



SILVERTOWN TUNNEL

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Fire Plan

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Revision History			
Rev No	Date	Summary of Changes	Section & Number
P01	10/02/2020	First Issue	
P02	21/04/2020	Revised following SPV and TfL review comments of P01	Section 6, page 5 Section 8.2, page 8

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1. Purpose

This Fire Plan sets out the strategic approach for the fire arrangements for the Silvertown Tunnels (STT) construction project, to identify the potential for emergency situations at Riverlinx CJV managed sites, and to develop arrangements to respond to such emergencies. To periodically test all emergency response situations and where applicable include all interested parties.

In accordance with Schedule 8 of the D&C Contract, Riverlinx CJV will submit to Project Co, for review, the proposed Fire Plan and will only be implemented once it has been endorsed by Project Co as “received” or “received with comments” in accordance with the Review Procedure (Schedule 9). This requirement extends to any amendments to the Fire Plan throughout the duration of the STT project.

2. Scope

This Plan applies to all Riverlinx CJV operational work locations and is to be read in conjunction with the Riverlinx CJV Emergency Plan.

Note: Whilst Riverlinx CJV continue to work on developing the content, including supporting process procedures, forms and standards as described in the Riverlinx CJV OHS&W management system manual, the Riverlinx CJV senior management have agreed that the Ferrovial safety management system (SMS) will be adopted. The Ferrovial SMS is OHSAS18001 certified.

3. Reference Documents

Regulatory Reform (Fire Safety) Order 2005
Construction (Design and Management) Regulations 2015
Fire Prevention on Construction Sites: The Joint Code of Practice (Fire Protection Association)
D&C Schedule 8 – Management Systems
BS6164 (Code of practice for health and safety in tunnelling in the construction industry)
HSG168 Fire safety in construction work
CIS 51 Construction fire safety

4. Legal Responsibilities

The main legislation relating to fire safety in the workplace is The Regulatory Reform (Fire Safety) Order 2005 which covers England and Wales and the Fire (Scotland) Act 2005 as amended. The key requirement of the legislation is for employers to carry out fire risk assessments and ensure that personnel have received the appropriate level of training.

The Construction (Design and Management) Regulations 2015 require that fire safety is considered by the Principle Designer and designers at the project planning stage and by the Principal Contractor in the preparation of the construction phase health and safety plan. It also requires that personnel receive appropriate training and that suitable emergency arrangements are made on construction sites.

5. Roles and Responsibilities

The Riverlinx CJV **Project Director (PD)** is responsible for ensuring compliance with regulatory requirements. To assist in discharging his duties the PD will appoint a fire safety co-ordinator(s). The PD will ensure that the arrangements for managing fire safety for each site, office, depot etc are described in location specific fire plans and that they are effective.

The **Fire Safety Co-ordinator(s) - (FSC's)**:

- conducts an initial and on-going fire risk assessment
- produces and implements the fire safety plan
- ensure that there are adequate numbers of trained Fire Wardens / Marshals across all Riverlinx CJV work locations
- carries out weekly checks of firefighting equipment and test of alarms and detection devices, keeping appropriate records
- institutes regular fire drills and training in the use of firefighting equipment, keeping appropriate records
- liaises with the local fire brigade and arranges site inspections and familiarisation visits
- supervises the evacuation procedure during an alarm and ensures that all staff and visitors report to the assembly point
- ensures that emergency procedures are permanently displayed

The Riverlinx CJV **Project Health and Safety Manager and Advisors** assists both the PD and FSC's in discharging their duties in ensuring that there are suitable and sufficient fire risk assessment for each location, including the development of the fire safety plan.

6. Assessment

In project / site offices and other fixed buildings the FSC arranges for a fire risk assessment to be carried out and reviewed by an external party who are approved by the Fire Protection Association. This must be reviewed following any works to the fabric of the building or that changes the internal layout of the building.

At site level, a fire risk assessment is undertaken by the FSC to determine the chances of a fire occurring in the workplace and the dangers to the people who use it. There are five steps in the risk assessment process (see flowchart in Appendix 1):

- identify potential hazards
- decide who might be at risk and where
- evaluate the risks, identify additional controls and carry out the improvements identified
- record the findings and the actions taken
- keep the assessment under review

Riverlinx CJV will be guided by the fire risk assessment framework as described in Appendix 2.

RiverLinx CJV will collaborate with the London Fire Brigade (LFB) throughout the construction phase and invite them to review and comment on our fire arrangements. The LFB will be also be invited to participate and provide comment in site based fire drills and other emergency scenario training.

7. Identifying Fire Hazards

For a fire to start three elements needed are: a source of ignition, fuel and oxygen. If any one of these is missing a fire cannot start. Taking steps to avoid the three coming together therefore reduces the chance of fire.

