Fire safety and fire protection survey and risk assessment - New Build

Part 1 - Incidence of fire

Low Risk	0	1	2	3	4	5	High Risk

1.1. Incidence of arson / deliberate fire in the locality

Locality has low arson rate (as reported by fire brigade / police)	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☒ 5	Locality has high arson rate (as reported by fire brigade / police)

1.2. Fires in other schools in the locality (in the last 5 years)

Few cases of fire in other schools in the locality	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☒ 5	Frequent cases of fire in locality

Part 2 - Environment and buildings

Low Risk	0	1	2	3	4	5	High Risk

2.1. Security measures - buildings

Good security measures provided for school building	☒ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Few security measures

2.2. Security measures – school grounds

Good security measures provided for school grounds	☐ 0	☒ 1	☐ 2	☐ 3	☐ 4	☐ 5	No security measures

2.3. Opportunities for arson

Few opportunities for arson	☐ 0	☒ 1	☐ 2	☐ 3	☐ 4	☐ 5	Many opportunities for arson

2.4. Building height

Single storey)	☒ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	High-rise

2.5. Building construction

Traditional	☒ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Lightweight

2.6. Building design and routes for fire spread

Few	☐ 0	☒ 1	☐ 2	☐ 3	☐ 4	☐ 5	Many

2.7. Building size (floor area)

Small building	☐ 0	☒ 1	☐ 2	☐ 3	☐ 4	☐ 5	Very large building

2.8. Building distribution (separation)

Distributed buildings	◉ 0	○ 1	○ 2	○ 3	○ 4	○ 5	Single building

2.9. Risk of fire from school activity

Low	○ 0	◉ 1	○ 2	○ 3	○ 4	○ 5	High

2.10. Out-of-hours use of school facilities (by the public)

None or low out-of-hours use	◉ 0	○ 1	○ 2	○ 3	○ 4	○ 5	Frequent out-of-hours use

2.11. Building users at risk

Low	○ 0	◉ 1	○ 2	○ 3	○ 4	○ 5	High

Part 3 Fire safety and fire protection measures

Low Risk	0	1	2	3	4	5	**High Risk**

3.1. Passive fire protection measures (fire engineered buildings)

Buildings have extensive fire compartment-alisation and fire/smoke barriers and doors	◉ 0	○ 1	○ 2	○ 3	○ 4	○ 5	Overly large fire compartment-s and lack of fire/smoke barriers and doors

3.2. Design relaxations of passive measures (for education reasons) (fire engineered buildings)

None	◉ 0	○ 1	○ 2	○ 3	○ 4	○ 5	Atrium or open-plan areas

3.3. Fire detection and warning system

Automated and linked to central control room	◉ 0	○ 1	○ 2	○ 3	○ 4	○ 5	Manual system, break-glass points

3.4. Means of escape (and emergency lighting and signage) (fire engineered buildings)

Many exits, short escape routes	◉ 0	○ 1	○ 2	○ 3	○ 4	○ 5	Few exits, long escape routes

3.5. Occupancy density

Few people, in small groups	○ 0	○ 1	◉ 2	○ 3	○ 4	○ 5	Large numbers in a single compartment

3.6. Fire Service notification

Automatic	◉ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5	None

3.7. Fire Service location

Very close	○ 0 ◉ 1 ○ 2 ○ 3 ○ 4 ○ 5	Very distant

Part 4 Consequences/ impact of fire (Weight = 4)

Low Risk	0	1	2	3	4	5	**High Risk**

4.1. Impact of fire on users (injury)

Low	◉ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5	High (risk of death)

4.2. Impact of fire on learning

Low	○ 0 ○ 1 ○ 2 ◉ 3 ○ 4 ○ 5	High

4.3. Impact on community

Low	◉ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5	High

4.4. Potential cost

Low	○ 0 ○ 1 ◉ 2 ○ 3 ○ 4 ○ 5	High

4.5. Environmental impact

Low	○ 0 ◉ 1 ○ 2 ○ 3 ○ 4 ○ 5	High

SCORE

Part 1	Incidence of arson (fire)	10	
Part 2	Environment and buildings	6	16
Part 3	Fire safety or fire protection measures	3	
Part 4	Consequences of a fire	24	27
	TOTAL	**43**	

Scoring

Proposed overall scoring		***Proposed scoring Parts 1 and 2***		***Proposed scoring Parts 3 and 4***	
Low risk	0 – 30	*Low risk*	*0 – 15*	*Low risk*	*0 – 20*
Average risk	31 – 80	*Average risk*	*16 – 35*	*Average risk*	*21 – 40*
High risk	80 – 200	*High risk*	*36 – 65*	*High risk*	*41 – 135*

Overall score

Low risk

Low risk

The fire safety and fire protection survey and risk assessment indicates your school is at a low level of risk. Sprinklers may be beneficial.

