**Follow the flow chart for work at height using the numbers for further advice as shown below.**

1. **Policy**

The Work at Height Policy, together with supporting arrangements, instructions and guidance, form part of the rules and guidance issued pursuant to the Council Statement and arrangements for Health and Safety’’ and for the management of work at height, which describes the ‘hierarchy of measures’ to be undertaken when considering work at height activities, it is available on the Derby City Council server.

Properly planned; appropriately supervised; and carried out in a safe manner. It will follow the hierarchy of measures for working at height.

The Council do not permit any Lone Working at Height unless it falls within the scope afforded ‘Low Level’ working (LLW) as described in paragraph 10.

1. **Risk**

All persons undertaking risk assessment must be appropriately competent to do so. Risk assessment training is provided by the Council. Further advice on risk can be found in the Council’s Health and Safety Policy Roles and Responsibilities document and the Councils Risk Assessment Policy and Managers Guidance documents on iDerby.

1. **Avoidance**

Within the hierarchy of measures as contained below is the first component in the decision making process prior to commencing any work at height, do you need to work at height and can alternative methods be employed?

Avoidance must also be considered during the pre-construction element of CDM in which the designer must evaluate and engineer out risk wherever practicable.

1. **Hierarchy of measures**

Before any work at height is undertaken managers are required to ensure the activity has been assessed and the hierarchy of controls followed. Managers are required to complete the Work at Height Checklist form 009 explaining at each stage of the hierarchy the rationale for the selection or not of the specific work at height equipment. The checklist must be used in conjunction with the work at height flow diagram and this guidance document. At each stage the following set of questions must be considered:

(i) the working conditions and the risks to the safety of persons at the place where the

work equipment is to be used,

(ii) in the case of work equipment for access and egress, the distance to be negotiated,

(iii) the distance and consequences of a potential fall,

(iv) the duration and frequency of use,

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

(vi) any additional risk posed by the use, installation, or removal of that work equipment

or by evacuation and rescue from it; and

(vii) the other provisions of the Work at Height Regulations.

If the work at height activity remains high risk, then the Corporate Health and Safety Team must be contacted a minimum of 5 working days prior to the work commencing for further advice and guidance.

Hierarchy details - avoid as paragraph 3

1. Prevent falls using existing workplace
2. Avoid falls using collective equipment e.g. guard rails
3. Prevent falls using protective equipment e.g. Restraint lanyards before arrest
4. Mitigate distance of fall using collective equipment e.g. safety nets,
5. Mitigate fall using PPE e.g. fall arrest systems
6. Minimise consequence of fall using collective equipment e.g. air bags
7. Minimise consequences by instruction and training
8. **Scaffolding**
	1. **System**
	2. **TG2013 (Tube & Fitting)**
	3. **Designer**

**System Scaffold**

A system scaffold is one containing 4 major components and is assembled by using pre determined configurations. The components are; Verticals, Horizontals, Diagonals and Starter Collars. Inspection is made against the manufacturers manual, common designed types are; Layher, Haki, Quickstage or Cuplock.

 Records of inspection must be retained and conducted every 7 days or when there has been an adverse event e.g. high winds, snow, and modification to the structure or accidental contact.

A rescue plan is required to demonstrate how a sick or injured person can be removed safely from the scaffold.

SEE FORM WAH 002 RESCUE PLAN

**TG2013 (Tube & Fitting) Scaffolds**

When working at height scaffolds can be used as independent scaffold structures, birdcages, loading bays, ladder-access and free-standing towers, and chimney scaffolds. It includes features such as bridges, protection fans, inside board brackets, cantilevered platforms and pavement lifts. Floor-level lifts and double standards are addressed, and guidance is provided for the first time for structural transom units.

TG20:13 is comprised of four distinctive publications: two comprehensive A4 books (Operational & Design Guides) and software known as the TG20:13 e-Guide incorporating ‘TG20 Compliance Sheets’ which reduce the requirement for additional scaffold design. Also included is a pocket-sized TG20:13 User Guide.

If you use TG2013 you must ask for the ‘compliance sheet’ the scaffold is inspected against this and it also acts as the designers brief.

Records of inspection must be retained and conducted every 7 days or when there has been an adverse event e.g. high winds, snow, and modification to the structure or accidental contact.

A rescue plan is required to illustrate how an injured person can be removed safely from the scaffold.

SEE FORM WAH 002 RESCUE PLAN

**Designer Scaffolds**

A designer scaffold is assembled from a drawing made by a scaffold or temporary works designer this is due to the complexity or loading of the structure. Where designer’s scaffolds are employed the drawings should be requested as the scaffold is inspected against this drawing. Normally inspection would be undertaken by a Temporary Works Designer, Engineer or an Advanced Scaffold Inspector.

See paragraph 15 Temporary Works

Records of inspection must be retained and conducted every 7 days or when there have been adverse events e.g. high winds, snow, and modification to the structure or accidental contact.