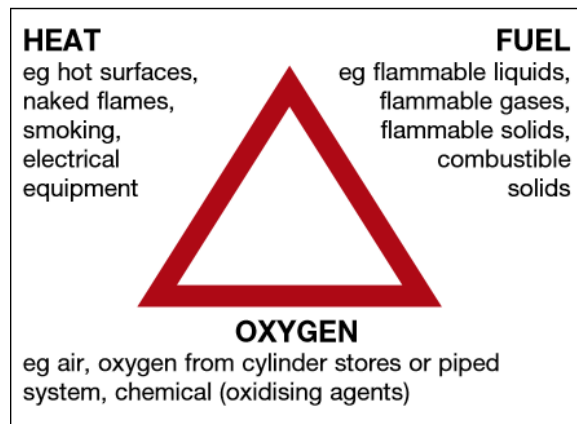


Figure 1: The three elements that combine to start a fire

7.1 Sources of ignition

The most common sources of ignition are, but not limited to:

- people smoking
- naked flames
- electric, gas or oil-filled heaters
- LPG boiling rings
- hot work processes (e.g. welding or oxy-gas cutting)
- sparks from cutting or grinding metal
- cooking
- faulty electrical equipment
- fuel / flammable liquid spillages
- lighting equipment, and
- arson

7.2 Sources of fuel

Indications of 'near misses' such as cigarette burns, scorched materials and electrical scorch marks can help identify hazards which may otherwise go undetected. All materials which burn reasonably easily and which are present in sufficient quantity for fire to spread need to be considered as sources of fuel.

Some of the most common fuels found at work are:

- flammable liquids and chemicals
- wood, paper and card
- plastics, rubber and foam
- flammable gases
- furniture, fixtures and fittings
- loose packaging materials, and
- waste materials

The internal construction of the workplace may also provide a source of fuel: hardboard, chipboard or block-board walls; or synthetic materials such as polystyrene tiles. Wherever practicable, materials giving a minimum of a half hour fire resistance should be used in walls and doors.

Ensure that the local Fire and Rescue Service are aware of any significant hazards associated with the premises e.g. oxygen cylinders, storage of petrol, etc. This will be supported by having a simplified 'Grab Pack' of reception point information that is immediately available for the London Fire Brigade during an incident, containing as a minimum:

- key contact information
- any necessary communications equipment, including radio equipment to enable firefighters attending emergency incidents below ground to use their normal radio equipment to communicate;
- A3 sized laminated site plans and sections for all locations with identified hazards and equipment, and
- Site access / egress points

7.3 Deciding who could be harmed

If there is a fire, the main priority is to ensure that everyone quickly reaches a place of safety. The assessment therefore identifies who may be at risk, how they will be warned and how they will escape.

8. Evaluating the risks

Appendix 3 provides a checklist of matters to be considered when evaluating risks.

Having identified the hazards and those people who may be at risk, the risk is then evaluated. A decision is then made as to whether the existing control measures are adequate by considering:

- the chance of a fire occurring and whether the sources of ignition may be further reduced and potential sources of fuel minimised
- the fire precautions already in place; whether they are sufficient and will ensure that everyone is warned in case of fire; and
- the means people can use to make their escape safely (or extinguish the fire if safe to do so)

8.1 Reducing sources of ignition

Hazards caused by potential heat sources may be reduced by:

- ensuring that electrical fuses etc are the correct rating
- operating permit systems for hot works
- operating safe smoking policies
- making sure that any smouldering materials are properly extinguished before leaving the workplace; and
- taking precautions to avoid the risk of arson

8.2 Fire detection and warning

An effective means is needed for detecting any outbreak of fire and for warning people quickly enough so that they can escape to a place of safety. In small workplaces it may be that a shout of fire is all that is needed. In larger premises an electrical fire warning system with manually operated, interconnected call points is likely to be the minimum needed. Testing of the fire alarm, or other means of raising the alarm, will be carried out weekly, with more formal evacuation drills to test the evacuation procedure carried out every six months.

8.3 Means of escape

Once a fire has been detected and a warning given everyone in the workplace must be able to evacuate without being placed at undue risk. In small single storey premises it is likely that the normal exits are sufficient for an emergency. In larger premises where travel distances are greater alternative escape routes are normally needed. Fire exit doors should open outwards on to a level platform at least 1m wide. Elevators are not to be used in the event of a fire.

8.4 Means of fighting fire

There needs to be enough suitable firefighting equipment (see Appendix 4) in place to enable workers to extinguish a fire in its early stages. The equipment must be suited to the risks and appropriate workers must be trained and instructed in its proper use.

Portable fire extinguishers can make the difference between an inferno and a fire under control. Adequate numbers of suitable extinguishers must be available and workers trained in their use.

Extinguishers need to be located in conspicuous positions near exits on each floor. In the open they must be 500mm above ground level, identified by fire point signs and protected from work activities or adverse weather. It may be necessary for some items of mobile plant to carry appropriate fire extinguishers or be fitted with an automatic fire extinguishing system.

8.5 Maintenance and testing

All fire safety measures and equipment are maintained in effective working order. Regular recorded checks, periodic servicing and maintenance are carried out. The fire alarm will be tested weekly.

8.5 Training

The FSC's and all Fire Marshals appointed must have completed the Fire Safety eLearning module which is available on the BAM Nuttall Learning Zone on Connect and will be made available to all non-BAM employees.

The FSC's must ensure that an appropriate number of workers are trained in the correct use of fire extinguishers to meet the control levels of the fire risk assessment.

Fire prevention and fire precautions training for everyone working on Riverlinx CJV work locations will be carried out during site inductions, pre-start briefings, toolbox talks and task specific risk assessment briefings. Appendix 7 gives an indication of what such training will cover.

Regular emergency drills, which will also specify and rehearse the arrangements for assisting visitors, disabled people or those with temporary physical impairments to safely evacuate the premises, are organised and co-ordinated by the FSC's. These are recorded on Emergency procedure drill – feedback report.

9. Recording findings and action

All fire risk assessments will be appended to the Fire Plan and subject to regular, ongoing review for all Riverlinx work locations. From these assessments, a location specific Fire Plan will be produced that will form part of the location specific emergency plan that will also be developed based on risk assessment to reflect the risks and potential, likely emergency situations / scenarios.

