

SAFE SYSTEM OF WORK

High Level Studio Grid and Ceiling Gantry Walkways Activities

This Safe System of Work details the arrangements to eliminate/minimise any danger from working at height hazards including objects falling from the grid/ceiling gantry walkways as well as any fall from height risk. It should be read in conjunction with:

- Grid Induction Forms (specific to each site and studio/stage)
- Risk Assessment – Manual Handling: Rigging & De-rigging (grid work)

Definitions:

Studio Grid	Permanent overhead mesh steelwork structure installed at high level, above the entirety of the studio/stage floor, used to support the rigging of lighting, vision and sound equipment, drapes, scenic elements and associated cables and accessories. Openable hatches are installed at key locations in the structure for direct access to the studio floor to facilitate lifting operations.
Studio Ceiling Gantry Walkways 'Ceiling Gantries'	Permanent overhead steelwork structures installed as walkway 'catwalk' sections at high level, above the studio/stage floor to access key loading/hanging locations to support the rigging of lighting, vision and sound equipment, drapes, scenic elements and associated cables and accessories
Responsible Person (RP)	The individual with overall responsibility for ensuring safe access to, and management of activities conducted within, the grids and ceiling gantries.
Approved Authoriser	A competent person authorised to provide inductions and control access to the grids and ceiling gantries, operating under the direction of the Responsible Person

Grid and Ceiling Gantry Walkways Safety Systems

The grid structures and ceiling gantry walkways provide collective fall-protection measures:

Grids: structure spans the full extent of the studio ceiling area.

Ceiling Gantry Walkways: fitted with fixed guardrails and toe boards on both sides and at the ends, creating a continuous protective barrier to prevent falls from height. No work is to be undertaken outside the designated walkways. Contractors must remain within the boundaries of the walkways at all times. Harnesses are therefore not required whilst working on the grids/ceiling gantries (with the exception of when grid hatches are opened – see below)

Grid Hatches – Permit to Work System

A small number of hatches are openable in the studios with grid systems: Television Centre – TC1, 2 & 3 and Elstree Studios Stages 8 & 9.

These are used on occasion for operational reasons to allow for direct access to the studio floor. The opening of these hatches are high-risk, as they pose a risk of fall from height, and are therefore managed under a strict permit-to-work system. A specific risk assessment and method statement must be submitted to the Operations Team Manager (or their nominated deputy) in order to issue a permit. The mandatory control measures listed in the risk assessment at the end of this document must be included in these RAMS, as well as any activity-specific controls to ensure the safe use of the hatches.

Responsibilities

Estate Manager

- Ensure the SSOW is reviewed, updated and communicated to the relevant staff
- Review all procedures, arrangements and other documentation in relation to working in the grids/ceiling gantries

Responsible Person (RP)

- Reviewing all risk assessments for contractors working in the grids/ceiling gantries and obtain an appropriate method statement with a description of the work activity and duration of the work
- Authorising work to be carried out in the grids/ceiling gantries
- Plan and sequence works effectively to avoid overlap of contractors in the same working area
- Ensuring coordination and communication between all parties working in the studio at both grid/gantry and floor level
- Ensuring all methods to restrict access to the studio floor are in place, as per the below rules and grid working risk assessment
- Ensure an exclusion zone is maintained beneath the working area of any lifting operations
- Report any defects to the structure or equipment/accessories to the relevant responsible management team immediately
- Report any incidents to the on-site facilities management team and Estate Manager immediately

During any studio production, the Resource Manager acts as the Responsible Person (RP). This role must be delegated to an Approved Authoriser, should the Resource Manager not be present.

For any maintenance or other activity in the grids/ceiling gantries, outside of a studio production, the Responsible Person will be the relevant Approved Authoriser, appropriate to the task.