A rescue plan is required to illustrate how an injured person can be removed safely from the scaffold. Scaffolds are ‘Temporary Works (TW)’ and as such must be identified, inspected and recorded on a temporary works register, this shows type of TW, any loadings and inspections carried out. See paragraph 15 Temporary Works

Further advice on scaffolding can be found from the NASC (National Access and Scaffolders Confederation) or CISRS (Construction Industry Scaffolders Record Scheme).

SEE FORM WAH 002 RESCUE PLAN

1. **Restraint / Work Positioning and Arrest Systems**

Restraint systems comprise a full body harness with point of attachment for a restraint lanyard or life line. This limits the travel to prevent the wearer over extending and falling from height.

The lanyards are adjusted following a risk assessment to determine the length required and to ensure the wearer cannot over extend the intended place of work.

A rescue plan is still required and the wearers trained in the particular system employed, of note harnesses are normally tested to 100Kg, always refer to manufacturer’s instructions.

SEE FORM WAH 002 RESCUE PLAN

 All restraint and work positioning equipment is tested in accordance to EN 358 and differs from fall arrest. Anchors for restraint systems are tested to 6Kn and are not suitable for arrest systems.

SEE FORM WAH 004 OPERATORS HARNESS INSPECTION CHECK SHEET

**Arrest Systems**

Arrest systems are the last resort as they allow a fall to take place; they are comprised of 5 components; a full body harness, means of connection, lanyard, deceleration device and anchor.

 The systems are tested to EN 361 which states that the minimum requirements for a safety harness is that it has a dorsal or rear attachment point clearly labelled with the letter 'A' for attachment when working in fall restraint or fall arrest.

Anchors for fall arrest systems must be tested to 12kN at least annually.

A rescue plan for fall arrest systems must be able to recover or render aid to the faller within 10 minutes.

SEE FORM WAH 002 RESCUE PLAN

Further information on rope access and work positioning systems is available from WAHSA (the Work at Height safety Association) and the Code of Practice for Industrial Rope Access BS 7985.

SEE FORM WAH 004 OPERATORS HARNESS INSPECTION CHECK SHEET

1. **Remote access**

Window cleaning robots can identify window frames and obstacles. They can calculate and program the optimal cleaning path for maximum efficiency. This avoids the need to work at height enabling the external cleaning of tall or hard to reach windows in high buildings.

Telescopic poles enable the window cleaner remote access, with purified water which is pumped through the carbon fibre telescopic poles reaching a height up to 27.5m (7-8 floors). The 100% purified water is excellent for cleaning windows without detergent which means no sticky residues are left, therefore windows do not soil as quickly and stay cleaner longer. No rescue plan is required

**8.** **MEWPS**

These are aerial work platforms, also known as an aerial device, elevating work platform, cherry picker, bucket truck or mobile elevating work platform which is a mechanical device used to provide temporary access for people or equipment to inaccessible areas, usually at height.

The Council has a MEWP daily checklist that must be completed prior to using the access equipment. Operator’s licenses are required that denote the specific type of equipment, these are; Scissor Lift (1a), Static Boom (1b, 1b+): Self-propelled booms (outriggers), trailers/push-a rounds, vehicle-mounted platforms. Mobile Vertical (3a, 3a+): Scissor lifts, vertical personnel platforms (mobile), Mobile Boom (3b, 3b+): Self-propelled booms. All licenses should be checked with the Independent Powered Access federation (IPAF) to determine validity.

Accredited operators will be in possession of a MEWP log book which shows types of equipment used and hours operated.

Rescue plans are required in the event of equipment failure. Prior to acquiring a MEWP consideration to the type of work and working environment is required as this will denote the type of equipment required e.g. using a diesel operated MEWP indoors rather than battery, or spider where a static operation is required with limited access.

A ground survey will be required to identify operating conditions e.g. manholes, pot holes undulating ground, traffic, overhead obstructions etc, MEWPs have a very limited angle of climb; again this is all subject to a risk assessment. Barriers must reflect the MEWP’s operational envelope. Inspections and certificates are required to be undertaken at 6 monthly intervals by a competent person.

MEWPs can be used as a means to access roofs although this should be avoided where possible as it means the operator coming off the safety restraint. Safety restraints are not to be worn when operating equipment over water.

SEE FORM WAH 002 RESCUE PLAN / SEE FORM WAH 007 MEWP DAILY CHECKS

1. **Rope access**

Rope access work must be planned and managed by a person designated with the responsibility for maintaining a safe system of work. Before rope access work commences there must be a documented pre-work analysis, to establish whether rope access methods are appropriate and the records must be retained

A risk assessment, to identify any hazards, to assess the likelihood of an incident occurring and to establish control measures to minimize the risk and a safety method statement, which clearly defines work procedures if required.

An operator must be deemed competent in workmate rescue & retrieval techniques appropriate to each worksite and able to organize and put into effect a rescue & retrieval plan appropriate to that worksite.

