

Dorota Kata

Compliance Report



Design Studio 8

May 2019

Table of Contents

Introduction.....	
1.1 Introduction	
1.2 Building Location and Description.....	
1.3 Building Intervention.....	
1.4 Floor Plans	
2.0 Occupancy Capacity	
2.1 Introduction.....	
2.2 Floor Area Breakdown.....	
2.3 Maximum Load Capacity	
3.0 Fire Safety	
3.1 Introduction.....	
3.2 Escape Routes	
3.3 Travel Distances.....	
3.4 Travel Distances Floor Plans.....	
3.5 Fire Rating/Compartmentation	
3.6 Smoke Control	
4.0 Sanitary	
4.1 Introduction.....	
4.2 Scale of Provision for Public Use	
4.3 Scale of Provision for Staff Use	
4.4 Universal WCs.....	
4.5 WCs Layout.....	
5.0 Accessibility.....	
5.1 Introduction.....	
5.2 Access Routes	
5.3 Stairs	
5.4 Lifts	
5.5 Audience Seating	

List of Figures

Introduction.....

Figure 1.1 Church Location Map
(Source: Google Maps)

Figure 1.2 Front façade of St. Patrick’s Church
(Source: Fermoy.ie)

Figure 1.3 View from the Nave towards the Altar
(Source: Brosnan Photographic).....

Figure 1.4 North Balcony Exterior Entrance and it’s Stairs
(Source: Photographs taken by Dorota Kata on site visit)

Figure 1.5 Reception.....
(Source: Visuals by Dorota Kata)

Figure 1.6 Library Space
(Source: Visuals by Dorota Kata)

Figure 1.7 Computer-Study Area.....
(Source: Visuals by Dorota Kata)

Figure 1.8 Breakout Area.....
(Source: Visuals by Dorota Kata)

Occupancy Capacity.....

Figure 2.1 Occupancy Loads
(Source: Fire Safety – Public Advice)

Fire Safety.....

Figure 3.1 Part B Table 1.3
(Source: Technical Guidance Document Part B)

Figure 3.2 Part B Table 1.4
(Source: Technical Guidance Document Part B)

Figure 3.3 Part B Table 1.2
(Source: Technical Guidance Document Part B)

Sanitary

Figure 4.1 BS6465 Table 8
(Source: British Code of Practice BS6465).....

Figure 4.2 Part M Diagram 20
(Source: Technical Guidance Document Part M)

Figure 4.3 BS6465 Table 10
(Source: British Code of Practice BS6465).....

Figure 4.4 BS6465 Table 3
(Source: British Code of Practice BS6465).....

Figure 4.5 7. Toilets for disabled people
(Source: British Code of Practice BS6465).....

Figure 4.6 BS6465 Universal WCs.....
(Source: British Code of Practice BS6465).....

Accessibility

Figure 5.1 Part M Diagram 12
(Source: Technical Guidance Document Part M)

Figure 5.2 Part M Table 2
(Source: Technical Guidance Document Part M)

Figure 5.3 Part M Diagram 10
(Source: Technical Guidance Document Part M)

Figure 5.4 Part M Stairs
(Source: Technical Guidance Document Part M)

Figure 5.5 Part M Diagram 13
(Source: Technical Guidance Document Part M)

Figure 5.6 Part M Table 3
(Source: Technical Guidance Document Part M)

Figure 5.7 Part M Diagram 27
(Source: Technical Guidance Document Part M)

Figure 5.8 Part M Section 1.6.4
(Source: Technical Guidance Document Part M)

Introduction

1.1 Introduction

New use and design proposal for St. Patrick's Church in Fermoy is investigated under the categories of fire regulations, sanitary facilities, accessibility and use. The proposed use for the church is a two storey library, combined with a variety of study/working spaces. The building also facilitates several meeting spaces, a cinema/presentation room and a café – keeping in mind staff rooms, public WC's, cleaner's cupboard and storage. The proposed design also intends to keep church use to be remained, therefore an in-place chapel at the back of the church is to remain as it is, altogether with a part of church-back for church facility use. The new proposed building scheme has been designed along with Technical Guidance Document's (TGDs) – mainly with Part B, Part K and Part M – and with the BS9999 and BS6465.

1.2 Building Location and Description

St. Patrick's Church is located in a town called Fermoy – North from Cork. Although not in town centre, the building, standing on a hill, is visible from every part of Fermoy – making the building to be a central point for the people. The site of the church is a major crossing point – having three entrances – each entering a different street. Additionally, the building is surrounded by apartments and many schools – having six schools within a close reach. Entering out towards the main – Cork Road – the church is near bus stops, allowing for the building to be accessed by car, bus or walking.

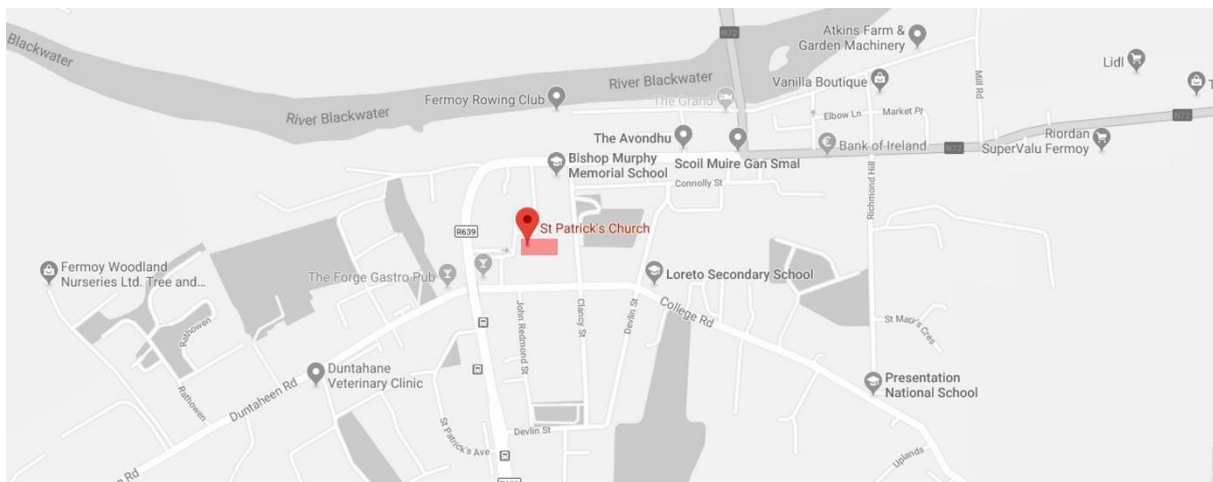


Figure 1.1 Church Location Map
(Source: Google Maps)

St. Patrick's Church has been built for a chapel use and has still remained as such till this day. The church has been well maintained over the years and is therefore in great condition. The new proposed design therefore doesn't include any violation to the structure of the building – whether it's the appearance of the building on the exterior or the interior

structure, such as the stone walls or concrete columns (visible in the photograph of the nave below).