Approved Authorisers

- Carry out grid inductions and maintain the grid induction database
- Authorising access to the grids/ceiling gantries under the direction of the Responsible Person
- Ensuring only those that have completed a grid induction have access to the grids/gantries
- Brief all workers prior to accessing the grid/ceiling gantry area to ensure they are aware of the rules and terms of the grid induction and risk assessment
- Ensure regular grid/ceiling gantry inspections are carried out to check for damage or defects in the structure or rigging/lifting equipment or accessories

Grid/Gantry Workers

- Read and understand the grid induction and relevant risk assessment before entering the grid/ceiling gantry area
- Abide by the rules of working in the grids/ceiling gantries
- Report any defects, incidents or concerns immediately
- Never work alone on the grids/ceiling gantries without a 'buddy'
- Do not override or bypass any safety system

Approved Authorisers

- Resource Manager
- Operations Manager
- Technical Services Manager
- Operations Team Manager
- Construction Manager
- Electrical Gaffer (incl. Workshop Supervisor)

Grid Inductions

The Studio Grids/Ceiling Gantries are restricted areas. Only those who have completed a grid induction, specific to that studio may enter the grid/ceiling gantry area. Grid Inductions are carried out by one of the Approved Authorisers. Individuals must sign the induction document to confirm they have understood the rules and terms and their details will be held centrally on the 'Grid Database'. Inductions are valid for 2 years, however an induction refresher may be required sooner, due to any change in procedure or review of the process.

Emergency Access and Procedures:

In the event of any major incident, the BBC Studioworks Emergency Procedure below must be followed. Site Security and the Responsible Person hold copies of this procedure.

Person Falls from height or person below is struck by falling item

- Call 999 Immediately and inform local Security team to ask for the Production Medic or First Aider
- Do not leave casualty unattended. Maintain voice contact.
- Clear the Studio
- Preserve the scene unless risk of further injury

Person is suspended in harness

If a worker falls and is suspended in their harness, it is a medical emergency. Suspension trauma can be fatal within minutes.

- Call 999 Immediately and inform local Security team to ask for the Production Medic or First Aider
- Clear the Studio
- Do not leave casualty unattended. Maintain voice contact.
- Enact emergency rescue procedure

Fire or Structural Emergency

- Activate the nearest break-glass fire alarm point
- Announce 'all persons to evacuate the grid/gantry and studio floor' via radio/talkback
- Exit via the nearest safe route
- Do not re-enter the studio until authorised by the Fire & Rescue Service or Responsible Person

Medical Emergency on the Grid/Ceiling Gantry

- Raise alarm via radio to the studio floor immediately
- Contact Security/Responsible Person to send the Production Medic or First Aider to the location
- If necessary, call 999 and request an ambulance. State the location including grid/gantry level and access route.
- If the casualty cannot self-rescue, do not move and stay with them until the emergency services arrive.

The rules listed below must be adhered to at all times for entering/working in the grids/ceiling gantries:

1. Grid/Ceiling Gantry working should be avoided whenever practicable to do so (e.g. by suspending equipment from hoists or gantries instead). When grid/ceiling gantry working is required, the relevant risk assessments and method statements should be read and adhered to or drafted for approval, if it is a novel activity.
2. For the studios at Television Centre, before entering the grid, Security must be contacted to disable the fire alarm beam detection system present in the grid being accessed. Security can be contacted on 0203 327 7443.
This is very important as inadvertent activation of the fire alarm is possible while this system is active.
Security must also be informed once the grid work is complete so the beam detection system can be reactivated.
3. Before accessing the grid/ceiling gantries, each person involved must empty their pockets of all loose objects (i.e. coins, lighters and mobile phones) and place them in the provided locker, tray or other secure area.
4. Only tools essential for the task should be taken into the grid and should be tethered to the user via a lanyard or an attachment placed on the tool in order to prevent it falling through the gaps in the grid.
5. When grid/ceiling gantry working is taking place in the studio, Warning Cones and Warning Notices must be placed inside the studio, at all pedestrian entrances to the studio. Each sign incorporates a small mains-operated beacon that must be plugged into an adjacent 13A socket by the user. 'Authorised Access Only' signage must also be placed on all the pedestrian doors to warn of overhead work, to prevent unauthorised entry and ensure those authorised keep to the studio firelanes. Television Centre and Elstree Stages 8 & 9 also have warning beacons in the grids which are operated via the grid lighting switch.
6. At Television Centre, a warning siren will sound when the switch for the grid lighting is turned on. If the siren fails to activate then you should not enter the grid and you should alert the grid authoriser in order to remedy this.
7. A nominated person must police the studio floor for the duration of the overhead/grid work, and an exclusion zone directly under the proposed work (plus several metres beyond) must be kept clear. Everyone working in the studio must be made aware of the grid work by nature of verbal warnings and the signage highlighted above.
8. Close communication must be maintained at all times between the individuals working at high level and spotters below via Radios. The floor team must also communicate to other teams working in other parts of the studio floor to ensure they do not enter the area directly beneath overhead work.

