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Introduction

Historically window cleaners have relied upon portable ladders, platforms, scaffolds, abseiling, MEWP and cradles for access for window cleaning.

In recent years, many window cleaners have adopted the use of water-fed pole systems that facilitate the cleaning of windows up to 80ft /24 metres high from ground level. Avoiding the need to work at height is an obvious immediate attraction that has significantly reduced within the industry, principally “falls from heights” however, there are various considerations to be taken into account.

Legal changes resulting from The Work at Height Regulations 2005 have further tightened safe practice. I.e.

Work at height may only be carried out when it is unavoidable and no safer alternative method can be used to carry out the work I.e. water fed pole.

Scope

For the purpose of this guidance, the term “water-fed pole” is defined as a telescopic pole fitted with a brush and a means of delivering purified water for window cleaning. The use of purified water is an integral part of the cleaning process. The term “Load” is defined as the water treatment system/water delivery tank, water-fed poles and other ancillary accessories such as hose reels and warning signs.

Avoiding Risk

The use of water-fed poles removes the need to work at height and providing the window can be viewed from the ground without obstruction, it is possible to clean using a water-fed pole. Although adopting water-fed use may remove the risks involved when working at height consideration must be given to both operational risks and other obvious risks that apply to water fed pole use.

When assessing operational risks consideration must be given to the location of the building, its design, site conditions, obstacles, the angle at which the pole is to be used, terrain underfoot, weather conditions and overhead power sources. The suitability of the operator regarding their level of fitness and medical history and the need to identify any muscular or skeletal disorders that may develop as a result of operating a pole using poor technique.

Less obvious risks include the consequences of carrying tank systems and equipment that are heavy, unstable, unsecured, or incorrectly installed within a vehicle, as well as the small/slight potential for the spread of legionella disease caused by poorly maintained filter systems.

Buildings on both industrial estates and domestic properties can present different risks than those in busy town or city locations, consideration must be given to the time of cleaning and traffic conditions and preventing public access to the working area. Warning signs should be displayed to warn of trip hazards presented from trailing hoses and the slip hazard presented by wet slippery surfaces. Hi-Viz clothing should be worn by operators, especially when near to pedestrian and vehicular traffic. Consideration should be given to adverse weather conditions. Consideration should also be given to size of working area in the event of the water-fed pole being dropped or blown over.

Risk Assessment

- The 5 principles of a risk assessment are:
- Identify the hazards.
- Decide who might be harmed.
- Evaluate the risks and decide on the control measures.
- Record the findings.
- Review and update, ensuring continuous management of potential harm.

The purpose of risk assessment is simply to identify particular risks on any job in order to take precautions to minimise them, typically these may include:

- Instruction in the need for the operator to be vigilant about the surroundings.
- Providing adequate PPE and/or roof edge protection or other systems.
- Giving consideration to the day and time of cleaning.
- Provision of Hi-Viz clothing.
- Cordoning off work areas to prevent public access – consideration should be given to the size of this area which should include an area as wide as the height of the pole being used.
- The angle at which the pole is to be used.
- Consideration should be given to trailing hoses which present a trip hazard in pedestrian areas – The use of trolley or backpack systems should be considered for these areas as these remove or limit the risk.
- Where there are to be trailing hoses then suitable and sufficient warning signs should be displayed and proprietary matting can be used to cover trailing hoses.
- Hoses should never be trailed across roads and other areas where there will be vehicle traffic unless suitable and sufficient barrier systems are used in conjunction with warning signs which not only isolate the trailing hoses from vehicles but also protect the operative. Barrier systems will also need to comply with Highways and road traffic regulations.

Hazards associated with the use of water-fed poles.

- Trip hazards to the general public presented by trailing hoses.
- Slip hazard presented from wet or icy pathways.
- Trip and Slip hazard for operator while concentrating on work.
- Falls from height when working from flat roofs.
- Electrocutation from pole coming into contact with or within the danger zone of an overhead power source or cables. Injury to others from falling poles or fabric of the building that may be dislodged.
- Injury to others from falling poles caused by incorrect handling or failure of pole.
- Injury through incorrect manual handling of poles and other equipment.
- Spread of legionella disease through poor maintenance of the system
- Hazards from carrying tanks, systems and equipment which are overloaded, unstable, unsecured or incorrectly installed within the vehicle.

Dos and Don'ts

- Don't use a defective water-fed pole.
- Don't use a water-fed pole in high winds.
- Don't use a water-fed pole near to overhead power lines.
- Don't lift a water fed pole away from the building either to rinse or lower it.
- Don't lift a water fed pole from the building to walk it to another building or part of the same building.
- Don't use a water-fed pole during thunder and lightning.
- Do carry out pre-use checks of equipment.
- Poles should be regularly extended, cleaned, and inspected in line with manufacturer guidance and frequency of use.
- Always cordon off and display suitable warning signs when working in public areas.

