



RIGGING MAST INSTALLATION HEALTH & SAFETY FILE



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CONTENTS

- 1. INTRODUCTION**
- 2. HEALTH & SAFETY STATEMENT**
- 3. ENVIRONMENTAL POLICY**
- 4. SITE RULES**
- 5. METHOD STATEMENT**
- 6. RISK ASSESSMENTS**

Appendix A - Structural Calculations

1. INTRODUCTION

- 1.1 Utilising existing truss systems and with a low profile base, Rigging Mast is a modular solution that can be built to any height up to ten metres and support loads up to 900kg.

- 1.2 It's ideal for a number of applications such as the flying of a PA loudspeaker cluster to a hothead camera, and for multiple uses such as supporting a LED screen without compromising stability.

- 1.3 The Pro Mast is a recent development assisted by structural engineers and utilising stock 30cm square truss with a custom built 2.5 m square low profile base.

- 1.4 The self erecting rigging mast is capable of loads up to 900kg at 10m high. Ideally suited for a variety of applications including flying PA, lighting or surveillance equipment.

2. HEALTH & SAFETY STATEMENT

- 2.1 It is the policy of Blackout Ltd to promote the highest possible levels of health and safety so as to lead to the avoidance or reduction of risks to the health and safety of all persons who may be affected by their work activities and to ensure compliance with all current legislation, in particular the Health and Safety at Work Act (1974).
- 2.2 Blackout makes specific commitments to its clients with regards working safely, personal safety, care of the environment and being mindful of safety issues when designing, managing and constructing Rigging Masts.
- 2.3 Blackout considers that these issues are the responsibility of the Company's management team and rank equally with that of finance, marketing, human resources and commercial issues.

The Project Manager

- 2.4 The Project Manager who is employed by Blackout on this activity takes responsibility for the implementation of the Company's Health and Safety Policy. Such responsibilities include but are not restricted to:
- Ensuring that health and safety, as well as licensing obligations, site rules and regulations are a major consideration when planning this activity.
 - Undertaking suitable and sufficient assessments of all the foreseeable risks presented to, and posed by any of the work activities undertaken whilst on site.
 - Ensuring staff under his control, including freelance workers and contractors are competent and fully aware of any potential hazards.
 - Informing all persons on site of what action to take in the event of a fire, bomb threat or any other emergency, and bring the emergency fire routes and evacuation areas to their attention.
 - Ensuring that adequate provisions for First Aid are in place and that all workers are aware of these provisions.
 - Monitoring all plant and work equipment to ensure it is operated in a safe manner and that any safety devices that are fitted are used in the correct way.

- Maintaining a system of good housekeeping in order to reduce the risk of trip/slip hazards and fire risks.
 - Ensuring that if Personal Protective Equipment is required that it is suitable and worn by all persons deemed to be at risk.
- 2.5 Blackout are well aware of their responsibilities for ensuring the health, safety and welfare of all persons attending the site, before, during and after the installation/de-rig work.
- 2.6 The Project Manager involved in the management of these work activities is mindful, that he carries considerable responsibility for the safety of the public whilst activities under his control are taking place.

Blackout Staff

- 2.7 The Health and Safety at Work Act (Sections 7, 8 and 20) places certain duties on employed persons. Section 7 states: "It shall be the duty of every employee while at work:
- i). to take reasonable care for the health and safety of himself and of other persons who may be affected by his acts or omissions at work;
and
 - ii). as regards any duty or requirement imposed on his employer or any other person by or under any of the relevant statutory provisions, to co-operate with him so far as is necessary to enable that duty or requirement to be performed complied with".
- 2.8 With reference to paragraph ii) above, Blackout issues instructions concerning safety in various forms. Safety information will always be available to the Blackout staff to whom it is relevant and it is their responsibility to conform to the instructions given.
- 2.9 In addition, all Blackout staff are expected to report any hazard that they may observe in the course of their duties. This is particularly important when considering the safety of the public. Where a hazard becomes apparent as a result of an accident or incident, this must be reported using the accident reporting procedure.

Arrangements for Monitoring and Review of Health and Safety Performance

- 2.10 Procedures for monitoring the application and validity of pre-planned safe systems of work will usually be through regular and random inspections of the site and workplace by one of Blackout's Installation Directors.
- 2.11 All contractors and freelancers will be expected to check the health and safety precautions being taken in respect of their own work activities.
- 2.12 Any items arising for immediate action will be conveyed verbally to the relevant persons, to include the Project Manager.

Fire & Emergency Procedures

- 2.13 Where possible the venue/site's existing Fire and Emergency procedures will be followed. They will be communicated to all staff, freelancers and contractors whilst working on site by the Project Manager before the work activity commences.
- 2.14 Muster points will be pointed out during the Site Safety Briefing and a description of the fire fighting equipment in use.
- 2.15 Fire Points will also be pointed out during the Site Safety Briefing, with particular reference to the types of extinguisher that are available for use.

First Aid

- 2.16 Blackout will supply a comprehensive First Aid kit, which will be centrally located within the area of works, and clearly marked as such.
- 2.17 During the Site Safety Briefing, the location of the First Aid kit will be pointed out, and when present, the appointed First Aiders will be identified.