There are three entrances into the main part of the church – the main entrance on the front façade and two smaller entrances on each side of the building, entering into the transepts. The building also includes two doors allowing for entrance to the first floor balcony at the front of the building and also another entrance to the balconies above the transepts at each side of the building. Including other doors into the back facilities of the church, such as the priest-offices and storage rooms, as well as to the Adoration Chapel which will remain its function within the proposed use for the building.

The main space of the church includes seventeen large stained-glass windows – three at the altar, having a large window facing the nave and two smaller windows on the sides, there is a large window in each transept, having an additional, smaller window in the north transept, while in the south transept in the same space is an entrance to an unused tower. Four windows are on the walls of each aisle – each of the same size. A larger window is at the front façade of the church with two smaller windows on each side – all three windows are directly above each entrance on the front façade, as visible in the photograph below.

Timber stairs to the balconies have not yet been restored, although kept in good condition, the timber has aged over the years becoming cracked and collapsed at several points, as visible in the photographs below.



Figure 1.2 Front façade of St. Patrick's Church
(Source: Fermoy.ie)



Figure 1.3 View from the Nave towards the Altar
(Source: Brosnan Photographic)



Figure 1.4 North Balcony Exterior Entrance and it's Stairs
(Source: Photographs taken by Dorota Kata on site visit)

1.3 Building Intervention

There has been a significant decline in religious belief through the past several years. Adelingi (2018), who has graduated in Philosophy & Religious Studies, states that “According to official censuses and surveys, Christianity is literally collapsing”. The design therefore proposes a conversion of an ecclesiastical buildings into a collaborative community space by extending the buildings traditional use. There are several factors that lead to such significant religious decline.

As education became widely available, people tended to question their religion more, leading to criticism. Religion is now not a mandatory subject at schools and children themselves are given the choice if they want to believe a religion or not. The internet gives the possibility to educate ourselves. With other factors leading to this religious decline, many ecclesiastical buildings are closed or are being sold to third parties. It is a crucial building space and it makes sense to therefore adapt such a building to the increasing demand for community development. An ideal collaborative and modern community space may link communities effectively.

The proposed design has been carefully thought of, also putting to consideration the location of the building and the age-group target. Since there are many schools within the reach of the building, a library-study area is a perfect space for younger school-going children and older students. The space may be used by teachers for presentations and students may use the space whenever they would like to for study, homework or class group projects. There is nothing stopping elderly people or people from the community to use the space – providing the space to be collaborative and accessible for all.

The proposed design for St. Patrick’s Church is therefore a collaborative co-working space, which has its main space to be a library with a variety of study spaces, several meeting areas, which may be transformed into a presentation space. Included within the building is also a larger presentation room which may be used as a small cinema for the people within the community, making it a great meeting space for students and people living in the close-by apartments. A two storey café takes the space of the south transept.

Moving to the space behind altar, it will be used to facilitate public WC’s, staff room, cleaner’s cupboard and storage. Since the building is too small to accommodate WCs on both stories, only ground floor will accommodate those. Part of the space behind altar will be remained for the church use, also leaving the Adoration Chapel that is currently in place on the site, allowing for church services to continue.

A new, collaborative library-study space will be ideal in Fermoy community – giving a new place for pupils and students to work within, giving schools a new space to show presentations or carry out events. A café gives opportunities for new place to come in for a break during work/school or be an awaiting place for parents waiting for their children.



Figure 1.5 Reception
(Source: Visuals by Dorota Kata)



Figure 1.6 Library Space
(Source: Visuals by Dorota Kata)



Figure 1.7 Computer-Study Area
(Source: Visuals by Dorota Kata)



Figure 1.8 Breakout Area
(Source: Visuals by Dorota Kata)

1.4 Floor Plans

Floor Plans with key of different spaces are visible over the next few pages.

Occupancy Capacity

2.1 Introduction

Because there are several functions for the building, the occupancy loads are calculated for each separate space, adding to the total at the end. The ground floor accommodates a café, a library space and mainly study areas, which may be referred to as 'common room'

	Type of accommodation	Floor space factor m ² /person
1	Standing spectator areas, bar areas (within 2m of serving point) similar refreshment areas	0.3
2	Amusement arcade, assembly hall (including a general purpose place of assembly), bingo hall, club, crush hall, dance floor or hall, venue for pop concert and similar events and bar areas without fixed seating	0.5
3	Concourse, queuing area or shopping mall	0.7
4	Committee room, common room, conference room, dining room, licensed betting office (public area), lounge or bar (other than in 1 above), meeting room, reading room, restaurant, staff room or waiting room	1.0
5	Exhibition hall or studio (film, radio, television, recording)	1.5
6	Skating ring	2.0
7	Shop sales areas	2.0
8	Art gallery, dormitory, factory production area, museum or workshop	5.0
9	Office	6.0
10	Shop sales area	7.0
11	Kitchen or library	7.0
12	Bedroom or study bedroom	8.0
13	Bed-sitting room, billiards or snooker room or hall	10.0
14	Storage and warehouse	30.0
15	Car park	Two persons per parking space

Figure 2.1 BS999 Table C1 – Occupancy Loads
(Source: BS9999)

2.2 Floor Area Breakdown

The first step of calculating occupancy capacity, is to calculate the total area of the building and of each floor level, as well as of each space.

Total Area of the Building	
Floor	m ² Area
Ground Floor	755.89 m ²
First Floor	421.93 m ²
Total	1177.82 m²
Ground Floor Area Breakdown	
Function	m ² Area
Entrance and Reception	47.14 m ²
Library	101.99 m ²

Study Breakout	149.96 m ²
Ground Floor Area Breakdown	
Function	m² Area
Computer Lab/Study Space	89.31 m ²
Café	82.3 m ²
Open Area	92.02 m ²
WCs	59.48 m ²
Staff Room + Storage + Cleaners Cupboard	35.28 m ²
Stairwells and Lifts	56.71 m ²
Side Entrances/Exits + Corridors	41.68 m ²
Total	755.89 m²
First Floor Area Breakdown	
Function	m² Area
Study Space	106.78 m ²
Meeting Rooms/Spaces	31.84 m ²
Café	72 m ²
Cinema/Presentation Room	65.38 m ²
Walkways/Bridge	75.23 m ²
WCs	7.03 m ²
Stairwells and Lifts	63.67 m ²
Total	421.93 m²

2.3 Maximum Load Capacity

Calculating the occupant capacity is essential in order to assess the means of escape and for the fire risk assessment, as well as accommodate an appropriate number of WCs for males, females, staff and universal WCs. The occupant capacity is the number of people who can safely occupy a space/building. The occupant capacity may be calculated by the floor area available for a particular space divided by the space factor. Calculating these figures allows to accommodate the exact number of fire stairs/exits needed and WCs.

