A Review of Work at Height Practices by the Broadcasting Industry in Sports Stadiums used by the UK Premier and Scottish Premier Football Leagues
“Wash Up” report

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Executive Summary

Over an eight month period from May 2008, a review was undertaken of work at height carried out in UK football stadiums by those employed by the broadcasting industry, assessed against the Work at Height Regulations 2005 (as amended). Falls from height remains the most common cause of workplace fatalities and the subject of many HSE advisory campaigns.

Demands on broadcasters to provide ever more angles of view for the television spectator have resulted in an increasing number of camera positions being established at football grounds. Many of these positions have been added into stadiums where demand for seating is also extremely high, and ticket price is affected by the level of unobstructed view offered to the spectator. Spectator safety legislation requires stadium operators to ensure that the “line of sight” of the spectator is not interrupted.

All Premier and Scottish Premier League (SPL) grounds in England and Scotland and both countries National Stadiums were visited to gather evidence. Invitations were extended to members of the broadcasting industry, local authority environmental health and planning officers to accompany each visit. A Premier League representative also attended at each visit in England but did not take part in the survey, and a manufacturing and fabrication engineer contracted to carry out work in stadiums in the UK and in Europe also accompanied the stadium visits. The purpose of this approach was to encourage the industry to come up with solutions to problems that were their responsibility in the expectation that they would more readily accept ownership of both the problems and the solutions.

Although there was evidence of some good practice in most stadiums, evidence emerged of a lack of management control of work at height, a reliance on PPE as the first choice rather than as a last resort, and confusion about ownership and responsibility. One of the most common issues that emerged was a failure to adequately guard the front edge of many of the broadcasting platforms, some of which were open with drops of 15 or more metres. The use of ladders was extremely common, often unnecessarily; ladders should only be used if the risk assessment shows that there is no other reasonably practicable means of access for work at height. A failure to plan for the emergency rescue of an incapacitated broadcasting employee during a football match was also common, exacerbated in some cases by a reliance on the local emergency services to provide for this. Other significant issues included poor access and egress to places of work at height.

In almost every club, improvements were necessary to achieve an acceptable minimal level of compliance with the Work at Height Regulations. To their credit, every club in the Premier League and the SPL gave an assurance that all necessary work, both structural and in terms of management, would be undertaken at their earliest opportunity and that in all cases where compliance could not be achieved in the short term, broadcasting work at height would not be permitted until compliance was achieved.

This report was written at the request of the stakeholders involved in the project work. Its purpose is to act as a record of the observations made during the stadium visits. The report makes general comments between areas of compliance and non-compliance, and makes recommendations to ensure that the lessons learned can be
shared with other clubs and stadium managers not only in football but in all other
sports arenas where broadcasting may take place on a regular or irregular basis. The
overall aim is to improve the managements and thereby the safety of those who work
at height, not to provide prescriptive solutions when this is best left to those who
create the risks and have the responsibility to manage them.
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1. **Introduction**

This report presents the findings from a series of visits carried out between May and December 2008 to observe work at height activities of broadcasters in football stadiums in Scotland and England.

Attempts at anonymity were not successful due to the high level of branding at each stadium; every attempt has been made to ensure personal identities have not been revealed.

2. **Purpose**

The purpose of the visits was to assess how the Industry managed work at height. The Work at Height (WaH) Regulations 2005 (as amended) apply to all industry Sectors. In this instance, three main categories of duty holders were identified. These were:

- The broadcaster (including sub-contracted outside broadcasting companies)
- The competition organisers
- The football clubs

HSE has health and safety legislation enforcement responsibility for the broadcasters; Local Authorities (LAs) have health and safety legislation enforcement responsibility for the competition organisers and the football clubs. Locations being provided for broadcasters at football clubs where work at height is involved may have enforcement implications for both agencies.

Specific project objectives were identified as follows:

- Observe and identify places where work at height activities take place
- Evaluate current management of risk
- Encourage discussion on how to improve any shortcomings in management and places where WaH is carried out
- Agree responsibility for ensuring improvements are achieved

3. **Approach**

Arrangements were made with the two main football competition organisers in England and Scotland (the Premier League and the Scottish Premier League) to conduct a series of visits to their members’ stadiums. It was intended that at each visit a group made up of an HSE inspector, a local authority Health and Safety Inspector and members of the broadcasting industry would visit together. Local authority planning officials were also made aware of the visits and advised that their presence would be welcomed. A manufacturing engineer who had already provided solutions for some venues also attended most of the visits in England at the invitation of one of the major broadcasters. The Premier League sent their representative to each stadium to ensure that stadium managers were aware of their contractual obligations in relation to the provision of adequate facilities.