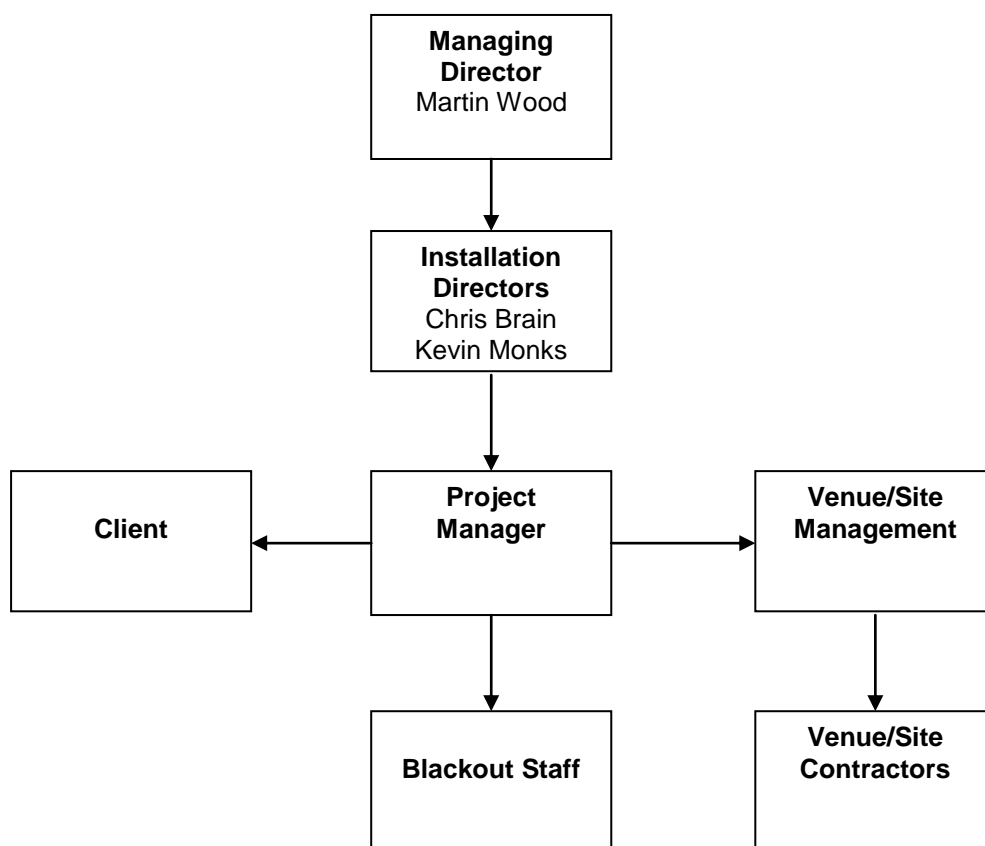
Accident/Incident Reporting

- 2.18 Any accidents/incidents or work related illness must be reported and should be recorded in the Accident Book, which is kept by the HR Manager. If a notifiable accident or dangerous occurrence is reported, a completed form F2508 shall be sent to the Environmental Health Department (or the Health and Safety Executive, where applicable). These shall also be reported to Blackout's Insurance Company.

Welfare Arrangements

- 2.19 Welfare arrangements will always be identified by the Project Manager prior to the work activity proceeding.
- 2.20 Details of these arrangements will then be cascaded down to the Blackout staff.

Safety Management Structure:



3. ENVIRONMENTAL STATEMENT

Introduction

- 3.1 Respect for the environment is fundamental to assuring a sustainable future.
- 3.2 Blackout recognises that our day-to-day activities impact on the environment in both positive and negative ways. We aim to minimise harmful effects whenever we can and will work to secure business benefit from environmental protection through a continuous improvement programme.
- 3.3 Blackout has embarked on a Company-wide programme to improve our environmental performance, to set policies and targets and implement management systems to monitor and measure our performance. Our first step has been to agree an overarching Environmental Policy. This policy sets out our approach to environmental management. Effective implementation of this policy represents an opportunity to improve Blackout's performance by reducing environmental risks and impacts and increasing the efficiency of our operations.

Environmental Statement

- 3.4 Blackout is committed to the prevention of pollution and will work to minimise the impact of its operations through a continuous improvement programme.
- 3.5 In particular, we will:
- Comply with all relevant existing environmental legislation and other requirements
 - Reduce harmful emissions wherever possible
 - Seek to reduce consumption of materials in our operations and promote recycling and the use of recycled materials
 - Manage energy and water usage wisely in all our operations
 - Incorporate environmental considerations into the procurement of goods and services.

3.6 To achieve these we will:

- Allocate sufficient management resources to ensure effective implementation of the environmental policy
- Motivate and educate our employees to conduct their activities in an environmentally responsible manner
- Measure, monitor and report on key indicators of our environmental performance on an annual basis
- Review our policy on a regular basis to take account of new developments in environmental management and legislation, and also stakeholder expectations
- Perform periodic audits of our activities to ensure compliance with company requirements, legislation and policy requirements.

3.7 Blackout recognises that the effective implementation of the policy represents an opportunity to improve the performance of the Company by reducing environmental risks and impacts, and increasing the efficiency of our operations.

4. SITE RULES

- 4.1 The following rules will be applied to all persons working on site unless the Project Manager has in exceptional circumstances specifically agreed to a dispensation.
- 4.2 Safety footwear must be worn at all times when working on site. Hard hats must be worn at all times unless and until the nominated Project Manager establishes by evaluation of the risks involved that hard hats are unnecessary for the work activities on site. High visibility jackets, gloves, eye protection, respiratory masks and any other form of personal protective equipment required to carry out a task safely must be worn when deemed necessary by the Project Manager. Any person wishing to use a safety harness must advise the Project Manager of their intended work activity and obtain his permission prior to the activity commencing.
- 4.3 All personnel are required to attend any Safety Briefings prior to working on site. This is in addition to venue's own induction(s).
- 4.4 Personnel must not operate plant/equipment or machinery or carry out any other tasks for which they have not been properly trained. Proof of suitable training is required before any person is given authorisation to operate plant.
- 4.5 Authorised Driver/Operators will become key holders for the plant/equipment type designated. Keys must be removed from plant/equipment when not in use and must be returned to the Project Manager at the end of a period of use or at the end of the shift. The authorised Driver/Operator is responsible for ensuring this is carried out.
- 3.6 Personnel are not permitted to enter or work on site under the influence of alcohol or drugs. This rule is non-negotiable, and any person found to be in breach of it shall be removed from site.
- 3.7 The use of mobile phones is strictly forbidden when operating plant/equipment, machinery, power tools and when working at height.
- 3.8 The misuse of any site temporary electrical supply is forbidden.
- 3.9 The use of transistor radios or personal stereos is not permitted.

- 4.10 The use of raised voices, shouting and swearing is discouraged unless in response to imminent danger.
- 3.11 All accidents, incidents or near misses must be reported to the Installation Director or Project Manager at the earliest possible opportunity.
- 3.12 Any unsafe acts or conditions experienced or, unsafe equipment, faulty plant or tools observed, must be reported to the Installation Director or Project Manager at the earliest possible opportunity.
- 3.13 All safety signage and notices must be observed and any instructions adhered to. Personnel must not interfere with anything provided in the interest of health, safety and welfare.