Ground Floor			
Function	Floor Area	Occupancy Load Factor	Occupancy Capacity
Entrance and Reception	47.14 m ²	2.0	23.57
Library	101.99 m ²	7.0	14.57
Study Breakout	149.96 m ²	1.0	149.96 (90 seats given)
Computer Lab/Study Space	89.31 m ²	1.0	89.31 (32 seats given)
Cafe	82.3 m ²	1.0	82.3 (32 seats given)
Staff Room + Storage Area	35.28 m ²	7.0	5.04

Total	-	-	364.75
First Floor			
Function	Floor Area	Occupancy Load Factor	Occupancy Capacity
Study Space	106.78 m ²	1.0	106.78 (72 seats given)
Meeting Rooms/Spaces	31.84 m ²	1.0	31.84 (22 seats given)
Café	72 m ²	1.0	72 (29 seats given)
Cinema/Presentation Room	65.38 m ²	0.5	130.76 (84 seats given)
Total	-	-	341.38

Total Occupancy Capacity	
Ground Floor	364.75
First Floor	341.38
Total	706.13

Note: The calculations exclude WCs, stairwells/stairs, lifts and other similar areas

The building may therefore accommodate 706 people in the building at the same time, having at total 364 on ground floor and 341 on first floor.

Fire Safety

3.1 Introduction

In order to achieve the best fire safety within the new scheme for St. Patrick's Church, Technical Guidance Documents Part B and BS9999 have been used. Highly effective fire safety environment has been designed, looking at areas such as fire exits, evacuation, smoke control, materials and other. The BS9999 document clearly states that *"the design of building for the fire safety relies upon an understanding of the source of fire, materials and systems likely to be involved in fire, and the likely spread of fire"*.

3.2 Escape Routes

The maximum allowed occupancy capacity in a building results in a minimum number of escape routes. Building regulations Part B, table 1.3 indicates the minimum number of escape routes in a building based on the number of persons accommodated.

Table 1.3 Minimum number of escape routes	
Number of persons accommodated	Minimum number of escape routes
1 to 500	2
More than 500	3

Figure 3.1 Part B Table 1.3

(Source: Technical Guidance Document Part B)

Table 1.4 in the building regulations Part B indicates the width of escape routes and exits. The table shows the minimum width of an exit that must be applied per maximum number of persons that are to use the exit. Since both floors in the new proposed scheme are over 220 people, therefore, along with the building regulations Part M, which refers to access and use, the width of each exit must be of minimum 1050mm.

Table 1.4 Width of escape routes and exits	
Maximum number of persons	Minimum width (mm) (1)(2)(3)
50	750 ⁽⁴⁾
100	850
150	950
220	1050
More than 220,	5mm per person ⁽⁵⁾

Figure 3.2 Part B Table 1.4

(Source: Technical Guidance Document Part B)

The proposed design allows 4 possible fire exits on the ground floor and 3 fire stairs on the first floor, meeting the regulations of Part B, since the total occupancy capacity of the building is over 500 persons accommodated.

Starting on Ground Floor, the width of fire exits are starting from 1100mm, the widest being at 1350mm. On the first floor, the fire stairs at the front of the building, have an exit of 1200mm, while fire exits that are in more accommodated areas have the exits at the width of 1500mm.

Since the building provides an open-plan design, there are only several more doors that lead to WCs, staff rooms or storage. Each of those doors are at 800mm or more, not exceeding the width of 1320mm.

All escape routes are highlighted red on the plans altogether with the travel distances calculations.

3.3 Travel Distances

Purpose Group(s) ⁽¹⁾	Use of premises or part of premises	Maximum travel distance ⁽²⁾ related to available direction of escape	
		In one direction	In more than one direction
2(a)	Residential (Institutional)	10	20
2(b)	Other Residential:		
	(a) bedroom ⁽³⁾	10	20
	(b) bedroom corridor	10	35
	(c) elsewhere	20	35
5	Assembly and recreation		
	(a) areas with seating in rows	15	32
	(b) other areas	18	45
	(c) buildings primarily for use by disabled persons	9	18
6	Industrial ⁽⁴⁾		
	(a) normal risk	25	45
	(b) high risk	12	25
7(a)	Storage ⁽⁴⁾		
	(a) normal risk	18	45
	(b) high risk	15	32
7(b)	Car Parks	18	45
8	Other Non-Residential	18	45
2 - 8	Places of special fire risk ⁽⁵⁾	9	18
2 - 8	Plant-room or roof-top plant		
	(a) within room ⁽³⁾	9	35
	(b) total travel (enclosed)	18	45
	(c) total travel (open air)	60	100

Figure 3.2 Part B Table 1.2

(Source: Technical Guidance Document Part B)

Table 1.2 from the building regulations Part B, indicates the different travel distances related to the available direction/s of escape. According to the building regulations Part B, *“the permitted travel distance will depend on whether escape is available in one direction only or in more than one direction”*. The travel distances are applied to each purpose group and the calculations with plan-visuals are available on the next few pages. Purpose group 5 is used for calculating travel distances within the proposed design.

3.4 Travel Distances Floor Plans

On the ground floor plan, there are several escape routes to be taken from each escape point. In order to comply with the building regulations Part B, two points of escape have been calculated in regards the travel distances. The first point, visible on the ground floor plan, has been taken within one space – having it to be the furthest point from the closest fire escape doors. Therefore, the distance from point E to fire doors at point A is just over 16 meters. Having other possible routes of escape, this perfectly complies with the regulations.

Another point has been taken in regards the furthest point from the main fire escape route. Point J, as visible in ground floor plan, has three possible routes of escape, where the shortest proved to be 21.3 meters and the longest to be over 41.7 meters, having J to N being the furthest, although possible route of escape.

First Floor also calculates possible escape routes from two points, where one escape point is placed in an enclosed room – Point F is in the furthest corner of the cinema/presentation room. Exiting the room, there are three possible routes of escape (2calculated). The closest fire exit is at almost 25 meters, although this involves walking entirely around a 9 meter long wall. The longest distance to a fire exit from Point F is to Point M, which is 32.4 meters away. Another point (J) of escape was at the middle of a walkway, giving it three possible routes of escape, which are as fallows: Point J – Point I is the shortest route of escape at over 15 meters, Point J – Point M is just over 22 meters distance and Point J – Point A being the longest distance at 25.6 meters. All routes of escape are complying with the set maximum distances (45 meters) of the building regulations Part B document – Purpose Group 5.

3.5 Drawings

The following pages provide ground floor and first floor plans of

1. Highlighted in red fire exits and travel distances with calculations.
2. Fire compartmentations, where red dotted line shows 30 minutes fire rating and a red solid line shows 60 minutes fire rating – for doors/partitions. With fire compartmentation the refuges are shown within fire exits.

3.6 Smoke Control

The new proposed scheme consists only of ground floor and first floor, therefore, the smoke control will be easier than over more floors. Section on the next page shows three possible points of fire breaking out, where:

1. AOV smoke extraction from the building. In case of fire at Point A, the AOV will extract fire smoke from the building to the exterior. The smoke that the AOV will not extract will collect under the ceiling and will be trapped, not invading the space and giving more time for people to make their way to the nearest fire stairs. The same system is provided on the parallel side of the building.