Road Safety

Journeys to and from the workplace are subject to documented risk assessment. Assessment of these risks will include security of the load to ensure that it does not shift under normal driving conditions, emergency braking or during a collision. Responsibility rests with the driver of the vehicle; however, business owners have a responsibility to provide suitable vehicles, equipment and means of securing the load. Consideration should also be given to the potential for the overloading of the vehicles fitted with water tanks for when a water tank is full a vehicle is likely to be close to its maximum payload capacity. To assess road safety risks consideration should be given to:

- The design of water treatment/delivery tanks.
- The manufacture of water treatment/delivery tanks.
- The installation/anchorage of water treatment/delivery tanks.
- The payload capacity of the vehicle and the potential of overloading.
- The security of water-fed poles, hose reels, and ancillaries etc.
- Driving conditions and braking distances.

Design and manufacture of tank systems and equipment should comply with The Health and Safety at Work Act 1974 (HASAWA) and Provision and Use of Work Equipment Regulations 1998 (PUWER) Both professional and self-installations in vehicles should meet the requirements of:

- The Road Traffic Act 1988.
- The Road Vehicle (Construction & Use) Regulations 1986.
- The Code of Practice "Safety of Loads on Vehicles."
- BS: 12195 Load Restraint Regulations.

Legionnaires Disease

Legionella Bacteria can be found in low levels in most water sources, the presence of a few bacteria is in itself unlikely to cause a problem, it is when they begin to multiply that the risk increases. Legionella requires nutrients to multiply; these can be provided by sediment, scale, sludge, and biofilms. These nutrients build up in the filters, housings, and tanks, particularly in translucent vessels used to purify and transport water. Filters should be replaced and systems sterilised at intervals specified by the suppliers. If specified service intervals are not met under certain circumstances systems may become a fertile breeding ground for legionella bacteria. Water temperature is a particularly important factor in the survival and multiplication of legionella bacteria when the temperature of water exceeds 20°C the bacteria begin to multiply, the optimum temperature being 37 degrees. Temperature above 60 degrees kills bacteria.

Contracting the Disease

The disease is normally contracted after the inhalation of the bacterium in small droplets (aerosols) or in droplet nuclei that are in the residue after the water has evaporated. Water-fed poles produce aerosols, and it should be noted that aerosols are not restricted to the point of production. Under suitable wind conditions. Aerosols can travel beyond the immediate area. systems must therefore be maintained to prevent bacterial growth.

Legionella will not normally multiply in cold water systems or even hot water systems when the water is heated at point of use, or when the system is in regular use. However, legionella will multiply when the right conditions exist, these are:

- When sediment, scale, sludge, and biofilms build up in filters.
- When water temperatures rise above 20 degrees (optimum temperature 37 degrees).

Measures that should be taken to control the risk of legionella are:

- Replacements of filters at recommended intervals.
- Following the manufactures servicing recommendations.
- Annual systems sterilisation protocols are followed.
- Keeping the system stored in a cool place when not in regular use.
- If system cannot be stored in a cool place, drain tank and filters whenever the system is to be left idle for more than three days during warm summer months.

The release of legionella is also subject to The Control of Substances Hazardous to Health (COSHH) Regulations 2002 or as amended.

Used filters should be disposed of in accordance with local authority guidelines.

Choice of tank system and equipment

Will be determined by:

- The duration and extent of work.
- The height of windows to be cleaned.
- The site conditions.
- The means of purified water delivery required.

For some jobs water-fed poles may be used in support of other access methods, for domestic properties to reach conservatory roofs or other windows inaccessible to ladders. On high rise buildings to reach the lower elevations and link bridges or on glazed structures in support of abseiling.

Water fed poles to 3 metres in length may also be used from mobile elevating work platforms (MEWPS). In addition to normal guidelines for MEWPs operation, consideration should be given to securing the pole to the MEWP basket to prevent it falling if dropped. Emergency procedures should be implemented to prevent snagging of any hoses trailing from the MEWP basket to the water delivery system.

For many buildings, however, water-fed poles may be used for the entire cleaning operation. Due to the physical rigor or prolonged use of consideration should be given to the weight of the pole, the lightest pole being the one that adequately reaches the top of the window but does not overreach i.e. do not use a 45ft pole to clean a window which is 20ft high.

Glass fibre composite poles or fully insulated poles will be best suited for use on sites such as those near to railways and electricity generating stations or substations, in the close proximity to overhead cables or any other site that poses an increased risk of electrocution. Site specific risk assessment of each site would identify whether it is safe to use a water fed pole in this instance. The correct pole for use in areas that pose a higher risk of electrocution should only be used if it has been designed, manufactured, tested and approved for use in these areas. In all circumstances, any water fed pole supplied with a claim of electrical safety should be supplied with a certificate of conformity.