5. METHOD STATEMENT - Single Point Rigging Mast

Raising the Mast

- 5.1 Position the cruciform on firm ground using packing as required. Ensure lifting eye is at the back of the base.
- 5.2 Level using integrated screw jacks.
- 5.3 Fit 1m truss section to base.
- 5.4 Fit shackle and 'O' ring to lifting eye.
- 5.5 Fit mast decks and front bolt if required.
- 5.6 Fit lifting jib and arms.
- 5.7 Place two of the 250 litre water ballasts on the side of the base and fill. Add the stage weights to the rear and check the level of the base.
- 5.8 Attach remaining truss lengths and head block using packing to ensure there is no more than a 90deg angle with the front forks)
- 5.9 Fit vertical safety line.
- 5.10 Fit the safety SWR over the head block pins and secure to the truss with tie line.
- 5.11 Attach a 2ft SWR to the O ring using a shackle.
- 5.12 Run the chain of the hoist over the lifting jib wheel, along and around the head block and back down the front face of the mast. (ensuring there are no twists in the chain)
- 5.13 Attach the hook to a roundsling wrapped around the lower section of the horizontal truss.
- 5.14 Using the motor take up the tension in the chain. Attach the motor hook to the 2ft SWR.
- 5.15 Undertake a final check on all fittings and pins.

- 5.16 Using the motor lift the tower. Avoid stop/start movements and STOP just before vertical. Stopping the tower before vertical is critical so as not to cause damage.
- 5.17 Push the tower into place manually.
- 5.18 Fit pins and clips to the rear forks.
- 5.19 Disassemble the lifting jib.
- 5.20 Fit the two rear support braces.
- 5.21 Suspend the PA. Use rope safety on the hook until the weight of the PA is greater than the chain. Attach the safety to the PA.
- 5.22 As soon as the load clears the decks. Place the remaining water ballast and fill. Fit two front support braces.
- 5.23 Undertake a final check to levels. Ensure the centre screw jacks are in contact with the ground.
- 5.24 Continue lifting the PA to required height.
- 5.25 Adjust PA angle and restrain as needed.
- 5.26 Check 'Earthing' arrangements with the onsite electrician.
- 5.27 Secure the safety SWR to the O ring on the cruciform using a turnbuckle to remove the slack in the SWR.
- 5.28 Fit cover boards to the base and dress with PUFC skirt.
- 5.29 Check security arrangements for the mast.
- 5.30 Fill out the completion certificate and hand it to the person who is remaining on site or taking responsibilities over once Blackout have departed.

Lowering the Mast

- 5.31 Lowering the mast is the reversal of the above procedure. Please note the following points:
- If the front two support braces have to be removed to lower the PA, ensure the load is lowered as far as possible first.
 - Use rope safety on the motor chain when removing the PA.
 - Do not remove all the ballast before the mast is lowered.
 - Check the motor hook is correctly re-attached to the front of the mast and the lifting jib is correctly re-assembled before the tower is lowered.
 - Some slack needs to be in the chain and the tower pulled by hand to start lowering. Ensure the correct two pins are removed.
 - Ensure the front fork does not go past 90deg as the mast is lowered.

General Notes

- 5.32 No person is to climb a rigging mast without using the correct PPE.
- 5.33 Always check the surface area and weight of the PA do not exceed the results of the stability calculations.
- 5.34 Daily checks by the responsible person:
- Tower is vertical
 - Cruciform bases are solid.
 - Diagonal support braces are tight.
 - No ballast has been removed or tanks emptied.
- 5.35 The load must be lowered at night or at anytime if left unattended.
- 5.36 The load must be lowered in high winds. The calculations are normally made for a maximum wind speed of 15m/sec = 34mph = Beaufort 7.

6. RISK ASSESSMENTS

- 6.1 Numerous pieces of legislation require risk assessments to be carried out and, in particular, the Management of Health and Safety (Workplace) Regulations 1999. All work activities need to be assessed by a competent person in order to identify the hazards and quantify the risks of these hazards causing harm to people. Hazards and risks that are not eliminated must be controlled and the control measures, be they physical or procedural, must be communicated to those who will work, or otherwise come into contact with the hazards.
- 6.2 This risk assessment for Rigging Mast Installation has been based on the activities that will take place during the installation work activity. The assessment also incorporates the experience of undertaking many similar activities.
- 6.3 Risk Assessments and method statements together with details of relevant insurances have been sought from suppliers to Blackout and have been taken into consideration when drafting this document.
- 6.4 In undertaking risk assessments, the following approach has been adopted:
- Gather information/identify risks
 - Consider control measures appropriate to the identified risks
 - Evaluate residual risk
- 6.5 The risk assessments below give the residual risks. The residual risk is the level of the remaining risk produced when proposed control measures have been applied. The figures given may be interpreted using the matrix at the end of the assessments. Blackout will ensure that the risk control measures are fully implemented to achieve these levels. The columns following the residual risk data indicate where additional controls are required or where special attention should be given. For the avoidance of confusion - the columns of the risk rating sections are headed $S \times L = R$. S is for "severity" and is given in the first column. L is for "likelihood" and is indicated in the second column.

- 6.6 The control measures, indicated within the assessment, are considered to be reasonably practicable measures, to control the risks identified based on experience of similar activities.
- 6.7 A review of the assessment will be made, should further information be received which suggests that the control measures suggested are no longer sufficient to control risks or are inappropriate or if additional hazards are identified.
- 6.8 During the work period a process of continuous assessment and reassessment will be undertaken by the Project Manager, to ensure appropriate risk controls are put in place should situations develop which are not covered within this assessment.

