Load Bearing Elements of Structure:

The hall and meeting room are less than 6m in height, therefore, from Table A1 of TGB B the minimum periods of fire resistant, when tested to the relevant parts of BS 476, for the
elements of new structure are as follows:

Part of Building	Minimum Provisions (Minutes)			Method of Exposure
	Loadbearing	Integrity	Insulation	
Loadbearing Walls	30	No provision	No provision	Each side separately
External Walls ≥ 1m from the boundary *	30	30	30	From inside
Gable Wall < 1m from Boundary(Table A2)	60	60	60	(From Table A2 TDG B)
Compartment Walls (none)	30	30	30	Each side separately
Cavity Barrier	No Provision	30	15	Each side separately
Ceiling described	No Provision	30	30	From underside

*** No external wall is less than 1 m from the boundary.**

From Table A2 of TGB B the minimum period of fire resistance for an unsprinklered purpose group 5 building is 60 minutes.

Compartmentation:

As the floor area of the building is less than 1900 sq.m. and the building is a single storey building, compartmentation is not required .
The proposed building complies with the provisions of Table 3.1 TGD part B 2006 .

Cavity Barriers:

These will be installed as required in accordance with Table 3.2 and Table 3.3 of TGB B specification [3.3.2]. Cavity barriers will have a fire resisting rating of at least 30 minutes [3.3.3].

Fire Stopping:

All pipes with other than non-combustible pipes in excess of 110 mm diameter to be fitted with intumescent collars where they pass through fire resisting construction and collars will have the same fire rating as that construction.

All pipes with a diameter less than 110mm where they pass through fire resisting construction will be fire stopped using sand and cement mortar. The openings for these pipes shall be kept as small as practicable so that a minimum amount of fire stopping is required.

Section B4: External Fire Spread

Construction of External Walls:

Any walls within 1m of the relevant boundaries are constructed in mass stone. As the building is less than 10m in height, there is no restriction to the rate of surface spread of flame provided any part of the wall has an index of performance (I) not more than 20 [Table 4.1]. The external walls are of stone construction with a plaster finish. There is no increase in the extent of un-protected areas to the existing external walls of the building except for the installation of Fire Doors and Windows
Fire Resistance for elements of structure shall comply with Table A2 and this also extends to Loadbearing walls and External walls.

Roof Covering Material:
The roof of the existing shop is tiled. It is Designation AA (Table A5 of TGD Part B) on a timber roof frame. There shall be no Perspex in any part of the roof.

Section B5: Access and Facilities for the Fire Service

Internal Fire Mains:

An internal fire main is not required as the building has no floor more than 20m above ground level and no basement more than 10 m below ground level [5.1.2].

External Fire Mains:

The floor area is 140 m^2. As the floor area is less than 1,000 m^2 there is no requirement to provide a hydrant [5.1.6].

Vehicle Access:

The volume of the building is less than 7,000 m^3 and the height is less than 10 m. The required vehicle access to the perimeter of the building is 2.4 m per 90 m^2 of floor area [Table 5.1], i.e. 3.58 m.

The full length of the building (28.6m) is adjacent to the road, and beside is a pre-existing parking area. Access into the building for fire- fighting personnel will be provided by the normal means of escape [5.3.1].

High Voltage Discharge Lighting:

It is not intended to install any high voltage discharge lighting as part of this development.

Appendix:

Fire Extinguishers:

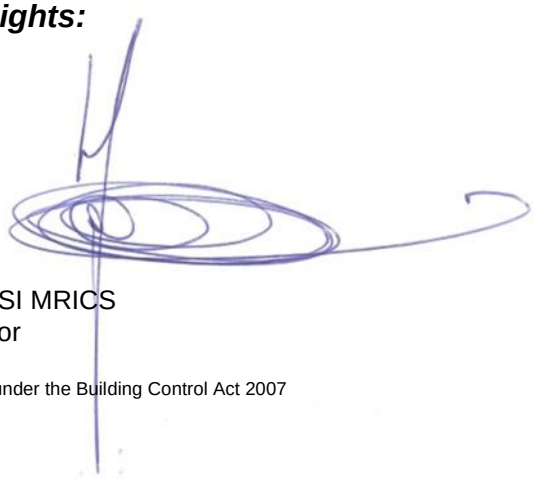
An adequate number of suitably sized portable type fire extinguishers, installed in accordance with BS 5306: Part 3 and complying with I.S. 290, I.S. 291 and BS 5423, are to be provided throughout the building and these are to be serviced in accordance with the manufacturer's instructions which is generally at least once per annum.

Fire Blankets:

A fire blanket will be provided beside cooking/hot plate areas in the kitchenette.

Glazed Screens/Fanlights:

There will be none



Fergus Merriman MSCSI MRICS
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Registered Building Surveyor B0069 under the Building Control Act 2007