9.1 Location specific Fire Plans

The Fire Plan provides details of:

- organisation of and responsibility for fire safety
- specific responsibilities of fire marshals
- general site fire precautions, fire detection and alarms
- requirement for a hot work permit system
- site accommodation
- fire escape and communication system
- emergency plan describing actions taken in the event of a fire (see 9.2)
- fire brigade access, facilities and coordination
- fire drills and training
- security measures to minimise risk of arson
- materials storage and waste control

9.2 Emergency Plan

The emergency plan describes the actions that need to be taken in the event of a fire. It forms the basis of the training and information provided to workers. The purpose of the plan is to ensure that:

- the people in the workplace know what to do if there is a fire; and
- the workplace can be safely evacuated

In drawing up the emergency plan, the results of the risk assessment will be taken into account. In some small workplaces the final result may be simple instructions on a fire action notice (Appendix 5). In large or complex workplaces the emergency plan will be more detailed (Appendix 5).

9.3 Information and Instruction

It is important that all workers know how to prevent fires and what they should do if a fire occurs. On their first day at work all workers will be given information about:

- the location and use of the escape routes from where they work; and
- the location, operation and meaning of the fire warning system where they work.

Fire action notices complement this information (see Appendix 5). They will be posted prominently at key locations throughout the workplace.

9.4 Training

The content of training is based on the particular features of the workplace. It covers:

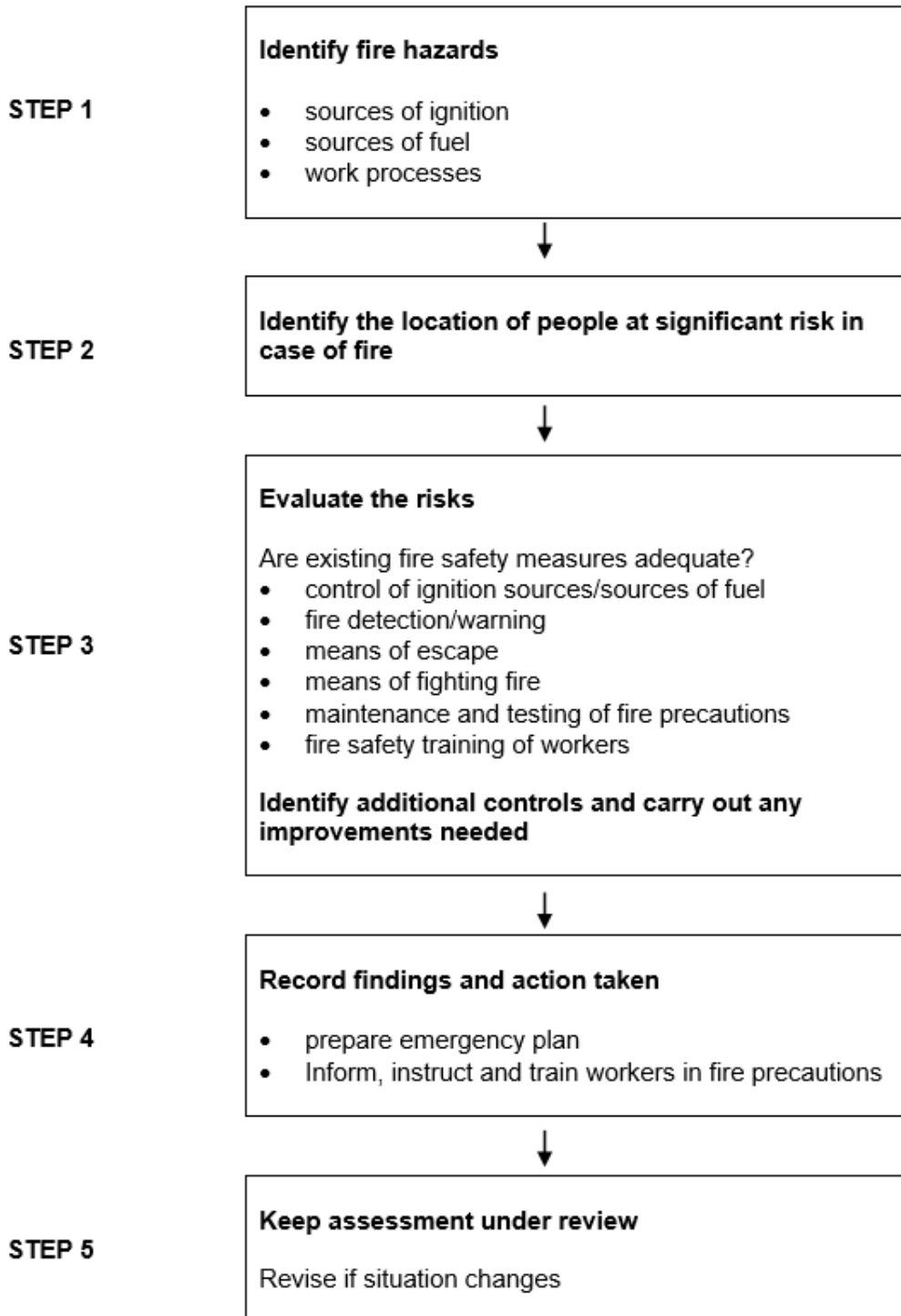
- what to do on discovering a fire;
- how to raise the alarm and what happens then;
- what to do upon hearing the fire alarm and, where appropriate, evacuation procedures;
- the arrangements for calling the fire and rescue service.
- the reporting of fire / emergency incidents and any near misses.