RISK MATRIX

DEFINITIONS	<i>Likelihood</i>			
Severity	RISK RATING	Low = 1	Med = 2	High = 3
	Low = 1	1	2	3
	Med = 2	2	4	6
	High = 3	3	6	9

Severity x Likelihood = RISK RATING

RISK RATING

6 - 9 = High risk – action required to reduce risk

3 - 4 = Medium risk – seek to further reduce risk

1 - 2 = Low risk – no action but continue to monitor

DEFINITIONS

Severity

H = Fatality or major injury causing long term disability

M = Injury or illness causing short-term disability

L = Other injury or illness

Likelihood

H = Certain or near certain

M = Reasonably likely

L = Very seldom or never

CONTENTS

- 1. General Risks**
- 2. Work at Height**
- 3. Rigging Mast Installation**

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Arrival and Event installation procedures: Failure to maintain control of equipment	1.1	Staff, freelance workers and agency staff.	3	1	M	Project Manager should be appointed to oversee the work of installation and to liaise with freelance workers and venue staff. Load in may necessitate traffic/people management. All vehicles/plant movement to be supervised. All installation staff to be trained and competent. Project Manager/Crew Chief to supervise activity.	2	1	L	Temporary barriers should be erected around work sites during build/dismantle when deemed necessary.
Working light: Insufficient visibility for working	1.2	Staff, freelance workers and agency staff.	3	1	M	Project Manager/Crew Chief to ensure adequate lighting levels if build/dismantle during hours of darkness. Venue/client to be advised if working into the hours of darkness. Project manager/Crew Chief to provide torches if deemed necessary.	2	1	L	

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Use of Electrical equipment: Electrical Shocks or Burns	1.3	Staff, freelance workers and agency staff.	3	2	H	All individual power supplies to be certified as appropriate. Use of 110V or battery operated tools where practicable. Portable tools, etc to be examined and certificated. Project Manager/Crew Chief to supervise activity.	2	1	L	
Storage of Materials: Falls, trips, unsafe stacking and or collision	1.4	Staff, freelance workers, agency staff and venue staff.	3	2	H	Safe storage locations to be identified by Project Manager/Crew Chief with Venue Management/Client in advance of work activity. Fencing, cones, hazard tape and hazard lighting to be erected as necessary where public/ other contactors have access or where there is a significant risk of vehicle collision. Security may be needed if left unattended. Project Manager/Crew Chief to monitor.	2	1	L	

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	

Medical Provisions: Lack of adequate medical provisions	1.5	Staff, freelance workers and agency staff.	3	3	H	<p>The Project Manager will evaluate the medical provisions for the work required and assess if they are suitable for the work activities being undertaken.</p> <p>The Project Manager/Crew Chief will distribute to all site staff this information prior to the work activity commencing.</p> <p>The Project Manager/Crew Chief will ensure the appropriate levels of medical cover are in place for the duration of the build and dismantle.</p> <p>The Project Manager/Crew Chief will identify the location of the nearest Medical facility.</p> <p>First Aid boxes will be supplied by Blackout when deemed necessary by the Project Manager.</p>	2	1	L	<p>When working out of hours the Project Manager/Crew Chief will inform the venue.</p> <p>Provisions may need to be made to extend the medical cover.</p>
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1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk			Minimise risk by:	Residual risk:			Further action needed:
			Severity x Likelihood = Risk rating	S	L		R	Severity x Likelihood = Risk rating	S	
<p>Lack of protection for head, hands, feet, ears: Cuts, lacerations, concussions, crushing injuries etc.</p>	1.6	Staff, freelance workers and agency staff.	2	2	M	<p>Project Manager/Crew Chief to be responsible for ensuring that all site staff have the appropriate Personal Protective Equipment (PPE) for the activities which they are undertaking and ensuring the exclusion of all other persons from areas where PPE is required.</p> <p>Signage/barriers placed as appropriate.</p> <p>Method statements should clearly state PPE requirements as appropriate.</p> <p>The method statements should also identify the operations/periods where PPE is necessary.</p> <p>Project Manage/Crew Chief to monitor all use of PPE.</p>	1	2	L	Personnel failing to wear the required PPE will be ordered to leave site.

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Weather Conditions: When working outdoors.	1.7	Staff, freelance workers and agency staff.	2	2	M	In the event of severe weather, which constitutes a severe risk to the health and safety of those on site, the Project Manager/Crew Chief has the authority to stop all activities until conditions improve. Clothing appropriate for the weather conditions to be worn. Access to suitable and sufficient welfare facilities and drinking water. Access to shade. Use of sun-block etc. Project Manager/Crew Chief to monitor.	2	1	L	
Equipment on Hire: Whenever hired equipment is used, the risk of accidents is increased due to a potential lack of training, discipline in use, documentation & maintenance. Examples of this equipment are MEWP, vans, forklift trucks, etc.	1.8	Staff, freelance workers and agency staff.	3	2	H	The Project Manager will ensure that the equipment is fit for purpose, used with due diligence and if necessary that access to and use of the equipment is restricted. All users must be competent, trained and, if necessary, properly insured. Project Manager/Crew Chief to monitor.	2	1	L	If Blackout provides equipment to be used by crew, they will ensure that the equipment carries a full test and maintenance history, is fit for purpose and comes with all appropriate user manuals and available for inspection on request.

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
<p>Communication Failure: Communications systems need to exist between all parties in order to prevent, or minimise, injuries that may be caused by an emergency.</p>	1.9	Staff, freelance workers, agency staff and venue staff.	2	3	H	<p>Decisions will be taken by the Project Manager as to whether communications between teams are via personal contact, mobile phones or radios.</p> <p>The Project Manager will publicise this information prior to the installation commencing.</p>	2	1	L	All personnel should inform the Project Manager concerning any requirement they may have for safety critical communications.
<p>Welfare Provisions: Insufficient welfare provisions can lead to fatigue, dehydration, hypothermia, overheating, etc.</p>	1.10	Staff, freelance workers and agency staff.	2	2	M	<p>The Project Manager/Crew Chief should always identify the nearest available drinking water point and toilets.</p> <p>When necessary Blackout will provide these facilities on site.</p> <p>The Project Manager must inform personnel in advance of extreme weather conditions they may encounter whilst on site and provide instructions regarding the appropriate clothing, PPE, etc.</p>	1	1	L	

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Substances Hazardous to health: Sickness, ill health etc.	1.11	Staff, freelance workers and agency staff.	2	2	M	All hazardous substances that are either stored or used on the premises have been identified, listed and COSHH data sheets obtained. The use of each substance to be established as essential to the task or function for which it is used. All necessary safety precautions to be established for each hazardous substance including the provision of any necessary water or ventilation systems. All necessary hazard warning signs to be in place local to the substances in use or being stored. All vessels, bags, wrappings etc that contain hazardous substances must be clearly marked and colour coded for the substance stored. All of the necessary antidotes or neutralising agents must be available in close proximity to the hazardous substance. Project Manager/Crew Chief to monitor.	2	1	L	All necessary personal protective equipment will be available to all staff who use or come into contact with a hazardous substance. Information should be given to personnel on hazardous substances that they use or come in contact with and the associated risks. Training should be given to personnel on the task and the use of hazardous substances together with training on the safety precautions and remedial actions to be taken in the event of an accident, spillage or other dangerous occurrences.