Observations made during each visit were captured on video camera. The stills included as part of this report have come from that source.

It is not thought that the presence of HSE and LA inspectors had any influence on the behaviour of the stadium managers or their staff. Almost all of the broadcasting platforms are in fixed positions, and broadcasting industry representatives advised of any locations that were infrequently used, or only used to mount a remotely controlled camera.
Staff at the stadiums were asked to supply information to help with the survey, much of which was corroborated by representatives of the broadcasting industry who were present at the visits. Although some information could not be corroborated, there was no occasion when information provided was challenged as being false.

Provision for rescue and emergency evacuation has been considered when determining the adequacy of methods used to prevent or protect from high falls, as timely rescue in the event of being suspended in a harness following a high fall is critical.

Although these visits were all carried out in stadiums at the ‘top end’ of football, it is thought that the behaviour of the broadcasting industry will be similar in all sports stadiums, and that the findings are representative of the work of the UK broadcasting industry as a whole. The information provided in this report should be helpful to any stadium manager who offers any part of their stadium as a suitable location to a broadcaster from which to record a sports event. The example set by those duty holders involved in this project in terms of their willingness to speedily make the necessary changes to ensure that they secured compliance with their health and safety duties, as demonstrated by the marked difference in standards achieved within a very short period, is something that should be reproduced at all levels of sports and events recording. After all, the requirement for suitable risk assessment and adequate control measures to manage the risks identified from any work activity is applicable at all levels of industry.
The broadcasting of live football matches and recorded highlights of football matches can involve the utilisation of a large broadcasting workforce working inside and outside of the stadium. Almost without exception, this broadcasting work is carried out outdoors. In winter this can mean working in cold, wet or windy conditions, and in summer months in high temperatures and often in direct sunlight. De-rigging can begin straight after a match has finished, and this can often be in reduced light levels. In a great number of cases, a significant amount of work at height is required. Much of the work involves subcontracted labour, many of whom are self-employed. Riggers can be employed to mount the recording equipment, and camera technicians operate most of the cameras (some are fixed in position, others remotely controlled).

The Work at Height Regulations 2005 (as amended) apply where work is carried at any height from which, should a person fall, they would suffer a serious injury or death. In order to obtain sufficient understanding of the difficulties being faced by dutyholders when trying to achieve compliance with these Regulations, a series of 4 fact-finding visits to football stadiums were carried out, to two stadiums in England and two in Scotland.

Figure 1 and 2 show typical examples of broadcasting platforms prior to cameras being mounted on them. Fig. 3 shows a walk on platform that can be accessed through a gate in the terracing.
In Figures 1 and 2, it is clear that there is no edge protection to prevent a person falling from the platforms. Figure 3 shows an example of how edge protection can be achieved, however spectator seating has been sacrificed to achieve this.

Figure 4 shows a broadcasting platform in context, a permanent fixture suspended on the underside of a tier of seating. The rigger or operator climbs over the parapet edge on a ladder and descends onto the platform. The camera operator will be on the platform often one hour before a match begins, and will stay there until some time after the match has finished. In this case the position of the ladder makes the climb more difficult. Not all ladders were securely fixed to prevent movement away from the parapet on which they were resting during the time when a person would be using them.
Figure 5 shows the locating posts for some form of barrier that could provide adequate edge protection; however the barrier had been removed and not replaced.
Figure 6 shows broad strips of sticky tape being used over an opening where the drop is some 4 metres onto a tier of raked seating.
Figures 8 and 8 show a scaffold tower used as a broadcasting platform where the footing is less than adequate. Many of these temporary structures are permanently positioned for the duration of one or even several seasons.

Fig. 9
Figure 9 shows how far the technician has to stretch out to plug a cable into a fixed terminal; a fall here would be several metres.

These and other photographs and video images collected suggested that the clubs and broadcasters had a problem with the interpretation of the WaH regulations. Informal discussions with Industry professionals confirmed that there was inconsistency from ground to ground, and although the sector accident history gave little cause for concern, the evidence gathered was convincing, and a further series of visits was planned.

The two main competitions in the UK are the Premier League and the Scottish Premier League. An initial approach was made to the Premier League, and agreement was reached for them to facilitate a series of visits to each of their member clubs. A similar arrangement was reached with the Scottish Premier League. The visits would be accompanied by members of the broadcasting Industry, and where it could be arranged, Local Authority Health and Safety Officials. A manufacturing engineer contracted to do work by stadiums and broadcasters also accompanied many of the visits to the Premier League clubs.