Training will take place regularly so that workers remain familiar with the fire precautions in the workplace. Training includes practical exercises such as fire drills to check people's understanding of the Fire / Emergency Plan. Following all drills a de-brief will be carried out to discuss with workers any areas of improvement that have been identified during the drill, with the outcome of these de-brief's being recorded. In small workplaces this might consist of making sure that workers are aware of details in the fire action notice. Topics for inclusion in fire safety awareness training are given in Appendix 7.

10. Monitoring

There may be changes in the workplace which have an effect on the fire risks and precautions. In these circumstances the fire risk assessment is reviewed. Reviews are also needed to make sure that the precautions are working effectively. The suitability and effectiveness of the Fire Plans is monitored continuously during regular site safety inspections, fire safety process audits, drills, and observation / near miss reports.

Appendix 1 – Fire risk assessment flowchart



Appendix 2 – Fire risk assessment framework

	Document Number:	Revision:				
To be completed by Assessor	Company name: Riverlinx CJV					
	Project: Silvertown Tunnels					
	Type of Building and location: Example: construction site welfare facilities (North Greenwich)					
	Does the Public have access to this area?					
	Identification of persons potentially at risk: Site Operatives/ Project Staff/Visiting Delivery Drivers					
	Name of Person Conducting Assessment:			Signature:		
	Name of Person Responsible for these Premises					
	Contact details:					
	Date of Assessment:		Provisional review date:			
	Fire Risk Assessment Scoring:		A (Sources of ignition)	B (Fire loading)	C (Escape)	D (Fire risk management)
	Risk Assessment Section Scores (example)		6	3	1	0
	Scores at these levels or higher <u>must</u> be reported to the Responsible Person <u>immediately</u> .		15	10	18	9
Referred to:	On (date):					
The Regulatory Reform (Fire Safety) Order 2005	<p>The Regulatory Reform (Fire Safety) Order 2005 came into effect on 1 October 2006 and requires that a fire risk assessment is carried out to determine what fire safety measures are necessary.</p> <p>This form is intended to assist local managers in carrying out the fire risk assessment. It is suitable for use in small buildings, with a simple internal layout, e.g. small offices, shops or industrial units. In buildings with complicated escape arrangements, large numbers of people or high fire risk processes a more comprehensive fire risk assessment may be necessary.</p> <p>The fire risk assessment does not need to be complicated, it should be a common sense review to identify the hazards (what could start a fire and what could burn), followed by consideration of the possible effects of a fire on people using the building. The important thing is that the fire risk assessment is systematic to ensure that every part of the premises is assessed. Every room, space or area, especially those not often used, should be included.</p> <p>If you identify any significant risks you should consider if they can be reduced: first by removing the hazards and secondly by providing fire protection measures (e.g. automatic fire detection).</p> <p>If your business is located within a larger complex and if a fire in your business could affect your neighbours, you should share the findings of your fire risk assessment with your neighbours.</p> <p>Your fire risk assessment must be kept up to date. It is important to update the assessment if anything is changed that might affect the risk (e.g. new ignition sources or use of flammable liquids etc.).</p> <p>If you identify that either the likelihood of a fire or the risk to people is not LOW you may want to consider seeking professional assistance from your organisations professional Head of Fire Safety.</p>					
Further Guidance	<p>For further guidance on the Regulatory Reform (Fire Safety) Order 2005 and for assistance with carrying out your risk assessment visit the website below. Here you will find a range of booklets that provides simple and practical advice to people responsible for fire safety in small businesses. It provides entry level guidance on how to make sure you are meeting the Regulatory Reform (Fire Safety) Order 2005.</p> <p>These guides will give you more information about how to carry out a Fire Risk Assessment, with specific advice for your type of premises. You may need additional information if you have large or complex premises.</p> <p>http://www.communities.gov.uk/publications/fire/regulatoryreformfire</p>					
Actions	<p><u>Procedure for assessor.</u></p> <ol style="list-style-type: none"> 1. Complete the Fire Risk Assessment Form. 2. Fill in the action plan 3. Forward this form and Action Plan to the Responsible Person for the department/premises. Raise any specific issues with your local manager as first line of reference. <p><u>Procedure for the Responsible Person.</u></p> <ol style="list-style-type: none"> 1. Classify overall risk. 2. Review action plan, ensuring that it is appropriate. 3. Forward a copy of this page to the relevant safety manager 4. Where necessary consider detailed fire risk assessment. 					

Fire risk assessments A – D on following pages

Fire risk assessment A (Sources of ignition)