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Drugs & Alcohol: Reduction of stamina, disorientation, incoherence, lack of judgement.	1.12	Staff, freelance workers and agency staff.	3	2	H	All personnel to be advised prior to their arrival on site that the consumption of alcohol and the taking of recreational drugs are prohibited by Blackout. The Project Manager/Crew Chief will send off site any member of staff who is or appears to be under the influence of alcohol or drugs. Project Manager/Crew Chief to monitor all site staff.	2	1	L	

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Manual handling: Back injuries	1.13	Staff, freelance workers and agency staff.	2	2	M	Where practicable avoid moving the load or to mechanise or automate the handling operation. Staff are trained on manual handling. The task must avoid: <ul style="list-style-type: none"> • Holding the load away from the trunk. • Twisting. • Stooping. • Reaching upwards. • Excessive lifting or lowering distances. • Long carrying distances. • Strenuous pushing or pulling. • Unpredictable movement of loads. • Repetitive handling. • A work rate imposed by a process. Training must be given to all staff on health and safety matters relative to manual handling tasks and also the use of all equipment and tools, etc. Project Manager/Crew Chief to monitor.	2	1	L	Instructions must be given to personnel not to lift loads, without supervision and assistance, that are: <ul style="list-style-type: none"> • Heavy. • Bulky/unwieldy. • Difficult to grasp. • Unstable/unpredictable. • Intrinsically unsafe (e.g. sharp). In the working environment there should be: <ul style="list-style-type: none"> • Space ample to allow good posture. • Floor of good quality. • Floor and/or work surface level. • Ambient temperature/humidity reasonable. • Lighting level sufficient.

1. General Risks

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			S	L	R		S	L	R	
Noise: Hearing damage	1.14	Staff, freelance workers and agency staff.	2	1	L	<p>A noise assessment should be carried out and recorded for areas and equipment where noise is excessive or a nuisance, either inside or external to the workplace.</p> <p>All operators or equipment noise levels must be below the noise threshold.</p> <p>Reasonable and adequate steps must be taken to reduce or eliminate noisy operations and/or noise from equipment.</p> <p>Work areas where noise expected to exceed 80dB (A) over an eight hour period to be identified and signed. Project Manager to advise staff accordingly and provide appropriate hearing protection.</p> <p>Hearing protection must be provided to all workers who are required to work in or regularly enter noisy zones.</p> <p>Project Manager/Crew Chief to monitor.</p>	1	1	L	<p>Suitable information, instruction and training must be given to all personnel that are required to work in, or have to enter noisy environments.</p> <p>All noise precautions to be regularly checked and records kept.</p>

1. General Risks

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			S	L	R		S	L	R	
Safety Signs: Emergency evacuation issues	1.15	Staff, freelance workers and agency staff.	3	2	H	<p>Suitable and sufficient safety signs must be used in the workplace.</p> <p>All staff must receive suitable and sufficient instruction and training in the meaning of safety signs.</p> <p>Comprehensible and relevant information on the measures to be taken in connection with safety signs must be provided to staff.</p> <p>All safety signs must be maintained so as to perform the function for which they are intended.</p> <p>Project Manager/Crew Chief to monitor.</p>	2	1	L	<p>An uninterrupted power supply is required for illuminated safety signs.</p> <p>Signboards and pictograms must be clear and un-ambiguous regarding their function.</p>

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Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Work Equipment: Injury	1.16	Staff, freelance workers and agency staff.	2	2	M	<p>Equipment must be suitable for the purpose for which it is provided.</p> <p>Equipment must be maintained in an efficient state with a current maintenance record.</p> <p>Work equipment provided after 1 January 1993 must conform to either British or EU Standards.</p> <p>Measures must be taken to ensure that, where appropriate, work equipment is provided with one or more readily accessible controls which will bring the work equipment to a safe stop condition.</p> <p>All controls must be clearly:</p> <ul style="list-style-type: none"> • Visible • Identifiable <p>Work equipment must incorporate warnings or warning devices that are easily identified and understood for reasons of health and safety.</p> <p>Project Manager/Crew Chief to monitor.</p>	2	1	L	<p>Where the use of work equipment involves a specific risk the use of that equipment must be restricted to personnel given the task of using it.</p> <p>Measures must be taken to ensure that all workers are prevented from being exposed to any hazard or risk, as listed below, when using work equipment or, where that is impracticable, the task is adequately controlled:</p> <ul style="list-style-type: none"> • Any article falling or being ejected from the equipment • Rupture or disintegration of parts • Work equipment catching fire or over heating

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Workplace transport: Collisions, accidents and injuries	1.17	Staff, freelance workers, venue staff and agency staff.	3	2	H	<p>Project Manager/Crew Chief to ensure vehicles and pedestrians must be kept safely apart; Banksman may need to be put in place.</p> <p>Suitable pedestrian crossing points must be identified on vehicle routes.</p> <p>Suitable parking areas are required for all parking needs.</p> <p>Vehicle traffic routes should be:</p> <ul style="list-style-type: none"> • Wide enough for the task • Well constructed • Free from obstructions • Well maintained <p>Roadways must be marked where necessary.</p> <p>Where there is a need for direction signs and speed limits signs they must be clearly displayed in the appropriate location.</p> <p>Project Manager/Crew Chief to supervise.</p>	2	1	L	

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
<p>Loading & Unloading Vehicles: People may be injured by reversing vehicles, blocking of access & egress routes and insufficient staff assigned to unload vehicles.</p>	1.18	Staff, freelance workers and agency staff.	3	2	H	<p>The Project Manager/Crew Chief will control and ensure proper supervision of vehicle unloading and loading.</p> <p>If unloading/loading is undertaken on a public highway hazard signage may need to be displayed and red & white tape used to restrict access to the area.</p> <p>In areas of high risk barriers will be put in place.</p> <p>High Viz must be worn when unloading vehicles on the public highway.</p> <p>Project Manager/Crew Chief to supervise activity.</p>	2	1	L	<p>Project Manager must ensure sufficient numbers of staff are available during the loading and unloading of drapes and equipment.</p> <p>The venue management should ensure that normal deliveries and collections do not affect the safety of this operation.</p>

