

# WINDOW CLEANING WITH WATER-FED POLES

## HOW TO DO IT AND LOOK AFTER YOUR BODY



## INTRODUCTION

This document explains the best practice techniques for Window Cleaners when handling water-fed poles. The aim is to provide you with guidance to decrease the risk of Musculoskeletal Disorders (MSDs)\* during the three steps of using a water-fed pole to clean windows:

1. Setting up your workspace
  2. Cleaning the windows
  3. Packing up
- > Note that this document assumes that you have assessed your working environment, carefully considered the plan of your work and determined that you will be using a water-fed pole rather than ladders, BMU or MEWP based work to clean windows.

\* The term Musculoskeletal Disorders (MSDs) covers any injury, damage or disorders of the joint or other tissues in the upper and lower limbs and in the back. For further reading on MSDs please refer to the Health and Safety Executive UK website <http://www.hse.gov.uk/msd/index.htm>

## KEY POINTS

- > Every job will be different, so it is important to adopt a **'risk management approach'** to each job by:
  1. Planning your work.
  2. Assessing your environment.
  3. Setting up your equipment correctly.
  4. Being alert to what is happening around you as you work.
  5. Using the correct techniques for handling the pole.
  6. Wearing appropriate personal protective equipment such as protective gloves, footwear, clothing and hi-vis clothing to help avoid hazards. Hard hats should be worn where a Risk Assessment demonstrates the need such as loose and unstable parts of a building which can cause harm.
  
- > To minimise the risk of MSDs when using a water-fed pole, try to:
  1. Use whole-body movements rather than isolating the movement to your arms.
  2. Keep your elbows close to your body and keep your hands below shoulder height.
  3. Alternate your arms periodically.
  4. Use the surface you are cleaning to help reduce the effort needed to move the pole.
  5. Limit the time spent using long poles such as 60ft length poles.
  
- > Take additional **mitigating measures** when working in restricted space and / or when cleaning higher windows to allow your muscles to recover.

## 1. SETTING UP YOUR WORKSPACE

### By adopting a ‘risk management approach’ to every job

- > **Plan your work** by determining where you will be working and what equipment you need to set up to perform your task in the safest way.
- > **Assess your work environment** for any potential hazards such as site condition, passing vehicles and pedestrians, obstacles, terrains and ground surfaces, weather conditions and overhead power sources. **Recognise your highest risks** and take appropriate measures to mitigate these (these controls are explained further within this document).
- > **Set up your cleaning equipment** to minimise any obstructions during the cleaning process:
  - As far as reasonably practical, **cordon off the work area** and exclusion zones as wide as the pole is long to prevent public access. Use cones, red tape or barriers as guided by your Risk Assessment (Image 1);
  - **Display warning signs** to warn of trip and slip hazards;
  - When cleaning **commercial buildings**, the surrounding area is likely to be busier with more hazards to take into consideration such as traffic conditions and preventing public access to the working area. Cordon off as much space away from the wall as safely possible. The more space you have around you, the less likely you will adopt awkward postures; and
  - When cleaning **residential buildings**, it is likely the surrounding area is less busy and more spacious, therefore you can utilise the extra space to avoid adopting awkward postures.
- > Wear appropriate **Personal Protective Equipment** such as hi-vis clothing, protective gloves, footwear, clothing and a helmet.



Image 1

## 2. CLEANING THE WINDOWS

### Extending the water-fed pole in preparation for the job

- > Position the water-fed pole vertically, resting the end of the pole on the ground, and the top of the pole against the window (Image 2).
- > **Use protective gloves** to avoid your hands being pinched or cut.
- > Stand with **one foot forward and one back** to help maintain a stable base of support and a neutral position of the lower back.
- > Extend the water-fed pole vertically **keeping the elbows close to the body** (Images 2 & 3).
- > **Minimise twisting of the body** by facing the pole and the wall while extending the pole.



Image 2



Image 3

## THE FUNDAMENTAL PRINCIPLES OF BODY POSITIONING WHEN CLEANING WINDOWS

- > There are various techniques used to clean windows, however, no matter which technique you adopt, applying the following principles can reduce the risk of MSDs. These include:
  - Adopting a **single stride position**; one foot in front of the other, to provide a stable base and help reduce the use of your arms;
  - **Avoid twisting or rotating the body** by adopting a ‘front-on’ position to the window being cleaned;
  - Maintain a position where **arms remain below shoulder height** and **elbows are kept close to the body** (Images 4 & 5). The higher your arms are elevated and away from your body, the higher the demand on your shoulders;
  - Hold the pole with an **underhand grip** rather than an overhand grip (Image 6). This can reduce the pressure on your shoulder joint;
  - **Minimise the repetitive tilting back of the neck** during the task;
  - Where space is restricted or you find that you are fatiguing from increased neck tilting and repetitive arm movements, take the below **mitigating measures** as additional controls to allow your muscles to recover:
    - A. **Take periodic breaks** while performing the task;
    - B. Two people working with **regular switching of roles**;
    - C. The **greater the height** being cleaned, the **shorter the working time** between breaks or the greater the frequency of swapping roles; and
    - D. **Alternate your lead arm** holding the pole.