	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
A1.	Are there any processes, machinery or equipment in the area that generate heat? (i.e. Conveyors, Boilers, Space Heaters, PC's, Printers, Photocopiers, etc.)	Include only those where there can be a reasonable anticipation of fire resulting from its use. For example: Boilers & Space heaters will definitely reach high temperatures where PC's and Photocopiers rarely do?			Try to determine if the heat generated by the process will reasonably be sufficient to ignite combustible materials. If not answer No!		
A2.	Is this equipment clean and well managed?	Is it clean and free from dust? Are any ventilation covers free from obstruction? Is it working normally, does it sound ok? Is there a cleaning and maintenance procedure in place?			Appropriate maintenance regimes should be in place. Additional fire protection devices may be necessary (detection & extinguishment) to reduce the risk. Seek professional guidance for complex processes.		
A3.	Does cooking take place in the area?	The installation of a cooker (Gas or Electric which includes "Baby Bellings") changes the use of the room into a Kitchen. Microwave ovens are not classified as cookers and their installation signifies a "Tea Point" which require no special arrangements.			Kitchens should be enclosed in fire resistant structure with heat detection. Microwave ovens are a lesser risk as heat is only generated in the food and is a "Timed" process designed to switch off. Also High risk cooking processes such as frying cannot be achieved.		
A4.	Are there any deep fat frying cooking units?	Typically this will be in Kitchens only and possibly in some tenanted areas, Café's etc.			Deep fat fryers may only be installed in purpose built kitchens. Additional protection may be required by means of fixed fire suppression systems and fire detection for professional deep fat frying units.		
A5.	If deep fat frying does take place, is the area well managed?	Is it clean, is the unit working normally and is there a cleaning and maintenance procedure in place?			Inadequate cleaning and poor maintenance increases the risk of fire. Regular cleaning and competent maintenance must be carried out and recorded.		

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	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
A6.	Is smoking allowed in a controlled area?	Legislation prohibits SMOKING in the workplace and public areas, except in designated places.			Designated smoking areas should be signed to indicate that smoking is permitted.		
A7.	Is the house keeping in the smoking areas well managed.	Is it clean, are the bins emptied regularly, is there evidence of burns on furniture, is there a history of bin fires?			Permitted smoking areas should be provided with adequate means for safely disposing of smoking materials and the area should be of sufficient size and cleaned regularly.		
A8.	Is there any evidence of illicit smoking?	Are there discarded smoking materials present? Can cigarette smoke be detected?			These are signs of illicit smoking and may represent a high risk of undetected fire occurring.		
A9.	Are there a lot of electrical extension leads and multi-plugs?	Extension leads should only be used for a temporary period and must be of an approved type. Multi-point adaptors should not be used. The cable should not be subjected to any mechanical damage or create tripping hazards should not be used for high load equipment such as portable electric heaters.			Keep extension leads to a minimum and checked, tested and maintained by a competent service provider (PAT). Test records should be retained by user. Extension leads should not be used as a permanent solution to a power supply shortfall.		
A10.	Are any portable heating devices used in the area?	The use of portable heaters and fan heaters is not recommended and should be avoided. Where they are used, oil filled radiators are a safer option.			All heaters to be fitted with suitable guards and fixed in position away from combustible materials.		
A11	Is lighting in the area clean and well managed?	The light units should be free from dust, have no obvious discoloration/distortion and be free from damage. The lights should be working correctly.			Lighting should be 'fixed' and not portable. There should be no combustible material close to light fittings.		

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	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
A12	Is there any compressed gas in the area?	Includes any gas canisters or cylinders, oxygen and abnormal amounts of aerosols. NB Aerosols use liquid petroleum gas as the propellant since the banning of inert propellants which damage the environment?			Any cylinders/aerosols should be stored in a safe, secure and well ventilated area. Only cylinders in use should be stored inside.		
A13	Can someone set a fire in the area (arson) without being seen?	Look for areas where there is no CCTV or where staff are not normally present. Look for what can be set fire to easily.			Is CCTV evident? Are there frequent Security checks and is access controlled? Is housekeeping good and is there an arson policy? (seek professional guidance)		
			Total	0			

Scoring: Any individual score of 2 must be addressed immediately	Low Risk	Medium Risk	High Risk
	0-5	6-14	15-20

Fire risk assessment B (Fire loading)

	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
B1.	Are there any highly flammable substances liquids or gases in the area other than small quantities of aerosols?	Only quantities for immediate use only should be available in the workplace			Substances need to be stored in closed containers, small quantities can be stored in an approved metal cabinet. Unused material should be removed to an approved store. Flammable gasses should be stored outside in a secure area. Acetylene should be substituted for safer alternatives such as MAPP or Propane.	There are stores for general equipment and hazardous substances which have been covered in separate sections of this risk assessment [Appendix 2 & 3]	
B2.	Is the storage of these substances well managed?	Is it clean, are the containers checked regularly? Are containers suitable, can they be secured?			There should be a good cleaning and stock control regimes in place.	Regular planned safety inspections	
B3.	Are there large quantities of paperwork and cardboard files on open shelving?	Only quantities for the day's work should be available in the workplace			Papers and textiles should not be placed near to a heat source. Unused materials to be returned to storage cupboards or drawers.	There are small quantities of paper and other combustibles in small office areas and gateman huts.	
B4.	Is any combustible waste stored in the area?	Rubbish and combustible waste should be kept to a minimum. Look for bags of rubbish stored ready to be taken outside, skips and contractors 'wheelie' bins.			Waste should be cleared regularly and placed in suitable containers outside of the building, away from fire exits and overhanging structures.	Shuttering, scaffold boards and general building material and waste.	
B5.	Is the storage of this waste well managed?	Is it clean, is there evidence of an effective cleaning regime? Is there large amounts of rubbish?			There should be a cleaning regime in place. Access to any stored waste should be controlled to prevent arson.	Waste is well managed and kept in a designated controlled area with waste skips changed on a regular basis.	
B6.	Are there 'easy' chairs or soft furnishings present?	Check for furnishings which may have come from home. Check for damage to coverings exposing foam or cushion as the fire risk is increased with this.			Furniture coverings, foams, wall fabrics and curtains should be fire retardant.		
B7.	Are there any combustible materials in close proximity to any ignition sources? (Identified in Section A)	Look for sources of ignition identified in Section A and check for combustible materials (Paper, rubbish, etc.)			There should be a cleaning regime in place, supported by inspections.	Housekeeping and a tidy site regime is closely monitored.	