The visits would focus on work at height, and in particular
- Access & egress, particularly the frequent use of ladders
- Inadequate edge protection
- ‘Permanent-temporary’ structures and their footing
• Selection of PPE, particularly as a ‘first choice’ control measure
• Emergency Rescue
• Environmental influences

A decision was also taken not to visit clubs on match days, so this project did not observe worker activity, rather it focussed on those areas within the stadiums used as broadcasting platforms and how health and safety was managed. Other important health and safety issues including slips and trips and manual handling were discussed if a question was raised during a visit, however reporting on these topics was outwith the scope of this report. These may be worthwhile topics for consideration for further work.

The management of other contractors working at height on site was also touched upon during visits, particularly the extent of responsibility of the stadium management towards these contractors.

Other legislation related to the safety of spectators within football grounds has a huge influence on the positioning of broadcasting platforms, the means of access to these platforms, and measures to prevent any article falling from a platform injuring a spectator. Whilst stadium managers must take this other legislation into account when planning their approach to allowing contractors to make alterations to the stadium or when making alterations themselves, it is outwith the scope of this project to do more than mention them as being relevant in the overall approach to management.
5 Project visits
Overview
The broadcasting of live or recorded football matches is a multi-million pound industry, and has become an integral part of the social life for much of the population, watching games either in their own homes or in pubs and clubs. Indeed for the most important of games, local authorities now erect very large screens in public areas to allow additional spectators to watch matches in large groups.

To obtain the pictures from the variety of angles that the public demand requires camera operators and riggers to work at height in most stadiums. Unless of very recent build, broadcasting gantries have been added and built into existing structures. The problems created by this are exacerbated by the demand by competition organisers for additional camera positions, all of which cannot be remote. Stadium managers may have to cater for more than twenty camera positions, though not all at height, e.g. several may be on the touchline.

There is often no direct contractual relationship between the broadcaster and the stadium. The relationship is normally between a competition organiser and a series of clubs, and between the competition organiser and the broadcaster. The broadcaster may have a separate agreement with the stadium for additional camera positions over and above those required by the competition organiser. The broadcaster will also often provide additional platforms; these may or may not then come under the control of the stadium management and may or may not be used by other broadcasters. It is not possible to determine the extent of the health and safety duties and responsibilities of competition organisers, broadcasters or clubs without detailed examination of the contractual arrangements between them; suffice it to say that it the responsibility of each partner to ensure that they have, as far as is reasonably practicable, cooperated with their partners to ensure that the requirements and prohibitions placed on them under the relevant statutory provisions have been complied with. Each partner should ensure that they have received competent advice on how to manage their health and safety responsibilities. Health and safety responsibility can be delegated but not abdicated by dint of a commercial contract between parties.

Almost all of the camera operators and riggers are self employed, and regularly work for more than one broadcaster throughout a season, or even over a weekend at different matches. It is likely that all broadcasting staff working in a stadium are employees of that broadcaster for the purposes of the Health and Safety at Work etc Act 1974; they are throughout their time at the match under the control of the broadcaster.

It is not only the mainstream broadcasters who access gantry areas. Most clubs employ their own staff, often younger members of development squads, to record aspects of a game for analysis. This requires them too to have access to work platforms, often at height.

The time pressures placed on other areas of the broadcasting industry were not as evident for those in this part of the industry. Access to stadiums was found to be available from at least the day before a match, and operators had access to gantries before spectators were allowed access to the stadium. Although rigging and de-
rigging was not observed, there did not appear to be any particular time pressure
difficulties in this area.

Almost all the work at height was carried out outdoors, so the influence of weather
conditions and other factors on the work activities will be discussed further in the
environmental influences section.
Avoiding risk
As has been mentioned already, many stadiums do not have proprietary broadcasting platforms that can be accessed without a requirement to work at height, however some very recently built stadiums were found that allowed access to gantry positions without exposing camera operators or riggers to work at height risks.
This type of gantry and access is what should be aimed for when stadium re-design or refurbishment is being considered. There is no doubt that maximising the number of seats available with unrestricted views for spectators is hugely important for stadium managers; the Health and Safety at Work (etc.) Act 1974 and its associated Regulations must be complied with, even when broadcasters only occasionally work at a stadium.

In order to maximise available space for seating, one very recently built stadium has gone from a position where no work at height was required because all the broadcasting platforms were accessible from the terracing areas to a position where a
number of gantries have been added to the underside of upper terraces and access is gained by climbing over a parapet at the front of the terracing.