2. In case of fire at Point B, the smoke has two possible ways of spreading. In case of travelling towards the north aisle, it will escape to first floor level through a void and the AOV will extract the smoke from the building to the exterior. In case of traveling towards the middle of the building, it will also escape to first floor through the void, trapping the smoke under the ceiling. At this point the smoke may escape outside through several ducts in the ceiling as shown at point D. This is an existing system in the church and is visualised in the images below.



3. If the fire breaks out at point C, it will travel straight through the void, and as in case of Fire at point A, it will be trapped under the ceiling, not invading the space and allowing people more time to make their way to the nearest fire exit. The smoke then can escape outside through several ducts in the ceiling as shown at point D in the section and illustrated in the above images.

Sanitary

4.1 Introduction

When it comes to designing sanitary facilities, the document BS 6465 is a guide under the design loads, gender breakdown, universally accessible provisions and many more. Because the building has been designed mainly as a library and study space, Table 8 from the document BS 6465 for the minimum provision of sanitary appliances is used. Table 8 refers sanitary appliances for assembly buildings where WC use is not concentrated in intervals.

4.2 Scale of Provision for Public Use

Previously in Section 2, the calculations for occupancy capacity of the building have given the number of 706 people in the building in total. Since the building is too small to accommodate WCs at both floors, the ground floor will accommodate most WCs for the whole building.

“The British Toilet Association recommends the following ratio of provision: Number of male cubicles plus number of male urinals x2 = required number of female cubicles”.

Table 8 Minimum provision of sanitary appliances for assembly buildings where WC use is not concentrated in intervals

Sanitary appliance	Male visitors	Female visitors
WC	1 per 250 males; plus 1 for every additional 500 males or part thereof; Male WC provision should be half female WC provision where urinals are not used	2 for up to 40 females; 3 for up to 70 females; 4 for up to 100 females; plus 1 for every additional 50 females or part thereof
Urinal	1 per 50 males up to 100 males; plus 1 for every additional 100 males or part thereof	–
Washbasin	1 per WC and in addition, 1 per 5 urinals or part thereof	1, plus 1 per 2 WCs or part thereof
Cleaners' sink	As 5.5	

NOTE Where the building type or form of entertainment is subject to an entertainment licence, the scale of provision and the location and arrangement of the toilets needs to be agreed with the licensing authority.

Figure 4.1 BS6465 Table 8

(Source: British Code of Practice BS6465)

353 Males:

- 1 WC per 250 males
- 1 WC for additional 500 males
- 1 Urinal per 50 males (up to 100)
- 1 Urinal for additional 100 males
- 1 Washbasin per WC / per 5 urinals

Needed: 1 WC, 1 Accessible WC (referring to Part M), 3 Urinals (one for children, referring to Part M), 2 Washbasins

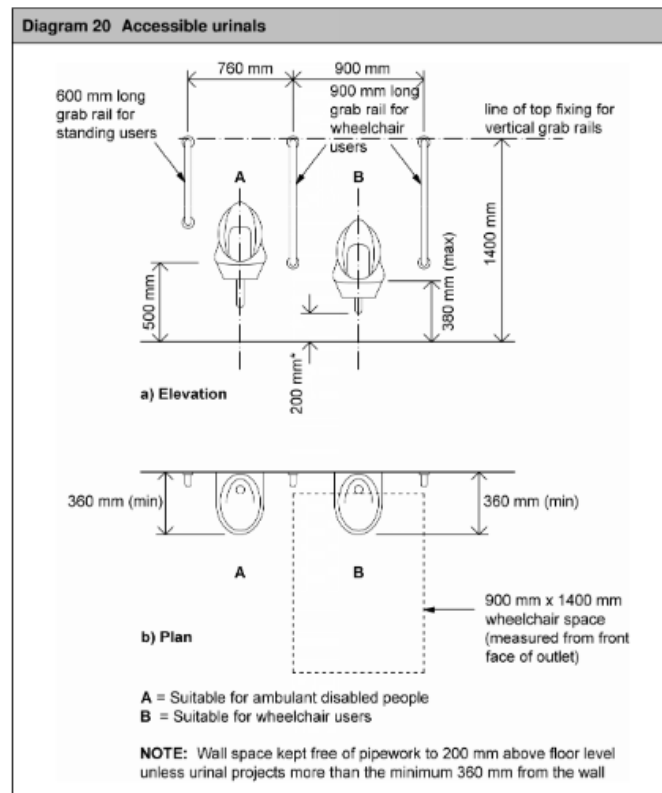


Figure 4.2 Part M Diagram 20
 (Source: Technical Guidance Document Part M)

353 Females:

4 WCs for up to 100 females

1 WC for additional 50 females

Washbasins: 1, plus 1 per 2 WCs

Needed: 9 WCs, 5 Washbasins

Table 10 **Minimum provision of sanitary appliances for restaurants and other places where seating is provided for eating and drinking**

Sanitary appliance	For male customers	For female customers
WC	2 for up to 150 males; plus 1 for every additional 250 males or part thereof 2 for up to 50 males if urinals are not provided	2 for up to 30 females; plus 1 for every additional 30 females up to 120, plus 1 for every additional 60 females or part thereof
Urinal	1 per 60 males or part thereof up to 120 males; plus 1 for every additional 100 males or part thereof	–
Washbasin	1 per WC, plus 1 per 5 urinals or part thereof	1 per WC
Cleaners' sink	As 5.5	

Figure 4.3 BS6465 Table 10

(Source: British Code of Practice BS6465)

The occupancy figures for the café are 154 persons allowed at one time. Although this is allowed, the two-storey space provides only 61 seating spaces. Table 10 from the document BS 6465 provides minimum provision of sanitary appliances for restaurants and other places where seating is provided for eating and drinking. Since the café is an open space to the rest building, it already provides the minimum provision of WCs. Although for the customer satisfaction and also for the staff use, there is one WC on each floor of the café.

4.3 Scale of Provision for Staff Use

Table 3 **Minimum scale of provision of sanitary appliances for staff toilets in offices, shops, factories and other non-domestic premises used as place of work**

Sanitary appliances for female staff, and for male staff where urinals are not installed		
Number of persons at work	Number of WCs	Number of washbasins
1 to 5	1	1
6 to 15	2	2
16 to 30	3	3
31 to 45	4	4
46 to 60	5	5
61 to 75	6	6
76 to 90	7	7
91 to 100	8	8
Above 100	8, plus 1 WC and washbasin for every unit or fraction of a unit of 25 persons	

Figure 4.4 BS6465 Table 3

(Source: British Code of Practice BS6465)

The building is mostly a public space with not many staff working within building.

- Reception allows for 2 staff members
- Café should provide up to 2 staff members at more busy days
- At least one cleaner will work in the building

This gives the total of 5 staff members, requiring 1 WC for the staff and 1 Washbasin.

4.4 Universal WCs

Although the building is small and is unable to accommodate WCs on both floors, it is recommended to provide a Universal WC at each floor for the ease of use. Two universal WCs are therefore provided – having one on ground floor and one on first floor.