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	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
B8.	Are there any banners or displays in public areas which if ignited could spread a fire?	Check for notice boards, posters, temporary signage. Check for anything the area user may have added. Check Retail/Tenant signage.			Any displays should limit the spread of flame. Certification should be provided for Retail/Tenant signage. Large displays of paper based signage should be discouraged.		
B9.	Does a kitchen extract ductwork start in the area?	Look for any ductwork going into the ceiling or walls, look for extractor units over hobs.			This would be unusual except in catering outlets.	Not Applicable	
B10.	Is there a well managed cleaning regime for the kitchen extract?	Look for signs of grease build-up on the extract hood. Is the area clean, do staff know when and how the extract is cleaned.			The cleaning should be recorded and grease levels monitored.	Not Applicable see B9 above	
				Total	0		

Scoring: Any individual score of 2 must be addressed immediately	Low Risk	Medium Risk	High Risk
	0-5	6-14	15-20

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Fire risk assessment C (Escape)

	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
C1.	Are means of escape provided for all occupants in the area including those with special needs and or young persons?	Means of escape is a continuous and unobstructed path of travel from any point in the workplace to a place of safety.			An escape route includes fire doors, corridors and fire exits. Are people able to move along the route easily.	There are designated identified and segregated access and escape routes.	
C2.	Are fire exits routes identified?	Fire exit routes should be identified by the green and white 'running man', with arrows.			Pictograms with additional text signage should clearly indicate the direction of travel.	Escape signage is in place.	
C3.	Are fire exit routes free from obstruction?	Fire exits routes must never be obstructed. Obstructions may include furniture, delivered goods or goods awaiting collection. Also included is anything that could cause a slip. (e.g. water leak)			Are procedures in place for regular checks of these routes, which should be recorded.	Weekly safety tours undertaken to monitor compliance to ensuring escape routes are obstruction free.	
C4.	Do all fire exit routes lead to a place of safety?	A place of safety is usually away from the building and open (i.e.. not an enclosed courtyard)			An evacuation plan must be in place and staff should have been trained to identify and use escape routes.	All escape routes lead to designated, identified and segregated access and escape routes.	
C5.	Can fire exit signage be clearly seen from all areas?	You should be able to see at least one emergency exit sign from anywhere within the area.			Signage visible, without the need to search for it. If on a light box, the sign <u>should be illuminated</u> .	There is both general access lighting and emergency lighting.	
C6.	Are all internal fire compartment or internal doors on fire exit routes labelled as a 'Fire Door'?	Where doors are designed to form a barrier to fire and smoke, they must carry a blue & white notice showing the condition in which they should be left. (e.g.. Fire Door - Keep Shut)			All fire doors correctly signed as such?		
C7.	Are the self-closers on the fire door operating correctly?	A self closer is a device which is designed to ensure a door shuts properly after use. Some doors are held open and release on activation of the fire alarm, this type device is permitted.			Check that the self closer works properly and closes the door fully against the door frame.		

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Revision P02

21/04/2020

	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
C8.	Is the fire door fit for purpose when closed?	Does the door fit the frame well? Is the glass intact? Are the brushes in place all around the door (this is to stop smoke)? Are there any holes in the door?			Visual inspections regularly carried out, formal inspections carried out and recorded. Watch out for ventilation grills installed in fire doors, these are not permitted unless fitted with an approved fire damper?		
C9.	Is the final exit door operating correctly (this is the last door to the place of safety)?	Final exit doors must be unlocked when the premises are in use. Security locked final exits must release on activation of the fire alarm (If electronic) or be fitted with a single action opening device (e.g. push-bar or pad) or similar device which does not need a key to unlock the door from the inside.			Inspection and tests are required and records kept. There will usual be a manual override fitted near security doors (i.e. green break glass)if an electronic lock is used. N.B You must be able to open a final exit door from the inside without the use of a key ?		
C10.	Is emergency lighting provided?	Emergency lighting will be provided in most parts of the building. Where fitted they must be functionally tested monthly and fully tested annually by a competent person.			Inspection and test records are required to be kept.	Emergency lighting is in place and maintained by the site electrical team.	
C11	Are there designated Assembly Points?	Are These clearly marked, designated locations in a safe, external area where dispersal can take place? The assembly point must not be located in an enclosed space, like a yard or enclosed garden which may trap them.			Staff should be familiar with the location and the route to them clearly signed. Assembly points should be free from other dangers (i.e.. traffic, heavy plant, flying glass, emergency vehicles etc.)	There is a designated Assembly Point is in Soho Square as detailed in the Site emergency Plan VBN-TCR-8742-PRO-00003	
C12	Is there a suitable means of raising the alarm for the type of premises?	In very small premises a fire alarm system may not be needed and verbal means of raising the alarm may be acceptable.			Instructions on how to raise the alarm should be located at designated points within the premises and all staff using the building must be instructed on the means of raising the alarm.	There is an audible alarm system on the site and additional alarms are installed in each worksite location or building. Both manual and wired alarm arrangements in place.	