Fig 16
Others have taken the view that it is better to loose seats to ensure the safety of those working at the stadium, and have built platforms into the terraces, sacrificing the number of seats with unrestricted views.

Fig 17
Relevant Regulation
WaH Regulations, Reg 6
Avoidance of Risks from work at height
6(2) Every employer shall ensure that work is not carried out at height where it is reasonably practicable to carry out the work safely otherwise than at height
Comment
Many stadiums have eliminated the risk of a fall from height by how they have chosen the positions of their broadcasting platforms. Platforms are located within terracing areas with restricted access. However in many cases this has not been possible, and where this is the case, duty holders must ensure that they have carried out a risk assessment as required by regulation 3 of the Management Regulations. Where a stadium has gone from no work at height to exposing workers to a managed risk, this has to be justified on grounds of reasonable practicability.
Additional demands by the public for additional views of a game or other event will inevitably require additional camera positions. Again, where this can be achieved without the need to work at height, and where it is reasonably practicable to do so, this should be the first choice. It would not be sensible to think that this could be achieved in every case, nor would it be sensible to expect duty holders to eliminate all risks; however duty holders at stadiums should not use this as a reason to justify not sacrificing seats where they are creating a risk to a worker from a fall from height. The stadium operator must be able to justify their choice based on the principles of sensible risk management.
Access and egress
Often the broadcasting platforms were found not to be accessible from floor level. Some gantries were suspended from roofs, others were part of the roof itself. Often access to these required climbing vertical ladders through hatches or onto gangways.

Hatch spaces were not always found to be safe, lacking either guard rails or covers or both.

Fig 20
In many cases, platforms had been suspended from upper seating tiers. Climbing over parapets is by far the most common way to access these type of under-slung gantries, though it was possible in some cases to achieve entry to them through gateways in the terracing parapet.

Fig 21
As can be seen from these examples, notwithstanding the lack of guardrail in the first, once over the parapet a person would have to turn through $180^\circ$ to obtain access to the small vertical ladder that is fixed to the platform. The risk of slipping or falling can be reduced by orienting the ladder so that a person only has to rotate through $90^\circ$ to obtain access (see pictures below), and by providing a handrail that extends above the edge of the parapet. The handrail can be designed so that it drops below the parapet once the operator has descended the ladder.
Poor access to platforms occasionally required immediate remedy, with broadcasters agreeing not to use them until alternative more appropriate access was available.

Relevant Regulation
WaH Regulations Reg 6

(4) The measures required by paragraph (3) shall include--

(a) his ensuring that the work is carried out--

(i) from an existing place of work; or

(ii) (in the case of obtaining access or egress) using an existing means, which complies with Schedule 1, where it is reasonably practicable to carry it out safely and under appropriate ergonomic conditions; and

Schedule 1

Every existing place of work or means of access or egress at height shall—

(a) be stable and of sufficient strength and rigidity for the purpose for which it is intended to be or is being used;

(b) where applicable, rest on a stable, sufficiently strong surface;

(c) be of sufficient dimensions to permit the safe passage of persons and the safe use of any plant or materials required to be used and to provide a safe working area having regard to the work to be carried out there;

Comment
Workers should not be exposed to a risk of falling. In this case a simple, low cost solution can be put in place that minimises this risk and that does not interfere with the view of those who are attending the stadium to watch an event.
Edge protection
As many of the earlier pictures show, most stadium operators had failed to address this issue, or if they had taken some measures, had failed to ensure they were being operated properly. Often the reason given for this was that any type of guardrail would interfere or restrict the sweep of the camera.

Fig 25
Lack of control of this risk was not only evident at the broadcasting platforms themselves; some positions on roof areas meant the operators having to expose themselves to a risk of falling from the unguarded roof edges.

Fig 26

Fig 27
It appeared that the catch net for falling objects was sometimes being considered as part of the safety measure that could restrict the distance a person would fall.

Fig 28
Many stadiums have gantries suspended from the roof that covers the terraces or stands. Many of these are accessed through proprietary gangways, some of which require access by climbing outside of the roof, walking along a gangway and descending back inside the stadium onto the gantry. Some of these gantries were only partially guarded on one side.

