

# Tilehouse Street Baptist Church

## Risk Assessment: Methodology

### 1. Hazard Analysis & Risk Assessment

The following methodology is used to derive a risk assessment from each of the Hazards identified during a Hazard Survey.

### 2. Definitions of risk and tolerability

Risk is defined to be a combination of likelihood of occurrence and severity of effect. A risk is said to be intolerable, tolerable or negligible. An intolerable risk is one, which cannot be accepted. The risk should either be rejected or reduced so that it becomes tolerable. A negligible risk is one, which can be accepted without further mitigation. A tolerable risk is one, which can be accepted, but only after the risk has been reduced, it is continuously monitored and demonstrated to be within tolerable limits. A tolerable risk need not be reduced when the cost to do so would be grossly disproportionate to the benefits of the reduced risk. The law states that the risks should be reduced As Low As Reasonably Practicable (ALARP).

The likelihood and severity of an accident or incident should be analysed to determine whether or not the risk is tolerable. Intolerable risks should be reduced at least to tolerable. Tolerable risks should always be reduced ALARP, unless the risk is negligible. The risk should then be monitored to ensure it always remains ALARP. Even if no hazards are identified, the risk should be reviewed to ensure no new hazards emerge as the design/running of the equipment progresses.

### 3. Risk Tables

The following 5x5 table of probability and severity is widely used within the safety industry. The risk is calculated by multiplying the value of probability from Table 1 by the value of severity from Table 2. The risk matrix in Table 3 shows at a glance the tolerability of the resulting product which is further explained in Table 4.

**Table 1: Frequency/ Probability**

Frequency Category	Description	Definition
1	Incredible	Less than once in 100 years
2	Improbable	10 to 100 years
3	Remote	1 to 10 years
4	Occasional	Monthly to Yearly
5	Probable	Daily to Monthly

**Table 2: Hazard/ Severity**

Severity Category	Definition
1	Minor injury
2	Major injury
3	Multiple major injuries
4	Single fatality
5	Multiple fatalities

**Table 3: Risk Matrix**

Severity → ↓Frequency	5 Multiple Fatalities	4 Single Fatality	3 Multiple Major Injuries	2 Major Injury	1 Minor Injury
5, Daily to Monthly	25	20	15	10	5
4, Monthly to Yearly	20	16	12	8	4
3, 1 to 10 years	15	12	9	6	3
2, 10-100 Years	10	8	6	4	2
1, < 1 in 100 Years	5	4	3	2	1

**Table 4: Tolerability of Risk values**

Risk Tolerability	Represents
Intolerable, (10-25)	Events with risks at or above one equivalent fatality a year. Such events are of a sufficiently high level of risk that they should be investigated/ assessed more rigorously and as soon as practicable. It is almost certain that risk mitigation measures will be required and professional safety advice/assistance may be needed.
Tolerable, (4-9)	Events with a level of risk greater than a minor injury a year but not as high as one equivalent fatality a year. These events, of a moderate level of risk, need to be investigated further in due course and may require risk mitigation measures to be taken.
Negligible, no shading (1-4)	Events with risks at or below the equivalent of a minor injury a year. While these events have a relatively low level of risk, several of them on a project/system need to be investigated further in due course, although it is unlikely that risk mitigation measures will be justified.

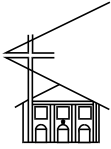
#### **4. Control Measures and Mitigation**

Measures may be taken to mitigate each of the hazards found. Such measures may reduce the likelihood of a consequence – for example, by providing handrails on steps – or reduce the consequence – for example, by replacing a hard surface in a playground with a resilient one. Other measures may remove the hazard altogether – for example, by replacing steps with a ramp.

#### **5. Tabulation of Results**

A table similar to that shown on the following pages can be used to tabulate the results for use in a Risk Report.

The risk is assessed before the application of mitigation measures and again afterwards in order to help show that risk has been reduced ALARP.



## Tilehouse Street Baptist Church

Activity		Applies to						
Assessor:								
HAZARD	TYPE/ CONSEQUENCE	RISK (Before Controls)			CONTROL MEASURES IN PLACE/ PROPOSED	RISK (After Controls)		
		L	C	R		L	C	R
<b>Additional Control Measure</b>					<b>Justification for Acceptance</b>			

**Key:** L= Likelihood/ Probability, C = Consequence, R = Risk = product of LxC