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	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Req'd
C13	Is automatic fire detection provided?	Look for detectors on the ceiling. Different types of fire detection may be found depending on the area. If you are not sure, seek professional guidance.			If detection is installed it must be Inspected, tested and maintained and records are required to be kept.	This is generally an open area, enclosed spaces are covered in separate risk assessments. However, fire detection in the open areas is still managed verbally.	
C14	Is a fire alarm system installed?	Not all buildings are provided with electric fire alarm systems (refer to No 15?). Look for Manual Call Points (RED, Break Glass Units), sounders and/or bells. Take this opportunity to revise the need for fire alarm system if none is fitted particularly if the use has changed?.			If fitted the system should be tested weekly, by the occupants, and maintained by a competent person and records kept for audit purposes.	There is an audible alarm system on the site and additional alarms are installed in each worksite location or building	
C15	Are fire alarm call points and break glass units clearly visible? Are Fire Action Notices displayed?	Manual Call Points must be mounted in conspicuous positions on fire exit routes and by the final fire exit door.			Call Points should be easily accessible and may be highlighted by signs. Fire Action Notices should be prominently displayed and contain appropriate and accurate information.		
C16	Has a fire evacuation drill been conducted in the last 12 months?	A planned exercise must take place every 12 months. If the building has been evacuated within the last 12 months due to the fire alarm activating this can be considered as a drill.			All occupants should participate in any exercises or drills and a records must be kept.	Regular evacuations are carried out in accordance with the Site emergency Plan VBN-TCR-8742-PRO-000039	
				Total	0		

Scoring: Any individual score of 2 must be addressed immediately	Low Risk	Medium Risk	High Risk
	0-5	6-14	15-20

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Fire risk assessment **D** (Fire risk management)

	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Red
D1.	Is the fire alarm tested regularly?	All areas should be tested on a frequent basis. At least weekly from a different call point each time.			Inspection and testing should be undertaken to confirm audibility and ensure that any interfaces with automatic fire doors closing, lifts and plant shutdown systems are functioning correctly. Records all results and actions.	Site alarms are tested every week on Wednesday.	
D2.	Is a log kept of those staff who have attended fire training?	Health & Safety legislation requires all staff to be made aware of the fire precautions in the workplace, on induction and at frequent intervals thereafter.			Records should detail who, when and what training was attended.	The Training Manager maintains a database detailing individuals training records including fire marshal/warden training.	
D3.	Has all electrical equipment either been PAT tested or recently checked for electrical safety?	Check for a sticker on the equipment or power cable detailing the date of test. In most cases, testing should be carried out annually for portable equipment and 5 yearly for fixed installations and the electrical distribution system..			Visual inspections should be carried out by users before use to check for obvious signs of damage or wear.. Repairs should be carried out immediately or the equipment withdrawn from use and replaced.	Pat testing is carried out every 3 months and regularly inspected during weekly site tours.	
D4.	Is housekeeping in the area well managed?	Look for rubbish build up, paper and boxes poorly stored. Look for dust and general untidiness. Check behind cupboards, under desks and in electrical cupboards.			Rubbish should be cleared regularly and the area should be clean. Do not permit build ups of such material? Do not permit storage of combustible materials in electrical cupboards or electrical intake rooms.	There is a well managed and controlled designated Waste area and general housekeeping is monitored and managed on a daily basis.	
D5.	Are all fire extinguishers and hose reels serviced and tested?	Equipment should be inspected every 12 months and have a label showing the date of inspection. The date shown indicates when it was last inspected and is valid for 12months from that date?			A maintenance schedule must be implemented and records kept.	Fire extinguishers inspected and tagged every 12 months.	

	Question	Advice	Yes or No?	Score	Additional Guidance for completing the Significant Findings	Significant Findings and other observations and notes	Further Action Red
D6.	Are staff aware of how to raise the alarm in an emergency? The emergency number? How and where to evacuate?	Ask staff these questions. Staff should know the premises emergency number (i.e. 999) if applicable. Note, some internal switchboards require two digits or more before an outside line is connected? I.e. 91-999 check this out and confirm? NB in airports the number can be "222"			This should have been covered on pre start induction briefings? Raise general awareness and provide advice and training accordingly.	This is covered in the site induction with signage displayed around the site.	
D7.	Do inspections and safety audits take place?	Workplace inspections should take place on a frequent basis. The frequency of inspection may be determined by the fire risk assessments and any material changes to the premises. But also from planned general inspections.			Inspections should be recorded for audit purposes.	Safety Inspections are carried out on a weekly basis as per the safety tour rota. People undertaking satey tours check for fire compliance.	
D8.	Are there any young workers in the area?	Any workers under the age of 18 years are deemed as being young workers and require special consideration.			An assessment should be made of the risks associated with the tasks being undertaken by the young worker's in particular to any special additional arrangements that may be required.	Visiting young persons are subject to a your persons risk assessment and assigned a supervisor/escort at all times.	
			Total				

Scoring: Any individual score of 2 must be addressed immediately	Low Risk	Medium Risk	High Risk
	0-5	6-14	15-20

Appendix 3 – Risk evaluation checklist

Considerations in the preparation of the risk assessment:

- Hazardous properties of substances
- Fire information provided by suppliers (hazard data sheets etc.)
- How different substances might react in a fire
- How much hazardous material is present
- How hazardous substances are stored, transported and how waste is dealt with
- How maintenance can affect fire
- The likelihood of explosive atmospheres developing
- Ignition sources including static build up
- Means of preventing spread of fire e.g. fire doors
- People exposed especially those with a disability
- Hot work
- Likelihood of arson

Fire detection and warning:

- Can the existing means of detection discover a fire quickly enough?
- Can the means for giving warning be clearly heard throughout the premises?
- If electrically powered, does it have a back-up power supply?
- Have workers been told of the fire warning system and the actions they may need to take?
- Are the fire detection and fire warning arrangements included in the emergency plan?