Fig 29

Relevant Regulation
WaH, Regulation 6
6(3) *Where work is carried out at height, every employer shall take suitable and sufficient measures to prevent, so far as is reasonably practicable, and person falling a distance liable to cause personal injury.*
Comment
A worker must not be exposed to the risk of falling from an unguarded edge. Removable guard rails can be designed that eliminate this risk whilst a camera is being assembled on a work platform. Once the camera is in place and locked across the opening, it effectively can become a means of preventing a person from being exposed to a risk of falling. It is extremely important that proper written procedures are drawn up setting out the responsibilities of those who assemble cameras and those who operate them who may at some point have to remove the guard rails to allow their work to proceed without interference. It is also vitally important that this work is monitored by a manager to ensure the agreed procedure can and is being followed, and that this is periodically monitored to ensure workers are continuing to observe good work practice.
Use of ladders
Many of the platforms were accessed by a variety of ladders, some inclined, some horizontal, and some hooped. In many circumstances, ladder access was not justified because it was not the most suitable means of access, and stairs were subsequently introduced. In other cases ladders were the only means of access due to space restrictions; unfortunately, many were found not to be properly secured.

Fig 30
Ladders were found that had to be immediately taken out of use; others were able to be made secure in the short term, with the longer term aim of replacing them with more appropriate means of access.

Fig 31
Very long ladders were also found being used at very steep angles.

It is difficult to argue that emergency rescue, to be discussed later in this report, could be carried out easily and timely from locations where this was the only available means of access.

Relevant Regulation
WaH Regulations, Reg 8(e)
Schedule 6 Requirements for ladders

Every employer shall ensure that a ladder is used for work at height only if a risk assessment under regulation 3 of the Management Regulations has demonstrated that the use of more suitable work equipment is not justified because of the low risk and--
(a) the short duration of use; or
(b) existing features on site which he cannot alter.

2 Any surface upon which a ladder rests shall be stable, firm, of sufficient strength and of suitable composition safely to support the ladder so that its rungs or steps remain horizontal, and any loading intended to be placed on it.

3 A ladder shall be so positioned as to ensure its stability during use.

4 A suspended ladder shall be attached in a secure manner and so that, with the exception of a flexible ladder, it cannot be displaced and swinging is prevented.

5 A portable ladder shall be prevented from slipping during use by--
   (a) securing the stiles at or near their upper or lower ends;
   (b) an effective anti-slip or other effective stability device; or
   (c) any other arrangement of equivalent effectiveness.

6 A ladder used for access shall be long enough to protrude sufficiently above the place of landing to which it provides access, unless other measures have been taken to ensure a firm handhold.

7 No interlocking or extension ladder shall be used unless its sections are prevented from moving relative to each other while in use.

8 A mobile ladder shall be prevented from moving before it is stepped on.

9 Where a ladder or run of ladders rises a vertical distance of 9 metres or more above its base, there shall, where reasonably practicable, be provided at suitable intervals sufficient safe landing areas or rest platforms.

10 Every ladder shall be used in such a way that--
   (a) a secure handhold and secure support are always available to the user; and
   (b) the user can maintain a safe handhold when carrying a load unless, in the case of a step ladder, the maintenance of a handhold is not practicable when a load is carried, and a risk assessment under regulation 3 of the Management Regulations has demonstrated that the use of a stepladder is justified because of-
      (i) the low risk; and
      (ii) the short duration of use.

Comment
All too often ladders are seen as a quick and easy solution to work at height problems, and all too often they are an inappropriate means of accessing a high place of work. Where stairs can be introduced, they should be. Where they cannot, and a ladder is the only reasonably practicable means of access, they should be suitable and regularly inspected to ensure they remain in good condition. A damaged ladder should be taken out of use immediately and replaced. Damaged ladders, if they cannot be repaired, are best destroyed.
Permanent temporary structures
Scaffold structures were found in many locations, installed as temporary structures, though many had been in place for a very long time. Although adequate as a place of work form height, consideration should be given to a more permanent solution. When the cost of frequent inspection is taken into account it may well be that a fully permanent structure is a more cost effective solution to solving a work at height problem.
Ladder access to scaffold structures was very common where stair access would have been more appropriate and could easily have been installed. In some cases on the site, one tower would have a stair and other have a ladder.

Fig 35
The footing of many of these towers was also found not to be suitable, either when positioned at ground level or when placed on top of sloping structures.
In these cases, the platforms were required to be immediately taken out of use until a suitable means of footing them could be obtained.

In almost every case, the towers had attached to them a ‘tag’ identifying when it was last inspected and the duration for which the tag was valid. Unfortunately anecdotal evidence emerged that the towers were being used by third parties with the full knowledge of stadium management outwith these periods.

Relevant regulation
WaH Regulations, Reg 12
(3) Every employer shall ensure that work equipment exposed to conditions causing deterioration which is liable to result in dangerous situations is inspected--
(a) at suitable intervals; and
(b) each time that exceptional circumstances which are liable to jeopardise the safety of the work equipment have occurred,
to ensure that health and safety conditions are maintained and that any deterioration can be detected and remedied in good time.