9. When equipment is to be suspended from the grid/ceiling gantries only designated suspension points must be used. The equipment and any cables must be made secure in such a way that they cannot fall.
10. Lone working in the grid or ceiling gantries is permitted only when operating under a 'buddy' system. This requires a second worker to remain on the studio floor and maintain continuous communication with the person working at height via an agreed method (e.g. radio).
11. **Asbestos.**

In studios TC2 and TC3 at Television Centre, the walls and beams on the soffit have been sprayed with a protective white coating to encapsulate asbestos containing materials. Most of the accessible beams (diagonal and floor members) have metal protective cladding. Asbestos is still presumed within the cavity walls of Stages 8 and 9. No works that penetrate the fabric/structure is permitted to be carried out, other than by a licensed Asbestos Contractor under an Asbestos Permit.

If at any stage an asbestos risk is observed i.e. the structure/encapsulation is damaged, or asbestos residue is suspected, all work must stop, the area must be exited, and it is reported immediately to the approved authoriser or Security who will then follow the Asbestos Incident Action Plan. The presence of asbestos is clearly stated as part of the grid induction process for the relevant studios/stages.
12. When the work in the grid/ceiling gantry is completed, all tools and unsecured equipment must be removed. No equipment or materials should be stored in the grid/ceiling gantry areas and all lights must be switched off. Ensure all grid doors are closed and/or access chains secured.

**NOTHING MUST BE STORED ON THE GRID/CEILING GANTRIES,
EVEN TEMPORARILY.**

13. Once works in the grid/ceiling gantries has been completed the approved authoriser should be informed that works are complete, floor beacons switched off and warning signs at the entrance doors removed.

All novel and/or unusual activities must be individually risk assessed, additional appropriate control measures introduced, and the authorising person(s) must be notified for their approval. Any damage, faults or loose fittings found whilst working in the grids must also be reported immediately.

IF IN ANY DOUBT, ASK AN APPROVED AUTHORISER.

GRID/CEILING GANTRY WORKING – RISK ASSESSMENT



Notes:

People that might be harmed: BBC Studioworks employees, contractors, public, artists

HAZARD	CONTROLS
<p>Unauthorised access to the grid</p>	<ul style="list-style-type: none"> • A secured, access controlled gate/door prevents people from entering the grid/ceiling gantries at Television Centre, Kelvin Hall and Elstree Studios Stages 8 & 9. • A gate or chain with a sign ‘restricted access only’ prevents people from accessing the ceiling gantry walkways at the Elstree Studios George Lucas Stages • Only Studioworks Approved Authorisers can provide access to grid/ceiling gantries including access control rights and will only approve access for people who have been grid inducted. • All access must be approved by the Responsible Person immediately prior to entering the grid/ceiling gantry area
<p>Incompetent persons working on the grid</p>	<ul style="list-style-type: none"> • Each contractor working on the grid/ceiling gantries must submit a risk assessment with detail of the work they intend to carry out and only when the Approved Authoriser is satisfied the proposed activity in the grid is going to be performed safely will they permit access • All persons working on the grid will have received an induction explaining the rules and procedures that have to be adhered to (see <u>rules listed above</u>)

HAZARD	CONTROLS
<p>Falls from height – people</p>	<ul style="list-style-type: none"> • Please see opening grid hatches below • Ensure workers can get safely to and from where they work at height using grid stairs • All Jacob’s ladders and steep access stairs leading to grids or gantries must be ascended and descended while facing the steps, maintaining three points of contact at all times • Handrails, toe boards and enclosed areas on ceiling gantry walkways • Ensure equipment is suitable, stable and strong enough for the job, maintained and checked regularly • The loading limits of the grids will be communicated to all persons • Fixed structural inspection of the grids/gantries and access stairs carried out annually
<p>Falls from height - objects</p>	<ul style="list-style-type: none"> • Before accessing the grid, each person involved must empty their pockets of all loose objects (i.e. coins, lighters and mobile phones) and place them in the stowage on the studio gantry or other secure area • Hand tools for grid working should only be taken into the grid when needed and should be tethered • Warning beacons and signage on cones on the studio floor when people are working above • Warning signage on pedestrian doors preventing unauthorised access • An exclusion zone for lifting operations will be set out with a physical barrier to prevent people entering the area if required • A floor marshal will be in place to police the exclusion zone
<p>Lone working</p>	<ul style="list-style-type: none"> • The only form of ‘Lone working’ in the grid or ceiling gantries is permitted when operating under a ‘buddy’ system with a second person working at floor level and is close communication e.g. via a radio