7.1 In buildings other than private dwellings, toilet provision for disabled people should be as follows.

- Where there is only one toilet in a building, it should be an enlarged wheelchair-accessible unisex type.
- At least one wheelchair-accessible unisex toilet should be provided at each location where sanitary facilities are provided for the use of staff, customers, and visitors to a building.
- At least one ambulant accessible WC cubicle for ambulant disabled people should be provided in separate-sex toilet accommodation.
- Additionally to item c), where there are four or more WC cubicles (in addition to the unisex facility), one larger WC cubicle 1 200 mm wide, for people who need extra space, should be provided in both male and female separate sex toilets.
- In toilet areas serving a large number of visitors, such as large sports stadiums and shopping centres, the provision of one enlarged wheelchair accessible unisex toilet capable of including an adult changing bench should be considered.

7.2 Provision of an accessible toilet can count as part of the overall WC provision for the building.

7.3 Size, layout and fittings in the toilets for disabled people should be in accordance with the recommendations of BS 8300.

Figure 4.5 BS6465 7. Toilets for disabled people
(Source: British Code of Practice BS6465)

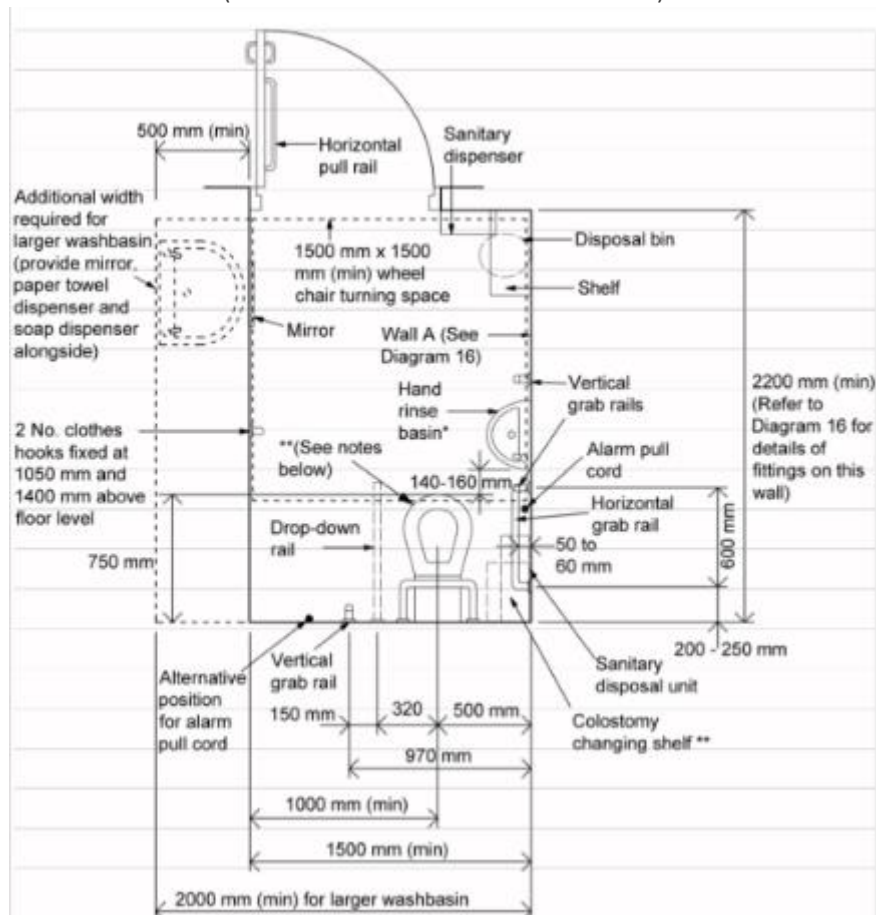


Figure 4.6 BS6465 Universal WCs
(Source: British Code of Practice BS6465)

4.5 WCs Layout

The following pages provide plans with the WCs provided in the building.

Accessibility

5.1 Introduction

Part M of the Technical Guidance Document for Building regulations refers to accessibility and use of the building. This includes accessible entrances, accessible reception desks, corridors, WCs, washbasins, lifts, refuges space in fire exits, etc.

5.2 Access Routes

Access Routes include doors, walkways and corridors.

Corridors should be provided with the minimum of 1050mm in width, avoiding any projections onto the walkway. Recommended width of a corridor would be of 1500mm, allowing for a turning point for the wheelchair users, with a recommended 1800mm at the junctions of such corridors. There is no need to provide passing points if a walkway/corridor is less than 25m long, or if the walkway/corridor is of 1800mm width.