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	

Loading & Unloading using vehicle tail lift: Injuries, accidents	1.19	Staff, freelance workers and agency staff.				<p>The Project Manager/Crew Chief will control and ensure proper supervision of vehicle unloading and loading.</p> <p>Wherever possible position vehicle on level ground.</p> <p>Ensure load is prevented from falling from platform during lifting or lowering.</p> <p>Vehicle driver to deploy and operate the lift at all times.</p>				Use of relevant PPE (gloves, safety footwear).
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1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	

Lone Working: No outside knowledge of injury or accident	1.20	Staff, freelance workers and agency staff.	3	1	M	<p>Arrangements must be in place for lone workers to report in by telephone regularly.</p> <p>Arrangements should be in place for staff to call in to the Project Manager/Crew Chief when undertaking work with identified risk to health and safety, with an estimate of the time to be spent undertaking the task and to “stand down” the Project Manager/Crew Chief when the task is completed</p> <p>Lone workers must be provided with suitable PPE and equipment for the task.</p> <p>Project Manager/Crew Chief to monitor.</p>	2	1	L	<p>When work is to be carried out with likely risk to health and safety arrangements should be put in place to attend in pairs.</p> <p>Mobile phones should be pre-programmed to call the Project Manager/Crew Chief number to avoid inputting long numbers in an emergency.</p> <p>When deemed necessary venue will be requested to provide experienced guide.</p>
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1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Personal Protective Equipment (PPE): Risk of injury	1.21	Staff, freelance workers and agency staff.	3	1	M	Suitable personal protective equipment (PPE) is issued to Blackout staff that are exposed to risks to their health and safety whilst at work. The personal protective equipment must take into account ergonomic requirements and the state of health of persons who may wear it. The personal protective equipment must be capable of fitting the wearer correctly, if necessary after adjustment. The personal protective equipment must control the risks involved without increasing the overall risk. Staff must be instructed to change personal protective equipment that is past its stated life. Appropriate accommodation must be provided for Personal Protective Equipment when not in use. Project Manager/Crew Chief to supervise use of PPE.	2	1	L	The personal protective equipment must be appropriate for the: <ul style="list-style-type: none"> • Risks involved • Conditions involved The personal protective equipment must be: <ul style="list-style-type: none"> • Inspected regularly • Cleaned regularly • Maintained regularly • Repaired or replaced when necessary Staff must receive adequate training in: <ul style="list-style-type: none"> • The wearing of personal protective equipment • The use of personal protective equipment • The maintenance of personal protective equipment • The purpose of the personal protective equipment

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Multi Contractor Environments: Staff may be at risk from hazards produced by other environments and companies working in the same Site.	1.22	Staff, freelance workers, agency staff and contractors.	2	2	M	The Project Manager will inform all on site staff of any hazards or risks presented by other contactors working on site. The Project Manager will ensure all Blackouts' risk assessments are handed to the Venue with a request that they should be passed onto other Companies if required. Assessment of Production Schedule and regular meetings to ensure that dangerous environments do not arise out of work activities will be undertaken. Project Manager to monitor.	2	1	L	The Venue should ensure all companies working on site at any one time have access to each other's Health & Safety Information.

1. General Risks

Hazard	Ref:	To whom:	Uncontrolled Risk			Minimise risk by:	Residual risk:			Further action needed:
			Severity x Likelihood = Risk rating	S	L		R	Severity x Likelihood = Risk rating	S	
Slips, Trips & Falls: Trailing cables and equipment causing a trip hazard.	1.23	Staff, freelance workers, agency staff and contractors	2	2	M	All cables should be flown where possible, temporary cable runs must be routed with care. Cable runs must not cross fire escape routes. All show cable runs that are not flown must be securely taped down. In high risk areas black & yellow tape must be used. All equipment and flight cases must be stored securely and with care. Project Manager to monitor.	1	1	L	

2. Work at Height

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
<p>Supervision of Work at Height: Project Managers need to supervise the use of access equipment, ladders and access towers etc.</p>	2.1	Staff, freelance workers and agency staff	3	2	H	<p>Consideration must always be given by the Project Manager to eliminating or reducing the amount of work at height.</p> <p>Before any work at height is undertaken, suitable 'Rescue Protocols' must be identified and put in place.</p> <p>The Project Manager/Crew Chief must supervise all work activities that are undertaken at height.</p> <p>The Project Manager/Crew Chief must ensure that areas beneath the work activity have restricted access.</p> <p>The Project Manager/Crew Chief must ensure that the appropriate PPE is worn and staff are properly trained in its use.</p> <p>The Project Manager/Crew Chief to advice venue/client if work at height is taking place well in advance of activity.</p>	3	1	M	Great care must be exercised whilst working at height in areas that other staff/persons sharing the space have access to.

2. Work at Height

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
<p>Working at heights (Aluminium Towers): There is a risk of overturning the tower with or without staff on working platform also falls by staff and falls of materials and or components or tools.</p>	2.2	Staff, freelance workers and agency staff	3	2	H	<p>Towers to be erected by competent staff only.</p> <p>Towers always to be erected on firm level grounding.</p> <p>Use of outriggers where applicable.</p> <p>Use of system decking for platform.</p> <p>Never overload the work platform.</p> <p>Use toe boards if loose equipment is used on the work platform.</p> <p>Always empty work platform before releasing wheel locks.</p> <p>Keep unnecessary personnel outside the work zone of the tower while in use.</p> <p>Ensure that when not in use the tower is stored securely in a place inaccessible to the general public..</p> <p>Project Manager/Crew Chief to supervise activity.</p>	3	1	M	<p>Always climb tower from inside.</p> <p>Use of trapdoor platform at ladder position.</p> <p>Adequate handrails to be provided.</p> <p>Towers must not be lent to third parties.</p> <p>Tower components to be checked for damage before use.</p>

2. Work at Height

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			S	L	R		S	L	R	

<p>Work at height (ladders): There is a risk of falls of staff from steps overturning</p>	2.3	Staff, freelance workers and agency Staff.	2	2	M	<p>Project Manager to consider the use of a small Access Tower as an alternative work platform. Stepladders for general access only, prolonged work activities to be undertaken from a work platform.</p> <p>Ladders to be used by competent staff only.</p> <p>Ensure all ladders are suitable for the task and are well maintained.</p> <p>Only to be used for tasks of short duration i.e.15 - 30mins.</p> <p>Use ladder on firm level ground only.</p> <p>Ladders to be footed or tied whenever possible.</p> <p>Never work from the top rungs.</p> <p>Ladder not to carry loads other than one person. The use of two ladders with deck between should be avoided.</p> <p>Not to be used for work at great heights.</p> <p>Project Manager/Crew Chief to supervise all ladder activity.</p>	2	1	L	<p>Blackout has a robust inspection program for all of their ladders.</p> <p>An Inspection Register is held by the Warehouse Manager.</p>
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2. Work at Height