Purified water may be delivered to the water-fed pole by flexible hose from a variety of sources, these include de-ionising cylinders/columns or cartridges, vehicle and trailer mounted systems and static systems incorporated into the building design. Delivery hoses pose a trip hazard that can be minimised if brightly coloured hose is used and warning signs are displayed wherever hoses cross a walkway.

Care should be taken to ensure that the weight of the filled water tank does not exceed the vehicle's payload or towing capacity, and allowance should be made for the weight of other equipment that may need to be carried as well as the weight of personnel travelling in the vehicle. Professionally Installed vehicle mounted systems offered with a claim of crash tested should be supplied with a certificate of conformity traceable to the original testing and standard it relates to with the claim it relates.

Maintenance

Water-fed poles are work equipment subject to the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER) or as amended.

Water-fed poles should be subject to:

- Pre-use visual inspection – Obvious defects i.e. worn/fractured/dented/bends in pole sections, loose clamps head/brush fittings, worn butt rings etc.
- Regular documented management inspections that take into account the degree of use and type of pole. In practise three monthly inspections are recommended.
- Procedures should be in place for handling any defects found that would include repair or replacement.
- Weekly cleaning all the sections of the pole.

Regular replacement of filters ensures both the quality of the water produced for cleaning and the effective control of legionella bacteria. Manufacturers will specify the appropriate intervals for filter replacement; generally smaller filters shall require more frequent replacement than larger filters.

In order to ensure that the installation in the vehicle continues to meet the requirements of regulations an annual inspection should be carried out by a competent person and any remedial work signalled by the inspection should be carried out.

Manual Handling

It feels more natural to operate a water-fed pole by movement of the arms alone and this is acceptable for poles that extend to a height of 10 metres. For water-fed poles that extend beyond 10 metres excessive strain may be exerted upon the upper body when operated for extended periods. It is recommended that when operating poles that extend above 10 metres use of arms be reduced by greater use of leg/whole body movement. With experience comes the ability to work with the natural balance of the pole, less effort is expended once the operator has mastered the balance technique and has learned to use the stored energy generated in the bending and flexing of pole as it is guided through the cleaning task. Even with the benefit of training these techniques take time to master, and

they are easier to acquire when shorter poles up to 10 metres are used. It is important both for development of new skills and in order to deliver acceptable cleaning standards, that new staff become experienced using short poles before moving up to poles that extend above 10 metres.

Measures to reduce fatigue:

- Operate poles with greater use of the legs; by stepping a single stride forward and back use of the arms may be significantly reduced.
- Pole sharing with other members of the team.
- Switching from the left-hand side of the body to the right, and vice versa.
- Taking regular breaks to undertake other tasks.
- Taking periodic breaks free from activity.

Overhead Electrical Hazards

As of April 2025, new guidance has been produced by the Federation of window cleaners in conjunction with the Health and Safety Executive, UK Power networks, British window cleaning academy, water-fed pole manufacturers and retailers and a leaflet is available from the FWC called "Use of window cleaning equipment near overhead power lines".

Although purified water has low conductivity, water-fed pole systems must be treated as potentially conductive in real working conditions.

Electricity in overhead power cables coming into commercial and domestic properties lines can arc across a gap without direct contact. Safe approach distances depend on the voltage of the line. Always follow HSE guidance (e.g. GS6) and stay well outside prescribed danger zones.

Obviously, care must be taken when using water-fed poles near any overhead electrical hazard to not only NOT come into contact with it but also to stay the required distance away from it to prevent arcing and therefore potential electrocution.

During a risk assessment safe areas should be identified on each elevation to be cleaned to ensure that water fed poles are raised and lowered only in an area of verified safety and only whilst contact is maintained with the building. Undertake these measures as a matter of course in order to completely avoid any part of the water fed pole moving into the danger area.

When a water fed pole is lifted away from the building into free space it may inadvertently enter a danger zone. In this scenario should an electrical current strike the pole the operator becomes the sole pathway to ground.

It is now considered industry best practice to train and educate users of water-fed and other telescopic poles to recognise and avoid working in proximity to overhead electrical hazards.

In the replacement of new parts or new purchase of water – fed /telescopic poles, it would be recommended to consider replacing the pole with effective, enhanced insulation against electrocution. It is important to obtain a certificate of conformity for any pole offered when a claim of enhanced electrical safety is made by the supplier.

Adverse Weather

In wet conditions – Rain, Mist and drizzle special consideration should be given to not work anywhere near overhead electric sources, cables, lines etc. as water on the pole is likely to conduct electricity.