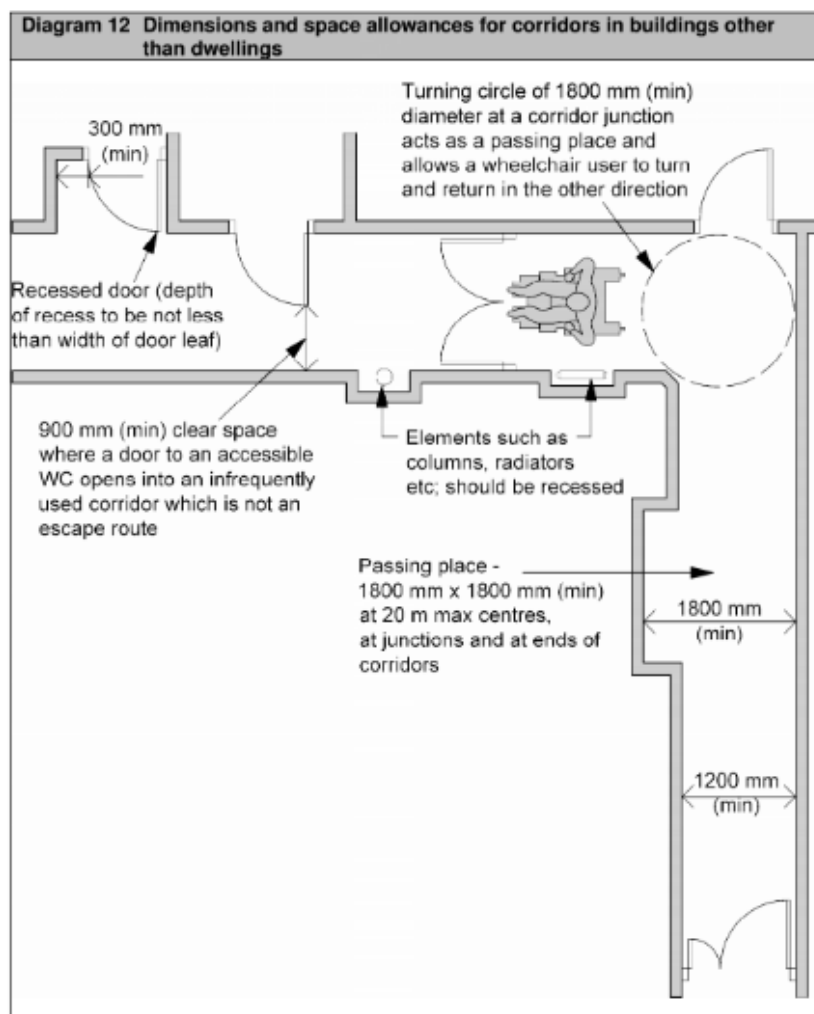
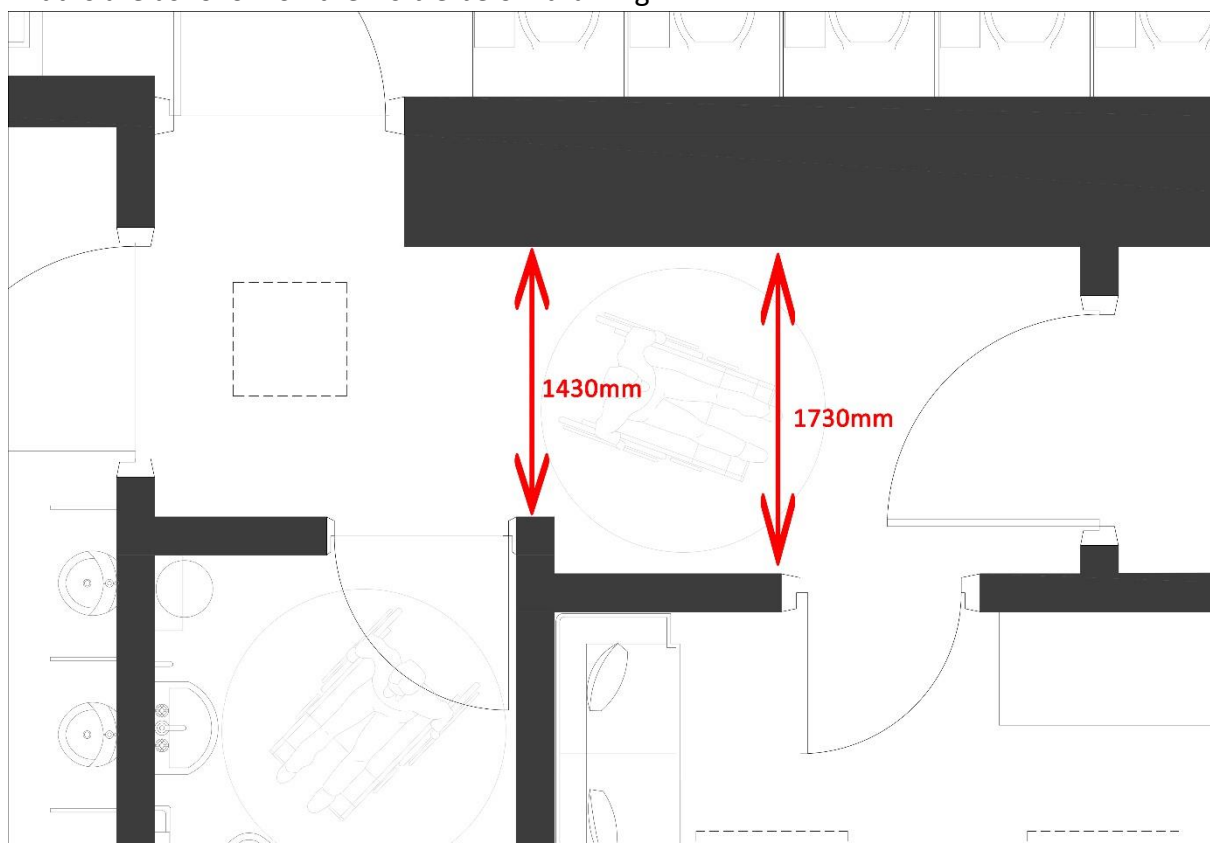


Figure 5.1 Part M Diagram 12
(Source: Technical Guidance Document Part M)

The building provides only one enclosed corridor that gives access to WC's and the widths are as follow on the visible below drawing.



Part M of TGDs indicate that the minimum width of external doors should be at 1000mm, while internal doors should be at minimum of 800mm.

Table 2 Minimum effective clear widths of doors	
Direction and width of approach	Minimum effective clear width ^(a)
Straight on (without a turn or oblique approach)	800 mm
At right angles to an access route at least 1500 mm wide	800 mm
At right angles to an access route at least 1200 mm wide	825 mm
External doors and internal lobby doors at the entrance of buildings used by the general public ^(b)	1000 mm

NOTES:

(a) The effective clear width should be measured in accordance with Diagram 10.

(b) Buildings used by the general public include day centres, hotels, institutional buildings, places of assembly, shops, shopping centres and office buildings with a nett floor area^(c) per floor greater than 200 m². (Refer to Page 13 for definitions)

(c) When calculating the nett floor area of any storey, the area provided for vertical circulation, common sanitary facilities and maintenance areas in the storey should not be included.

Figure 5.2 Part M Table 2
(Source: Technical Guidance Document Part M)

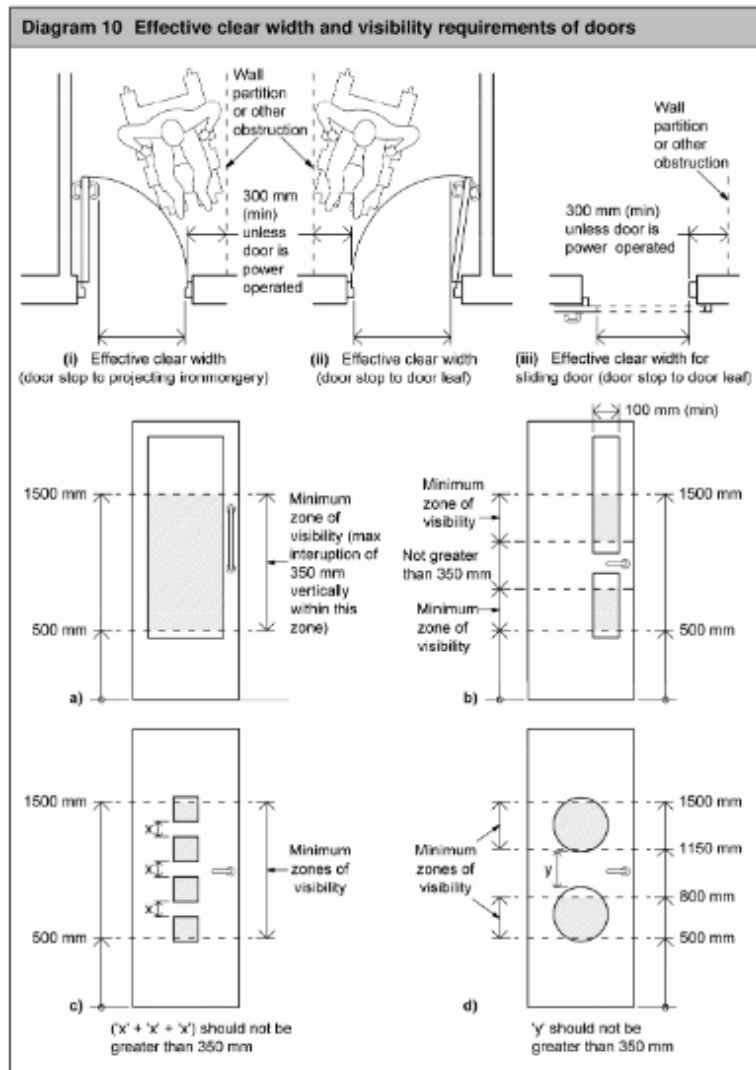


Figure 5.3 Part M Diagram 10

(Source: Technical Guidance Document Part M)

With the new designed scheme for the St. Patrick's Church, the widths of external doors do not go below 1m of width. The smallest external doors are at 1120mm in width. The smallest available door at 800mm are provided for the storage entrance.