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	

<p>Use of Mobile elevated work platform (MEWP): Overturning of the MEWP. Falls of personnel from the operating basket. Falls of tools or materials. Personnel becoming trapped or entangled in moving parts.</p>	2.4	Staff, freelance workers and agency staff.	3	2	H	<p>Ensure that MEWP is on firm, level grounding and where applicable that the outriggers are used.</p> <p>Trained personnel only to operate MEWP.</p> <p>Use of restraint harness equipment where manufacture requires it. Always work within cage.</p> <p>Adequate planning of works to ensure where necessary that materials can be taken up within the cage.</p> <p>Always work within the MEWP's SWL. Never use MEWP as a crane.</p> <p>Keep unauthorised personnel away from the work zone by using barriers or hazard tape if necessary.</p> <p>Ensure the MEWP is suitable for the task conditions and terrain is used; if in doubt consult the manufacturer.</p> <p>When operating indoors ensure appropriate head protection is used.</p> <p>Project Manager/Crew Chief to supervise.</p>	3	1	M	<p>Project Manager to check MEWP Licences.</p> <p>Project Managers/Crew Chief to ensure that Daily Checks are undertaken on all MEWPs.</p> <p>Authorised Driver/Operators will become key holders for the plant/equipment type designated.</p> <p>Keys must be returned to the Project Manager at the end of plant/equipment use or end of shift.</p> <p>Keys must never be left unattended in the ignition.</p>
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2. Work at Height

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			S	L	R		S	L	R	

<p>Use of Safety Harnesses: Falls from height.</p>	2.5	Staff, freelance workers and agency staff.	3	2	H	<p>Safety Harnesses must only be used as a last resort.</p> <p>Rescue Protocols need to be identified by the Project Manager/Crew Chief prior to the work activity commencing.</p> <p>The type of harness must be appropriate for the risks involved and the prevailing conditions.</p> <p>The harness must be capable of fitting the user correctly and adequately control one or more risks without significantly increasing the overall risk.</p> <p>The harness must comply with and display the appropriate 'CE' mark.</p> <p>All lanyards must be fitted with a Fall Arrest Device'. The point of attachment for the lanyard must have sufficient load bearing capacity.</p> <p>The 'Double Lanyard' method is preferred by Blackout.</p> <p>Project Manager/Crew Chief to supervise all safety harness usage.</p>	3	1	M	<p>Blackout will provide suitable harnesses for all staff; freelance workers are to provide their own harness.</p> <p>Harnesses must be checked prior to use and an appropriate periodic inspection regime observed.</p> <p>Project Manager/Crew Chief to advise venue/client when safety harnesses are in use.</p>
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2. Work at Height

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Fragile ceilings: Falls from Height.	2.6	Staff, freelance workers and agency staff.	3	3	H	<p>At the pre-production stage, Project Managers must identify any areas of the work site that may contain fragile ceilings or roofs; this is likely to require consultation with the venue management.</p> <p>Should a fragile surface be identified the work activities will to be planned to avoid the area as much as possible.</p> <p>All personnel working on site must be informed in the Site Safety Briefing of any fragile ceilings or roofs.</p> <p>Warning signage, Red & White hazard tape and barriers to be used whenever possible.</p> <p>Project Manager to determine and implement any PPE requirement for personnel working in the vicinity of the fragile surface.</p> <p>Project Manager to supervise and liaise with venue management.</p>	3	1	M	

3. Rigging Mast Installation

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
<p>Overloading Mast: Death, major injury and damage to property and equipment due to overloading.</p>	3.1	Staff, freelance workers and agency staff	3	3	H	<p>Project Manager must obtain the weights of the equipment to be suspended from the mast from the client or venue.</p> <p>The SWL of the mast must not be exceeded.</p> <p>When calculating loads Point Loading and the Universally Distributed Load (UDL) need to be taken into consideration when producing the calculations.</p> <p>The weights of all of the proposed suspended equipment/items must be determined and taken into account when working out the mast's collective weight loading.</p> <p>Electric Chain Hoist and truss SWLs must also be taken into account.</p> <p>Calculations must always be produced electronically and forwarded on to client and venue for their approval prior to work activity commencing.</p> <p>Installation Directors/Project Manager to monitor.</p>	3	1	M	<p>When deemed necessary an Independent Structural Engineer will be contracted to inspect rigging.</p> <p>Consideration needs to be given to not just the weight of the suspended item but also the mass – scenery etc.</p>

3. Rigging Mast Installation

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Rigging Point failure: Death, major injury and damage to property and equipment due to venue points of attachment failing.	3.2	Staff, freelance workers and agency staff	3	3	H	Rigging attachments only to be made to designated rigging points within the mast infrastructure. Project Manager to ensure the mast to be used has been tested and regularly inspected in compliance with LOLER 98. Project Manager to supervise activity.	3	1	M	All masts must have a certificate of inspection and a SWL attached to or marked near to point. Rigging Equipment Supervisor to monitor.
Tools and or equipment falling from above: Death, major injury and damage to property and equipment.	3.3	Staff, freelance workers and agency staff	2	3	H	The Project Manager must ensure that access to the area beneath where any work at height is being undertaken is restricted. Barriers or hazard tape to be used. Head protection to be supplied to all Blackout staff who may be at risk. All tools to be secured via a suitable lanyard to a fixed item. Project Manager/Crew Chief to supervise activity.	3	1	M	

3. Rigging Mast Installation

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			S	L	R		S	L	R	

<p>Rigging Equipment failure: Death, major injury and damage to property and equipment.</p>	3.4	Staff, freelance workers and agency staff.	3	3	H	<p>All rigging equipment inspected on a regular basis by a competent contractor in compliance with LOLER 98.</p> <p>All equipment visually inspected each time it is returned to Blackout's Rigging Store, after use on site.</p> <p>Rigging Equipment Supervisor to monitor.</p> <p>All suspended items of significant weight to be fitted with a secondary form of attachment – 'Safety'.</p> <p>Extra motors can be installed when deemed suitable and sufficient to provide the secondary form of attachment.</p> <p>All secondary forms of attachment to be inherently flame retardant.</p> <p>Rigging Equipment Supervisor to monitor.</p> <p>Project Manager to supervise.</p>	3	1	M	Staff to undertake visual check on all equipment prior to installation.
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3. Rigging Mast Installation