Average risk

The fire safety and fire protection survey and risk assessment indicates your school is at an average level of risk. A sprinkler system is recommended.

High Risk

The fire safety and fire protection survey and risk assessment indicates your school is at a high level of risk. Sprinklers should be provided.

The tables below list the type of fire safety and fire protection measures that might be appropriate for your school.

Fire safety or fire protection measures for consideration to reduce risk of fire (Parts 1 and 2)

Low risk

The fire safety and fire protection survey and risk assessment indicates your school is at a low level of risk with regard to the incidence of fire and environment and buildings.

Sprinklers may be beneficial. You may also wish to consider:

• Improved building security measures
• Improved site security measures
• Better building and equipment maintenance
• Further control of activities likely to cause a fire

Average risk

The fire safety and fire protection survey and risk assessment indicates your school is at an average level of risk with regard to the incidence of fire and environment and buildings.

Sprinklers are recommended. You may also wish to consider:

• Improved building security measures
• Improved site security measures
• Better building and equipment maintenance
• Improved control of activities likely to cause a fire
• Improved procedures to ensure that buildings are cleared of materials that can be used for arson

(Note: a sprinkler system may act as a deterrent to arsonists, but primarily acts to prevent a small fire growing)

High Risk

The fire safety and fire protection survey and risk assessment indicates your school is at a high level of risk with regard to the incidence of fire and environment and buildings.

Sprinklers should be provided. You should also consider

• More building security measures
• More site security measures
• Security measures include;
• good window locks,

• intruder detection
• CCTV
• Security staff / guards
• good perimeter fencing
• Car parks well lit and overlooked etc
• Doors secure against all but the most determined intruders
• Windows and roof-lights protected against intruders etc
• Better building and equipment maintenance
• Control of activities likely to cause a fire
• Buildings cleared of materials that can be used for arson

(Note: a sprinkler system may act as a deterrent to arsonists, but primarily acts to prevent a small fire growing)

Fire safety or fire protection measures for consideration to reduce risk of injury, damage, and consequences (if a fire does occur) (Part 3 and 4)

Low risk

The fire safety and fire protection survey and risk assessment indicates your school is at a low level of risk with regard to the risk of injury, damage, and consequences (if a fire does occur).

Sprinklers may be beneficial. You may also wish to consider:

• An improved automatic fire detection and alarm system
• Improved procedures to ensure doors are shut at night
• Secure storage (fire cupboards) for documents and coursework
• Better communications with local fire brigade
• Contingency plans, for example for use of alternative buildings
• Better planning, training and more frequent drills

Average risk

The fire safety and fire protection survey and risk assessment indicates your school is at an average level of risk with regard to the risk of injury, damage, and consequences (if a fire does occur).

A sprinkler system is recommended. You may also wish to consider:

• An improved automatic fire detection and alarm system
• Additional fire compartmentalization
• Procedures to ensure doors are shut at night
• Secure storage (fire cupboards) for documents and coursework
• Better communications with local fire brigade
• Contingency plans put in place for use of alternative buildings
• Better planning, training and more frequent drills

High Risk

The fire safety and fire protection survey and risk assessment indicates your school is at a high level of risk with regard to the risk of injury, damage, and consequences (if a fire does occur).

Sprinklers should be provided. You should also consider:

• An automatic fire detection and alarm system
• Additional fire compartmentalization
• Procedures to ensure doors are shut at night

• Secure storage (fire cupboards) for documents and coursework
• Better communications with local fire brigade
• Contingency plans put in place for use of alternative buildings
• Better planning, training and more frequent drills
• Controls on the number of people using the building

For more information on types of fire safety and fire protection measures refer to BB100:
"Designing against the risk of fire in schools"

AWAITING RESPONSE FROM FIRE SERVICE AND COUNCIL IN ORDER TO ANSWER QUESTIONS 1.1 AND 1.2