5.3 Stairs

Newly built internal stairs for the building will meet the Part M regulations. Having main stairs at the library space and separate stairs in the café. Since the scheme for St. Patrick's Church has evolved from the idea of 'wrapping' around the columns, the stairs provided for the mentioned spaces are at a curve. Diagram 2 illustrates how to measure tapered stairs.

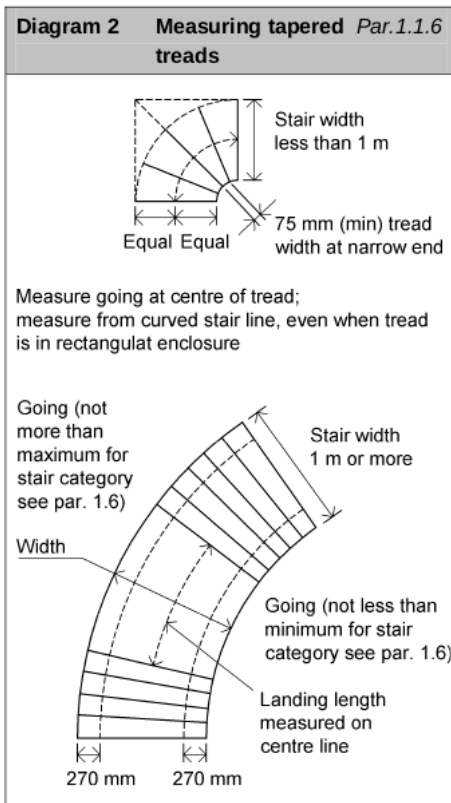
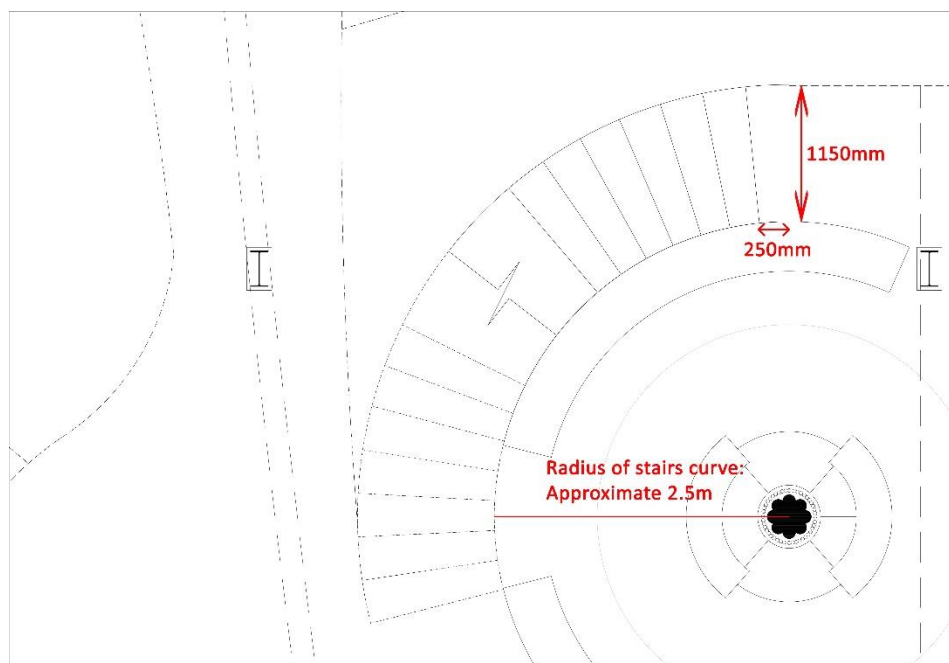


Figure 5.4 Part M Stairs

(Source: Technical Guidance Document Part M)

Visible on the following image are the main stairs in the building:



Part M indicates key dimensions for stairs, showing heights of handrail being 900-1000mm, the spacing between the last step (top or bottom) and the tactile warning surface, etc.