Image 4



Image 5



Image 6

## WHAT TO AVOID

1. **USING AN OVER-HAND GRIP** as this can place increased pressure on the shoulder joint (Image 7)
2. **REPETITIVE OVERHEAD ARM MOVEMENTS** can increase the fatigue level in your shoulder muscles (Images 8 & 9)
3. **EXCESSIVE TILTING OF THE NECK** can also increase the pressure on the spine and increase the strain on your spinal muscles (Image 10)



Image 7



Image 8



Image 9



Image 10

## Cleaning Windows Techniques

### Technique 1: Using the ‘Whole Body’ Technique

- > Stand with **one foot forward and one back**.
- > Where it is safe, stand away from the wall to help you look upwards to the brush head. As a guide, aim for a start position **half the length of your pole away from the building** (Image 11). The further outside of this you work, the greater emphasis you should place on the mitigating measures outlined in the above section under ‘the fundamental principles of body positioning when reaching and washing’.
- > Move the water-fed pole with your arms and **alternate your body weight between your front and back foot** by leaning forward as you push the pole up the window and backward as you pull it down again (Images 12, 13 & 14).
- > When moving the water-fed pole up and down the window, **keep your arms below shoulder height**, and avoid moving your elbows away from the body into a ‘winged’ position (Images 12, 13 & 14).
- > Swap hands periodically to minimise fatigue on one side of the body.



Image 11



Image 12



Image 13



Image 14



## Cleaning Windows Techniques

### Technique 2 - Using the 'Walk In and Away from the Wall' Technique

- > Stand with **one foot forward and one back** to provide a stable base and help reduce the use of the arms.
- > **Keep your arms below shoulder height at a comfortable position**, avoid moving your elbows away from the body into a 'winged' position.
- > **Walk towards and then away from the wall** as you guide the pole up and down the window (Images 15 & 16).
- > **Swap hands periodically** to minimise fatigue on one side of the body.



Image 15

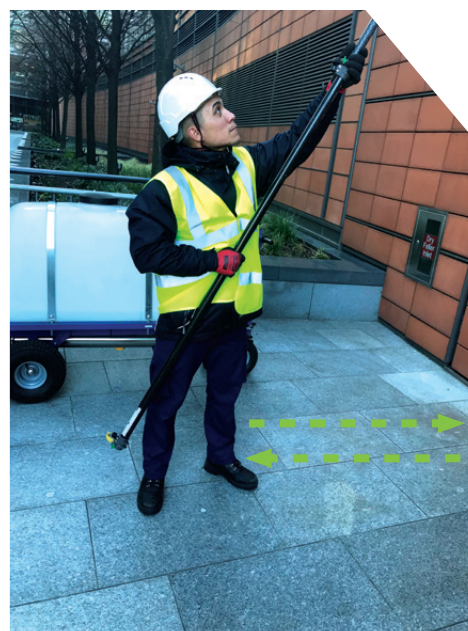


Image 16

### Retracting the water-fed pole post-cleaning

- > Retract the water-fed pole by using the same best-practice principles as 'extending the water-fed pole':
  - Keep the pole vertical, resting its end on the ground, with the top still against the window;
  - **Use protective gloves** to avoid the hands being pinched or cut;
  - Stand with **one foot forward and one back** to help maintain a stable base of support and a neutral position of the lower back;
  - Retract the water-fed pole vertically keeping your **elbows close to the body; and**
  - **Minimise twisting of the body** by facing the pole and the wall while retracting the pole.

### 3. Packing up the workspace

- > Once you have finished cleaning the window and are ready to pack up, return all equipment to your vehicle by applying safe lifting principles:
  - Adopt a **semi-squat position** or **half-kneel position** when working at lower levels or picking up equipment from the ground (Image 17);
  - Keep **loads close to the body and face the load**, rather than twisting your back (Image 18);
  - Periodically **return to an upright, neutral posture** when working at low heights to avoid long periods of back bending; and
  - Have 2 or more people move large equipment and trolleys (Image 19).



Image 17



Image 18



Image 19

This document was produced as a joint initiative between dorsaVi and the following partners:



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