Means of escape

- How long will it take for all the occupants to escape?
- Is that a reasonable length of time?
- Are there enough exits and are they in the right place?
- Do fire doors open outwards?
- Is the fire escape route a suitable length to comply with guidance?
- Is the fire escape route maintained to allow free passage?
- What arrangements are in place for emergency lighting?
- Are the type and size of exits suitable for the number of people likely to use them?
- In the event of fire, will at least one route from any part of the premises remain available?
- Are all escape routes easily identifiable, free from any obstructions and adequately lit?
- Once outside the door is there a level platform of 1m width to prevent falls at the exit?
- Are all staff trained in using the means of escape?
- Are instructions about the means of escape displayed?
- Are the arrangements for escape included in the emergency plan?
- Are emergency drills planned and carried out at regular intervals?

Means of fighting fire

- Are the extinguishers suitable for the purpose and of sufficient capacity?
- Are there sufficient extinguishers sited throughout the workplace?
- Are the right types of extinguishers located close to the relevant hazards?
- Are the locations of the extinguishers obvious?
- Have the people likely to use the fire extinguishers been given adequate instruction and training?
- Is the use of firefighting equipment included in the emergency plan?
- Is suitable PPE available?

Maintenance and testing

- Do you regularly check all fire doors and escape routes and associated lighting and signs?
- Do you regularly check all your fire-fighting equipment?
- Do you regularly check your fire detection and alarm equipment?
- Do you regularly check any other equipment provided to enable escape?
- Are there instructions for relevant workers about testing of equipment?
- Are those who test and maintain the equipment properly trained to do so?

Fire procedures and training

- Is there an emergency plan?
- Does the plan take account of all reasonably foreseeable circumstances?
- Are all workers familiar with the plan, trained in its use and involved in testing it?
- Is the plan made available to all who need to be aware of it?
- Are the procedures to be followed clearly indicated throughout the workplace?
- Have all those likely to be in the premises been considered?
- Is there a schedule of emergency drills to be carried out?

Appendix 5 – Fire action notice

Fire action notices are permanently and prominently displayed on major escape routes, places where people meet, circulation spaces, etc. They clearly outline:

- the action to be taken on discovering a fire including raising the alarm and first-aid fire fighting
- the action to be taken on hearing the fire alarm including evacuation, assembly and accounting for people

A typical fire action notice format is illustrated below.



Appendix 6 – Emergency Plan checklist

The emergency plan provides clear instructions on:

- the action workers should take if they discover a fire
- how people will be warned if there is a fire
- how the evacuation of the workplace should be carried out
- where people should assemble after they have left the workplace and procedures for checking whether the workplace has been evacuated
- identification of key escape routes, how people can gain access to them and escape from them to places of safety
- the fire-fighting equipment provided
- the duties and identity of workers who have specific responsibilities in the event of a fire
- arrangements for the safe evacuation of people identified as being especially at risk, such as contractors, those with disabilities, young persons, lone workers, members of the public and visitors
- where appropriate, any machines / processes / power supplies which need stopping or isolating in the event of fire
- specific arrangements, if necessary, for high fire risk areas of the workplace
- how the fire brigade and any other necessary emergency services will be called and who will be responsible for doing this
- procedures for liaising with the fire brigade on arrival and notifying them of any special risks, eg the location of highly flammable materials, and
- what training workers need and the arrangements for ensuring that this training is given
- phased evacuation plans (where some areas are evacuated while others are alerted but not evacuated until later); and
- plans to deal with people once they have left the premises.

For larger or more complex workplaces a drawing is produced. The drawing shows:

- essential structural features such as layout of the workplace, escape routes, doorways, walls, partitions, corridors, stairways, etc (including any fire resisting structure and self closing fire doors provided to protect the means of escape)
- means for fighting fire (details of the number, type and location of the firefighting equipment)
- the location of manually operated fire alarm call points and control equipment for the fire alarm
- the location of any emergency lighting equipment and any exit route signs
- the location of any automatic fire fighting system and sprinkler control valve, and
- the location of the main electrical supply switch, the main water shut-off valve and, where appropriate, the main gas or oil shut-off valves

Appendix 7 – Fire safety awareness training

Fire safety awareness training includes the following:

- action to take on discovering a fire
- how to raise the alarm and what happens then
- the action to take upon hearing the fire alarm
- the procedures for alerting members of the public and visitors including, where appropriate, directing them to exits and head counting
- the arrangements for calling the fire brigade
- the evacuation procedures for everyone in your workplace to reach an assembly point at a safe place
- the location, and, when appropriate, the use of fire fighting equipment
- the location of the escape routes, especially those not in regular use
- how to open all escape doors, including the use of any emergency fastenings
- the importance of keeping fire doors closed to prevent the spread of fire, heat and smoke
- where appropriate, how to stop machines and processes and isolate power supplies in the event of fire
- the reason for not using lifts (except those specifically installed or adapted for evacuation of disabled people, and the importance of general fire safety and good housekeeping).

Fire risk assessment training includes the following:

- Identification and reduction of ignition sources
- Identification of required fire precautions and means of containing fire
- Identification of means of escape and maximum travel distances
- Identifying the most suitable type of alarm
- Maintenance of equipment and record keeping
- Writing the fire action plan
- Training requirements for others in the workplace and a schedule of drills to be carried out.