Also Schedule 3 Part 1
Requirements for All Working Platforms

Interpretation
1 In this Schedule, "supporting structure" means any structure used for the purpose of supporting a working platform and includes any plant used for that purpose.

Condition of surfaces
2 Any surface upon which any supporting structure rests shall be stable, of sufficient strength and of suitable composition safely to support the supporting structure, the working platform and any loading intended to be placed on the working platform.

Stability of supporting structure
3 Any supporting structure shall--
(a) be suitable and of sufficient strength and rigidity for the purpose for which it is being used;
(b) in the case of a wheeled structure, be prevented by appropriate devices from moving inadvertently during work at height;
(c) in other cases, be prevented from slipping by secure attachment to the bearing surface or to another structure, provision of an effective anti-slip device or by other means of equivalent effectiveness;
(d) be stable while being erected, used and dismantled; and
(e) when altered or modified, be so altered or modified as to ensure that it remains stable.

**Stability of working platforms**

4 A working platform shall--

(a) be suitable and of sufficient strength and rigidity for the purpose or purposes for which it is intended to be used or is being used;

(b) be so erected and used as to ensure that its components do not become accidentally displaced so as to endanger any person;

(c) when altered or modified, be so altered or modified as to ensure that it remains stable; and

(d) be dismantled in such a way as to prevent accidental displacement.

**Safety on working platforms**

5 A working platform shall--

(a) be of sufficient dimensions to permit the safe passage of persons and the safe use of any plant or materials required to be used and to provide a safe working area having regard to the work being carried out there;

(b) possess a suitable surface and, in particular, be so constructed that the surface of the working platform has no gap--

(i) through which a person could fall;

(ii) through which any material or object could fall and injure a person; or

(iii) giving rise to other risk of injury to any person, unless measures have been taken to protect persons against such risk; and

(c) be so erected and used, and maintained in such condition, as to prevent, so far as is reasonably practicable--

(i) the risk of slipping or tripping; or

(ii) any person being caught between the working platform and any adjacent structure.

**Loading**

6 A working platform and any supporting structure shall not be loaded so as to give rise to a risk of collapse or to any deformation which could affect its safe use.

**Comment**

Because of the nature of football competitions, if a club falls down to a lower league it is unlikely that they will attract the same amount of demand for television coverage, hence there is an understandable reluctance to install permanent facilities for broadcasting. This cannot be an excuse for poor practice if the decision is made to use scaffold towers as broadcasting platforms. These towers should be inspected at suitable intervals by a competent person, and a record kept of these inspections. Any inspection will normally result in a certificate that states the period for which, in the opinion of the inspector, the structure will
remain safe. Scaffold towers should not be used outwith this period unless another inspection has taken place.

In almost every case, towers were located in position where stairs could have been provided instead of ladders. Where it is possible to provide a stair this should be the case. Where a ladder is the only reasonably practicable means of access, particularly to upper levels, consideration should be given to the comments made above.

It is not acceptable to allow a scaffold tower to be used when there is insufficient footing. Sitting towers on fragile roof surfaces and on pallets is not an acceptable practice. Towers can be sited on sloping surfaces only when appropriate proprietary footing and/or anchoring is provided.
Personal Protective Equipment (PPE)
As no worker activity was observed, PPE use was not discussed in great detail during any visits. In some cases however PPE was observed, that was not appropriate for the use to which it was being put, in particular, fall arrest PPE was being used where restraint PPE would have been more appropriate. PPE was also often considered as a ‘first choice’ means of protection from falls in locations where the risk could be reduced by effective barriers, or was used when there was adequate edge protection making its use redundant if the worker restricted their activities to those prescribed by the employer. If a work procedure requires PPE to be used, this should be audited periodically to ensure good practice is being followed. Schedule 5 of the WaH Regulations 2005 provides extensive guidance on the selection and use of PPE.
Emergency rescue
For all work at height, rescue in case of an emergency has to be considered as part of the planning process. Rescue should be able to be carried out easily and timely, and should never rely on calling on the emergency services unless they are stationed on site and have a contractual duty to remain there throughout the period when a person is working at height. Rescue from height can pose particular difficulties for this industry, not only because of the difficulty in accessing some platforms, but also because some of the platforms are only big enough to safely accommodate one person. There is also the crowd of spectators that has to be considered when putting a rescue into effect, not only if rescue has to be effected during an event, but if a stadium has to be evacuated in the case of a general emergency, safe and speedy evacuation of camera operators and others working at height must also be considered.

