



# **FIRE SAFETY SPECIALISTS**

PROTECTING YOUR PEOPLE, YOUR BUILDING & YOUR FUTURE

Eckington Business Centre, 62, Market Street, Eckington, Derbyshire, S21 4JH  
Tel/Fax: 01246 434314 Mobile: 0797 4709435  
email: [vinmaher@fire-safety-specialists.co.uk](mailto:vinmaher@fire-safety-specialists.co.uk); Website: [www.fire-safety-specialists.co.uk](http://www.fire-safety-specialists.co.uk)

## Consultation Report

**Premises:** Broad Street Plaza

**Address:** 51 North Bridge,  
Halifax HX1 1UB

**Consultant:** Vin Maher. G.I.Fire.E

**On behalf of:** Fire Safety Specialists Ltd

**Date of report:** 21<sup>st</sup> February 2023



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## Notes

Fire Safety Specialists Ltd were asked by James Driver of Calderdale Council to advise on a proposed scheme that reduces the width of a public footpath outside a fire exit from these premises.

The comments made below are based purely upon the information provided in the following documents:

1. A629 - Phase 2 Halifax Town Centre Improvements - BROAD STREET PLAZA - PROJECT NUMBER 60528270 - SHEET NUMBER 60528270-SHT-30-0016-C-SK-003
2. Emails from James Driver on 31/1/2023; 9/2/2023 (x2)

A site visit was not carried out.

Advice provided in this document is based upon the guidance within:

1. The Building Regulations 2010 Approved Document B - vol 2 – Buildings other than dwellings.
2. The Building Regulations 2010 Approved Document M - vol 2 – Buildings other than dwellings.
3. HM government – Fire safety Risk Assessment – theatres, cinemas and similar premises.

## **Current/proposed means of escape**

The fire exit in question consists of a four leaf exit of unknown width. However, Approved Document M of the Building Regulations 2010 requires that the width of an external door for disabled people is a minimum of 1000mm.

It is therefore assumed that each door leaf provides this width.

The current capacity of this exit is 4 doors @ 1000mm = 600 people. This is based on an evacuation time of 2.5 minutes.

This is calculated as follows:

The risk category is considered to be normal.

A width of at least 750mm can accommodate up to:

- 80 people in higher risk premises;
- **100 people in normal risk premises; or**
- 120 people in lower risk premises.

An additional 75mm should be allowed for each additional 15 persons (or part of 15).

Therefore:

A 1000mm wide door can accommodate:

$$750\text{mm} = 100$$

$$250/75 = 3.3$$

$$3.3 \times 15 = 49.5 \text{ (50)}$$

$$100+50 = 150 \text{ people per door}$$

$$150 \times 4 \text{ doors} = 600$$

Once people have exited from the building they need to continue to move away from the doors in order to allow those behind to evacuate.

In order to avoid a bottleneck at this stage there needs to be sufficient external escape width to allow the flow to continue.

According to the information provided there is 4.2 meters of available escape width towards North Bridge Street and 4 meters towards Broad Street.

Under the proposed scheme this reduces to 3.5 meters towards North Bridge Street and 3.8 meters towards Broad Street.

This therefore allows a combined means of escape width that would accommodate approximately 1370 people which is clearly adequate for the 600 people evacuating from this exit.

This is calculated as follows:

Towards North Bridge Street @ 3500mm

$$750\text{mm} = 100$$

$$2750/75 = 36.6 \text{ (37)}$$

$$37 \times 15 = 555$$

$$100+555 = 655 \text{ people}$$

Towards Broad Street @ 3800mm

$$750\text{mm} = 100$$

$$3050/75 = 40.6 \text{ (41)}$$

$$41 \times 15 = 615$$

$$100+615 = 715 \text{ people}$$

Total external means of escape capacity  $655 + 715 = 1370$

It should be noted however that there is a possibility of people walking into the road after they have exited the building.

It is therefore recommended that a kerbside barrier is provided to cause people to turn to the left or the right after leaving the building.

### **Conclusion**

Although the proposed scheme will reduce the width of the external escape route there will remain adequate width to accommodate the anticipated number of people evacuating via this route.