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Lifting Operations: All lifting operations (i.e. MEWP, forklifts, chain hoists etc.) must be properly planned and appropriately supervised.	3.5	Staff, freelance workers and agency staff.	3	3	H	The Project Manager/Crew Chief will ensure that every lifting operation has a nominated "responsible person" who is in charge of all lifting & lowering operations of the system. This person will be in overall charge of the operation irrespective of to whom it belongs. The Project Manager/Crew Chief will identify any appropriate communication systems and chain of command, particularly if loads are being moved as part of the event. All lifting operations should be in compliance with the Lifting Operations and Lifting Equipment Regulations Regs 1998. Project Manager/Crew Chief to supervise activity.	3	1	M	Project Manager/Crew Chief to deliver Safety Briefing prior to the work activity commencing. Project Manager/Crew Chief to inform Client/venue of any significant lifting operations in advance of activity.

3. Rigging Mast Installation

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Assembling Truss: Incorrectly assembled truss can result in failure.	3.6	Staff, freelance workers and agency staff	3	2	H	Compliance with manufacturer's assembly instructions. Method Statement to be strictly adhered to. Critical components identified and checked during installation. Truss pins and safety clips must be fitted. Truss sections must be connected in the correct orientation so the bracing pattern is maintained. Truss to be assembled at ground level whenever possible and flown to a height of 1.5m for equipment installation. Care to be taken when removing truss pins with truss hammers, the use of a 'Podger/Pin-Puller' is recommended. Completion Certificate to be completed by Project Manager. Project Manager/Crew Chief to supervise activity.	1	1	L	All trussing inspected on a regular basis in compliance with LOLER 98 by a competent contractor.

3. Rigging Mast Installation

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			S	L	R		S	L	R	
Lifting Mast: Mechanical failure or collision with venue/event infrastructure.	3.7	Staff, freelance workers and agency staff	3	2	H	The location of mast to maintain safe separation distances from venue/event infrastructure. All trussing inspected on a regular basis by a competent contractor in compliance with LOLER 98. Fragile services removed or disconnected prior to lifting operation. Limits switches to be used on moving trusses. Banksman to be appointed where full system is not visible to the Hoist Control Operator. All personnel to be advised verbally of "Mast Moving!" Only competent staff permitted to operate flown Hoist Controls. Project Manager/Crew Chief to supervise activity.	1	1	L	It is recommended that the lifting activity is paused at intervals to enable Project Manager/Crew Chief to inspect progress. Head protection maybe required.

3. Rigging Mast Installation

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			S	L	R		S	L	R	
<p>Electric Chain Hoists: Incorrect use can result in mechanical failure.</p>	<p>3.8</p>	<p>Staff, freelance workers and agency staff</p>	<p>3</p>	<p>2</p>	<p>H</p>	<p>Blackout solely use hoists designed for theatre use with the correct CE markings.</p> <p>Only competent staff permitted to operate flown Hoist Controls.</p> <p>Hand held controls (Pickles) to be used for all lifts whilst hoist is being handled.</p> <p>Ensure chain bag fitted, in good condition and positioned correctly.</p> <p>Visual inspection prior to use.</p> <p>Distribution equipment protected by RCD, and only of "Plug and Play" type.</p> <p>Compliance with manufacturer's operating instructions.</p> <p>Operator to ensure correct setting of limits on hoist prior to lift.</p> <p>Visual assessment to undertaken of distance of travel/trim height during lifting operation.</p> <p>Project Manage/Crew Chief to supervise activity.</p>	<p>2</p>	<p>1</p>	<p>L</p>	<p>All Electric Chain Hoists inspected on a regular basis in compliance with LOLER 98 by a competent contractor.</p> <p>Regular electrical inspection and test certificates available for inspection.</p>

3. Rigging Mast Installation

Hazard	Ref:	To whom:	Uncontrolled Risk <i>Severity x Likelihood = Risk rating</i>			Minimise risk by:	Residual risk: <i>Severity x Likelihood = Risk rating</i>			Further action needed:
			S	L	R		S	L	R	
Erecting the Mast Outdoors: Unstable ground, overhead cables, underground services etc.	3.9	Staff, freelance workers and agency staff	3	2	H	Project Manager to undertake a visual ground survey prior to erection of mast. Mast must not to be erected within a 10m radius of any overhead power cables. Project Manager to make enquiries about any underground services that may be affected by the mast's chosen location – CAT Scanner to be used if significant risk is identified.	2	1	L	Consideration to be given to ground stability if subjected to heavy continuous rain.

3. Rigging Mast Installation

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			S	L	R		S	L	R	
Adverse Weather: Wind and rain.	3.10	Staff, freelance workers and agency staff	3	2	H	<p>Mast must be fitted with an anemometer at the mast head capable of being read at ground level. This device to be checked regularly by a Competent Person, the frequency determined by wind speed forecast.</p> <p>Weather forecasts to be checked by Project Manager in advance and during Mast use.</p> <p>Mast must be lowered should wind speeds reach 15m/sec = 34mph = Beaufort 7.</p> <p>Mast to be suitably electrically earthed. This may require consultation with the site/venue appointed Electrician.</p> <p>In adverse weather conditions a waterproof cover to be applied to the hoist.</p>	3	2	M	The applied load must always be grounded at night when not in use.

3. Rigging Mast Installation

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			S	L	R		S	L	R	
Mast left Unsupervised by Blackout Crew: Client/venue staff unaware of Mast safety procedures.	3.11	Client, venue and site workers.	3	2	H	Project Manager to ensure a responsible representative of Client/venue is properly briefed in all matters pertaining to safety that are associated with the use of the mast. Correct 'Hand Over' Sheet to be produced and signed by Client/venue. When mast erected outdoors the workings of the anemometer to be fully explained to the responsible representative by Project Manager. Project Manager's emergency contact details to be given to the appointed Responsible Person.	3	1	M	The applied load must always be grounded at night when not in use.