Cooperation and coordination of resources can be put to good effect to ensure that in the event of an emergency where a person working at height requires immediate assistance, each person who is working at that site knows what their role is, to ensure that the assistance is given in the shortest possible time, and to ensure that the rescue efforts are not duplicated or interrupted, thereby exposing others to risk.

Relevant regulation
WaH Regulations, Reg 4

(1) Every employer shall ensure that work at height is--

(a) properly planned;

(2) Reference in paragraph (1) to planning of work includes planning for emergencies and rescue

WaH Regulations, Reg. 7

(1) Every employer, in selecting work equipment for use in work at height, shall--

(b) take account of--

(v) the need for easy and timely evacuation and rescue in an emergency;

Comment
The need to effect the rescue of a person who becomes incapacitated whilst working at height, no matter how remote, is foreseeable. Should effective rescue not be carried out within a reasonable time the consequences for that person could prove fatal. Account of this must be taken when carrying out the risk assessment for work at height and suitable effective measures put in place to manage this risk.

If a person is using a fall arrest harness and becomes suspended then it is equally as important to ensure that that person can be rescued speedily.
Environmental influences
Football matches take place in all weathers and throughout the year, and those recording them do so almost entirely outside and exposed to all the UK weather can throw at them, from low temperatures, snow and rain, to high temperatures and long periods in sunlight. Camera operators have to take up their positions generally before spectators are admitted to a stadium, and remain there for a period after the game has concluded.

The operators also have to work at night for evening matches, where adequate lighting levels are important within the working platform areas.

Relevant legislation
WaH Regulations, Reg. 4

(3) Every employer shall ensure that work at height is carried out only when the weather conditions do not jeopardise the health or safety of persons involved in the work.

Comment
There is probably no definition of ‘typical’ British weather, however a suitable and sufficient risk assessment for work on an exposed platform, including mobile elevated work platforms and those permanently fixed to the stadium structure, should include among other things the risks associated with long exposure to extreme cold and heat, the risks from high winds, and the risks from ice and snow. It should also include suitable and sufficient measures for mitigating and managing these and other risks.
Management
As has been touched upon previously, the issue of management and responsibility within this Industry can appear complex, but no more so than many other industries. At its simplest, a football club will own a ground; a competition organiser (FA, UEFA, Premier League) will organise a competition, and invite the clubs to participate. The competition organiser will then sell the broadcasting rights for the matches to one or a number of broadcasters. The clubs are required to provide the competition organiser with a specified number of safe and suitable places from which the broadcasting can take place, and in turn the competition organiser is required to provide a specified number of safe and suitable places from which the broadcasting can take place to the broadcasters. The broadcaster may wish to have additional platforms, and they can negotiate this directly with the club. Circumstances will vary, and may be become more complex if additional subcontractors are used for external broadcasting work.

As a number of different competitions take place throughout a season, this necessarily means that a number of different broadcasters will use the available broadcast platforms. This means that different contractual arrangements are likely to exist between competition organisers, clubs and broadcasters at different times of the season for different competitions.

The statutory health and safety obligations between broadcasting employers and employees remain constant, but it should be noted that neither the competition organisers nor the clubs can claim to be exempt from all health and safety duties and responsibilities to those who are not their direct employees when they are contractually required to provide a safe workplace to someone who is not their employee. Despite the fact that a platform may have been installed by a broadcaster, and may even be maintained by that same broadcaster, a club cannot simply ignore the most obvious of health and safety failings and claim no responsibility for the actions of someone working in their premises and expect this to be acceptable. At the very least, clubs have a duty to ensure that when others work in their premises they are doing so safely to ensure that their work will not affect the health and safety of the clubs own employees or the safety of anyone else who may be present there.

The prime responsibility for managing safety lies within the management of a club, and similarly within the management of a broadcaster or competition organiser. It should be part of the written policy of every club that they will take measures to ensure that the working practices of broadcasters or anyone else who is working in their premises does not put those employees or anyone else at risk from avoidable injury. This will require a degree of cooperation at several levels within the participating organisations, and clear communication between parties to ensure safety standards are maintained.

The behaviour of and example set by senior managers in this regard will set the standard for others. It is not sufficient to put systems and procedures in place and not to ensure these are being audited and complied with. Managers should put in place a means of supervising the work of others until they have demonstrable evidence that people are competent to do work unsupervised, and must have a way of monitoring and evaluating health and safety performance. Employees must have some means available to allow them to communicate back to their managers any problems they
might face whilst following work procedures. If employees are not following procedures, it is often the case that they cannot do their work in the way they are being asked to, for a variety of reasons. This should be investigated and procedures changed if it is discovered that they cannot be followed safely, or that they are unrealistic or unreasonable.