5.4 Lifts

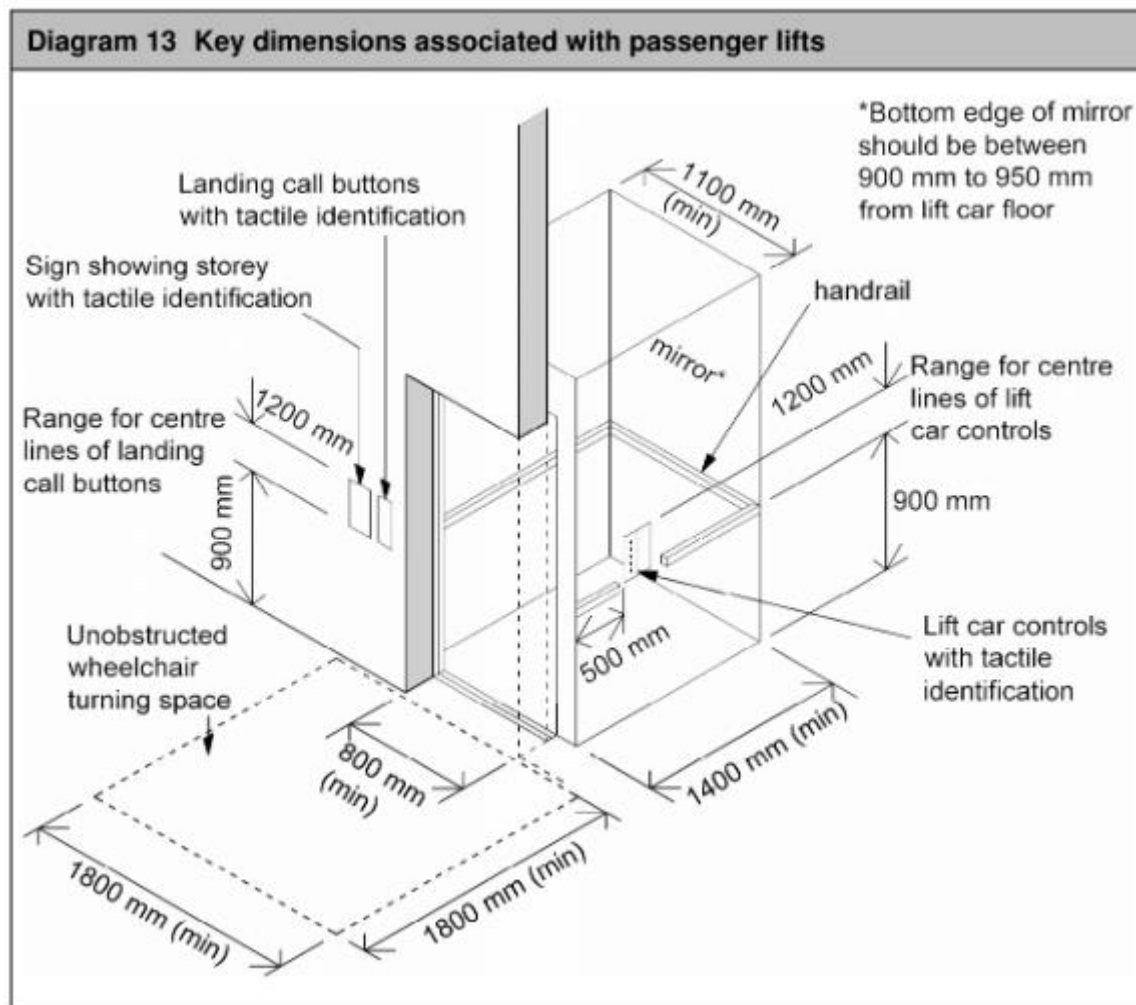


Figure 5.5 Part M Diagram 13
(Source: Technical Guidance Document Part M)

Diagram 13 shows the minimum size of a lift for passengers. The lift that has been accommodated for the library is 1550mm x 1900mm with an entrance of 1200mm, where the minimum is of 800mm.

5.5 Audience Seating

Since there is a cinema/presentation room on first floor of the library space, Part M indicates that audience seating for wheelchair users should be provided, having at least 1% of the total seating capacity, if there is up to 600 seating capacity. The cinema/presentation room provides 84 seats and 2 wheelchair spaces at the front of the room in the audience row.

Table 3 Provision of wheelchair spaces in audience seating		
Seating capacity (persons)	Minimum provision of spaces for wheelchair users	
	Permanent seating	Removable seating
Up to 600	1% of total seating capacity ⁽ⁱ⁾	Remainder to make a total of 6 ⁽ⁱ⁾
More than 600 but less than 10,000 ⁽ⁱⁱ⁾	1% of total seating capacity ⁽ⁱ⁾	Additional provision, if desired
NOTE: ⁽ⁱ⁾ Percentages need to be rounded up to determine the recommended number of spaces. ⁽ⁱⁱ⁾ For seating capacities greater than 10,000 refer to guidelines given in 'Accessible stadia: a good practice guide to the design of facilities to meet the needs of disabled spectators and other users'.		

Figure 5.6 Part M Table 3
(Source: Technical Guidance Document Part M)

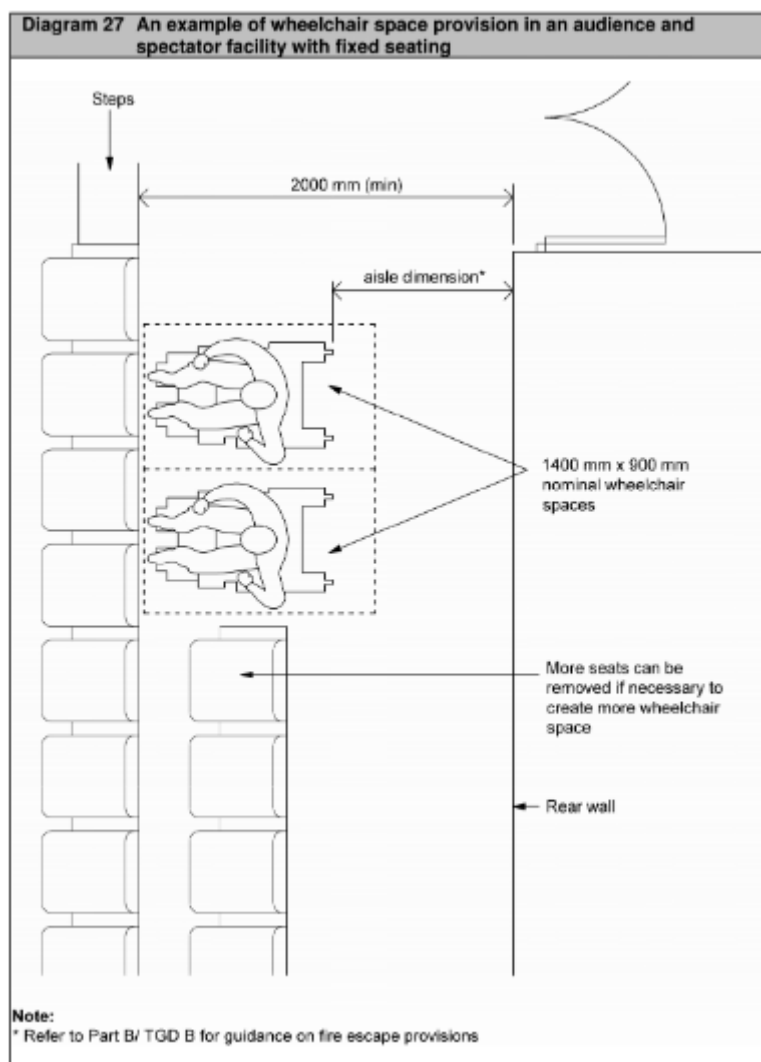


Figure 5.7 Part M Diagram 27
(Source: Technical Guidance Document Part M)

5.6 Visual Contrast

1.6.4 Visual contrast

Where visual contrast is provided:

- (a) the difference in the LRV of the surfaces should be 30 points or more when measured in accordance with BS 8300:2009 Annex B or BS 8493:2008. For large areas such as walls and floors a difference in the LRV of 20 points or more is acceptable, provided the illuminance on the surfaces is 200 lux or more. For door opening furniture, a difference in the LRV of 15 points between the product and its background is acceptable;
- (b) the area should be adequately lit in all conditions;
- (c) shadows and glare should be avoided e.g. from changing daylight or high gloss surfaces;
- (d) large repeating patterns should be avoided in spaces where visual acuity is critical as they will hamper communication for people who are partially sighted and those who lip-read or use sign language. This would apply to locations such as reception areas with enquiry desks and speakers rostrums in lecture halls.

Figure 5.8 Part M Section 1.6.4

(Source: Technical Guidance Document Part M)

The following image provides visual contrast within the new space, by providing different colours of walls to floors, additionally providing yellow popping colour on the stairs, making it easier for the user to distinguish between the rise and the going of the stairs. There are many spot lights provided within the space, as well as LED halo-lamps, in order to make the space well lit, although avoiding glare. The space is designed as open-plan, allowing a large amount of natural light to enter every space of the building.