Water fed/telescopic pole should not be operated when a risk of an electrical/lightning storm exists.

In windy conditions extra care should be taken especially when moving from a sheltered elevation to one more affected by the wind. Wind strength must be considered as part of the risk assessment. The longer the pole and the higher the work, the greater the effect of wind. Work must stop if the operative cannot maintain safe control of the pole.

Regardless of wind strength, water-fed poles should never be left unattended in an elevated position.

During cold spells, the likelihood of purified water freezing in the delivery hoses will adversely affect the use of water-fed poles. Systems that deliver hot water may be affected to a lesser extent and precautions should be taken to ensure that any water that may fall on to walkways is prevented from freezing by the removal of excess water by floor squeegee and the application of sodium grit.

Personal protective equipment (PPE)

PPE must be considered as part of the risk assessment. In most routine water-fed pole work, risks are controlled by safe systems of work. PPE may be required where additional protection is needed. However, when working in areas where identifiable electrical hazards exist such as over ground electric cables, rail and tram routes, sub stations, power generation sites etc. then in addition to site specific precautions not limited to electrical safety, PPE for electrically sensitive work such as appropriately rated gloves and footwear must be used.

Hard hats may however be appropriate when use of water-fed poles may dislodge defective parts of the building fabric and when using poles on construction sites.

Safety footwear should also be used to prevent injury to operative if the pole slips through hands or is dropped.

Training & Competence

All water fed pole users should be suitably trained and competent. They should have appropriate knowledge, experience and practical skills for the work being undertaken. Employees with different levels of responsibility, such as managers, will require different types of competence.

The following criteria should be used at initial and ongoing assessments:

- Daily pre use check.
- Manual handling
- Ground conditions
- Weather conditions
- Cordoning off
- Common Hazards
- Dos and don'ts

Any gaps in knowledge should be assessed, and suitable training and/or supervision be provided until competence is achieved.

Competent Person

A competent person may be defined as a designated person suitably trained or qualified by knowledge and practical experience to enable them to:

- Carry out their required duties at their level of responsibility.
- Fully understand any potential hazards related to their work.
- Detect any defects or omissions in that work, recognise any implications for health and safety, and be able to specify appropriate remedial action needed including refusal to do work if the danger is too great.
- Know their limitations and not be frightened to ask for help.

In other words, a competent person should not only be able to discover defects but tell what effect they are likely to have in a site-specific working day.

Lone workers

Are defined as employees who work by themselves without close contact or direct supervision. Lone working must be risk assessed. This applies to both employed and self-employed window cleaners.

Lone working may increase risk. Locations with heavy pedestrian or vehicle movement, overhead electrical hazards or adverse weather must be carefully risk assessed. Where risks cannot be controlled by one-person, additional assistance should be provided.

If working in a team on a single site, regular (hourly) checks should be made on any lone worker.

If a window cleaner is dropped on a job to work solo, intervals between contacts should not exceed one hour.

If a window cleaner is working solo for a full shift or day, a one-hour contact system should be established, e.g. mobile phone or radio.

The FWC provide IOSH accredited training courses on the safe use of water fed pole systems and Risk Assessment - they can be contacted on Tel: 0161 432 8754 or Email: info@f-w-c.co.uk.

The BWCA city and guilds accredited training course on the safe use of water fed poles and Risk Assessment - they can be contacted on Tel 01793 871386 or Email info@bwca.co.uk.

Further Reading

- ❖ The Health and Safety at Work etc Act 1974 (HASAWA)
- ❖ The Management of Health and Safety at Work Regulations 1999
- ❖ The Road Traffic Act 1988
- ❖ The Road Vehicle (Construction & Use) Regulations 1986.
- ❖ BS EN: 12195 Load Restraint Regulations
- ❖ The Control of Substances Hazardous to Health (COSHH) Regulations 2002
- ❖ Approved Code of Practice (L8): The Control of Legionella Bacteria in Water Systems 2000
- ❖ The Workplace (Health, Safety and Welfare) Regulations 1992
- ❖ The Manual Handling Operations Regulations 1992
- ❖ The Work at Height Regulations 2005
- ❖ The Provision and Use of Work Equipment Regulations 1998 (PUWER)
- ❖ The Personal Protective Equipment Regulations 2002 (PPE).

The Federation of window cleaners developed this guidance along with contributions from the following companies.

- ❖ Federation of Window Cleaners (FWC)
- ❖ Energy Networks Association (ENA)
- ❖ Health & Safety Executive (HSE)
- ❖ The British Window Cleaning Academy (BWCA)
- ❖ Ionic Systems Ltd
- ❖ Gardiner Pole systems
- ❖ Varitech Systems Ltd (Streamline)
- ❖ Ultra Reach Poles

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