Different broadcasting organisations may use different types and sizes of equipment, so what is a suitable means of access or a suitable work platform for one may not be suitable for another. In this Industry, an employee may work for several different broadcasters doing the same type of work but with different equipment. That employee should inform his employer if he is unable to carry out work safely because of the work equipment he is being asked to use. Where suitable lifting equipment is provided, it should be used. If any lifting equipment provided is not suitable for a required task, this information should be conveyed to the person in charge of the task, and either an alternative, safe way found to carry out the task, or the task should be abandoned until some other solution is found. Risk assessments should take account of the different sizes of pieces of camera and other recording equipment when considering how and where they can be sited.

Broadcasters should share their concerns with club managers if they are experiencing difficulties when working in their clubs. They should also share these concerns with competition organisers as it is they who may be ultimately responsible if the contractual arrangement to provide a safe place to work is between the organiser and broadcaster.

Relevant regulation
The Management of Health and Safety at Work Regulations 1999 are the principle regulations that require an employer or self-employed person to assess and manage risks faced whilst at work. When there is doubt about legal responsibility this can be clarified and included in the terms of a contract, however legal duties under Section 3 of the Health and Safety at Work Act cannot be passed on under a contract. Legal advice should always be sought if persons are considered to be responsible for their own health and safety before work begins to remove any doubt.

Comment
Managing health and safety is not about eliminating risk, rather it is about allowing those who create risks form work activity find practical and sensible ways of protecting people from real harm. The HSE publication Successful Health and Safety Management (HSG65) was prepared as a practical guide for directors, managers, H&S professionals and employee representatives who want to improve health and safety in their organisations. More recently HSE has introduced its Sensible Risk Management campaign that includes model risk assessments for many activities. Risk assessments should be about identifying practical actions that protect people from harm and injury.

All work at height should be properly planned and organised, and should only be carried out by competent persons. Following the hierarchy for managing risks from work at height, i.e:

- taking steps to avoid, prevent or reduce risks;
- choosing the right work equipment; and,
selecting collective measures to prevent falls (such as guardrails and working platforms) before other measures which may only mitigate the distance and consequences of a fall (such as nets or airbags) or which may only provide personal protection from a fall;
will allow all those involved in work at height to carry out their duties safely.
Conclusion
This work reports on the conditions found in Premiership and Scottish Premier football stadiums at the start of the 2008-09 football season.

The series of visits carried out within the remit of this project identified that in most cases work at height was unavoidable and necessary. It also identified that there was scope for improvement in a number of areas, including management, access and egress, edge protection, use of ladders, and emergency rescue.

At each stadium as the visits progressed, cooperation between broadcasting health and safety professionals and club management resulted in most issues being addressed. Directed by the competition organiser who facilitated the visits, reasonable time frames for providing solutions were agreed before the end of the visits. Solutions were proposed by the duty holders, and were agreeable to the enforcement agencies present, both those responsible for enforcing health and safety legislation and those responsible for enforcing other football stadium spectator safety and planning legislation.

It is not the purpose of this work to state how the risks from work at height in sports stadiums should be managed: that is best left to those who create the risks and who have a better understanding of the conditions under which workers carry out their tasks.

The key to safe working at height is for a competent person to carry out a suitable and sufficient assessment of risks from that work, and to put in place adequate, proportionate control measures to manage those risks. The hierarchy of control should be followed, all those involved need to be trained and made aware of the control measures; work activity should be supervised until those in charge are confident that procedures are being followed; where employees find they cannot do what they have been asked to safely, they need to tell their employer and some other method or equipment found

It is hoped that as a result of this work all work at height in sport stadiums will be properly planned, organised and managed. Just as it is the responsibility of employees to inform their employer when work cannot be carried out safely, it is the responsibility of their employer to provide the employee with the right tools and system of work that will allow the work to be carried out safely. Complex contractual arrangements cannot be allowed to interfere with effective health and safety management.

Those involved in this work embraced the task faced and did not shirk form their responsibilities. This example should be followed by all those involved in the broadcasting of live sports and other events where work at height is required.
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**Additional guidance & links**

HSE guidance on avoiding falls from height
http://www.hse.gov.uk/falls/index.htm

Shattered Lives; learning about slips, trips and falls
http://www.hse.gov.uk/shatteredlives/index.htm

Risk Management
http://www.hse.gov.uk/risk/index.htm