HAZARD	CONTROLS
<p>Falls from height whilst lifting items onto the grid using an electric hoist</p>	<ul style="list-style-type: none"> • Please see opening grid hatches below • Precise details should be provided in RAMs of contractors undertaking this work • Area below the load should be coordinated with other staff and contractors and studio floor-based users informed about lifting activities • A nominated person must police the studio floor for the duration of the overhead work, with a physical barrier to prevent people entering the area if required
<p>Suspension and rigging of loads</p>	<ul style="list-style-type: none"> • All rigging operations are carried out by competent persons, using correct standards and methods for rigging • All equipment used for rigging, including SpanSets (slings), motors, chain blocks, hoists, steels are regularly tested and inspected within LOLER requirements • All safe working loads are adhered to, with calculations and plans submitted to the studio management prior to work activities taking place
<p>Specific flying operations</p>	<ul style="list-style-type: none"> • Any specialist flying operations that take place within the studio, including top rigging and flying of persons and set will be carried out by professional and competent contractors, with specific risk assessments provided • Dynamic loads will be taken into consideration by the riggers and identified within their specific risk assessment
<p>Provision and use of hoists</p>	<ul style="list-style-type: none"> • The operation of scenic and lighting hoists within the studio are supervised and controlled by BBC Studioworks studio management • All hoists have SWLs identified and are rigged within their load capacity • During hoist operations, clear lines of sight are maintained at all times, with immediate areas below being clear prior to hoist movements • Each hoist and lighting bar has set trim / dead heights reducing the risk of collision with grid and/ or studio floor • Spotters will be provided where necessary

HAZARD	CONTROLS
Failure of primary suspension equipment	<ul style="list-style-type: none"> • Lighting equipment rigged onto bars and hoists will have adequate secondary suspension arrangements in place in the event of failure of primary equipment
Use of MEWPS	<ul style="list-style-type: none"> • The use of MEWPs is carried out by competent trained persons only, using correct harnesses if required • Weight restrictions on studio floors and access into studios will be considered when appointing and using any form of MEWP equipment • Adequate rescue plans are in place in the event of an operative becoming suspended at height in their harness • The rescue operation will release the operative from suspension within 5 mins
Asbestos	<ul style="list-style-type: none"> • Asbestos Management Plan managed by the local facilities team with regular inspections carried out by a licensed contractor • Asbestos Register is available to consult for the relevant studio from the facilities department • The Asbestos (ACM) hazard is included as a warning in the relevant studio grid induction • A visual inspection of asbestos encapsulation in the grids at TVC is carried out frequently by Lighting Workshop staff • Asbestos Incident Action Plan in place

HAZARD	CONTROLS
<p>Opening grid hatches</p>	<p>In addition to the general control measures listed above, the following must be adhered to:</p> <ul style="list-style-type: none"> • All hatches that are not designated as being operable are secured shut • Working and opening of grid hatches is strictly restricted and is operated under a permit-to-work system managed by the Operations Team Manager or nominated deputy • All grid hatches designated for access are locked shut as default and only opened for approved works which have a valid permit in place • No other access is allowed to the grid area other than that included in the permissible works detailed in the permit • Productions or their contractors must complete specific RAMS with a detailed description of the work being undertaken and the control measures put in place before a permit may be issued • Grid hatches must have barriers around them whenever they are open • All personnel working in the hatch area must wear restraint harnesses and attach these to the overhead beams • All personnel working in the studio must be made aware of grid activities • A nominated person must supervise the entire studio floor for the duration of the overhead work, with an exclusion zone clearly marked by physical barriers where required to prevent people from entering the area