SEE FORM 002 RESCUE PLAN

The Independent Rope Access Trade Association (IRATA) require a level 3 qualified rigger to act as supervisor and to approve both rigging and rescue planning, A level 2 can rig under a level 3 supervision, Level 1 is a qualified rope technician but not competent to conduct rigging.

1. **Tower scaffold platforms / Light Weight (LWT)Scaffold Towers]**

There are many variants of portable light access towers, they are covered by the trade association; Pre fabricated Access Suppliers and Manufacturers Association (PASMA). PASMA provide a range of training courses for operators and managers.

Currently 3T (through the trap, Advanced Guard Rail (AGR), Cantilever and Low level (podiums and pop ups). Anyone holding a PASMA card can be checked and verified online, licences valid for 5 years. Other providers include; ROSPA, IPAF,NTPC and Lantra and provide training certificates / cards.

Where towers are used externally use is limited to towers complying to EN1004, stable in freestanding conditions with wind speeds up to 28mph (Beaufort 6), however at wind speeds 25mph or more the tower must be tied. When wind speed exceeds 17mph work on platforms should cease.

**Low Level Working (LLW)**

Low working is work involving pop ups, podiums, elephants feet, step ladders, Users of this equipment must have undertaken manual handling training and be confident in the use of the equipment, inspection is limited to a visual user check and subject to risk assessment.

 PASMA, provide low level access training using folding scaffolds with a maximum reach of 2.5m. The operative will require a PASMA card with designation ‘U’ and ‘T’ or similar, a different level is required for Low level podiums, platforms and hop ups where the operative will require a PASMA card with designation ‘U’ and ‘L’ or similar.

Towers must be inspected before use and re-inspected as often as is necessary to ensure safety but at least every 7 days and issue a new report each time, and post adverse events .A rescue plan is required.

SEE FORM WAH 002 RESCUE PLAN

1. **Ladders / Step Ladders**

To meet the revised EN 131 standard, ladders are designed and tested to take a maximum total load\* of 150 kg including the user, their tools, equipment and any materials.

Ladders can only be used for short duration work i.e. 30 minutes duration with 3 points of contact, the ladder to be placed at 75° from the vertical or 1:4 rules and inspected before use and at regular intervals. Ladders must be secured, footing is a last resort.

All ladders must carry a stable ladder tag identifying previous inspection dates and next inspection date. The Ladder Association recommends every 3 months currently the Council undertake this at 6 monthly intervals.

To prevent damaged ladders being removed from skips during disposal, it is recommended to cut them up to prevent use by third party.

Further advice on Ladders can be found in HSE guidance indg 455 and from the British Ladder Association

SEE FORM WAH 005 LADDER INSPECTION / FORM WAH 006 STEP LADDERS INSPECTION

1. **Confined spaces**

“Confined space” means any place, including any chamber, tank, vat, silo, pit, trench, pipe, sewer, flue, well or other similar space in which, by virtue of its enclosed nature, there arises a reasonably foreseeable specified risk. Entering into a confined space is not only hazardous but often requires working at height.

Any work at height undertaken within a confined space must only be undertaken following the Council ‘confined spaces entry procedures’, these require a safe system of work and permit to work.

Consult the Confined spaces register appropriate to the site before considering work, where no register exists a risk assessment of the space must be undertaken, if you are unsure consult the CHST.

 Further information can be found in the Approved Code of Practice L101 Ed 3 available from the HSE web site.

SEE FORM WAH 002 RESCUE PLAN / FORM CS001 PTW CONFINED SPACES / WAH 004 OPERATORS HARNESS INSPECTION CHECK SHEET / FORM CS002 CONFINED SPACES REGISTER

1. **Excavations**

Work in and around excavations is hazardous and entry is classified working at height, excavations must be guarded using barriers or fencing to prevent unauthorized or accidental entry and falls within the scope of CDM Schedule 3.

Excavations are to be inspected daily and after inclement weather, this includes graves that have been left open overnight. The inspections are to be undertaken by a competent person using Form 010 which is available for this purpose, all inspections must be recorded. No inspection no entry.

Excavations are deemed ‘Temporary Works (TW)’ and as such must be recorded on a temporary works register, this shows type of TW, any loadings and inspections carried out.

Rescue plans are required for any work within an excavation including grave digging and exhumation. Ladders are suitable as a means of rescue for grave digging and exhumation.

SEE FORM WAH 002 RESCUE PLAN / FORM WAH 008 EXCAVATION INSPECTION CHECK SHEET

Further information can be found in the Code of Practice for earthworks BS 6031:2009 Health & Safety in Excavations HSG 185 L101 Ed 3 available from the HSE

1. **Fragile Surfaces**

All roofs are to be treated as fragile until informed otherwise by an appropriately competent person, see Property Projects and Technical Services (PP&TS) who will advise on condition surveys where undertaken.

When working on, near, or passing across fragile materials suitable and sufficient steps will be taken to prevent any person falling through by the provision and use of sufficient platforms, Coverings; or Other similar means of support.

Prominent warning signs must be displayed at all approaches to any fragile roof, tool box talks to reinforce hazards.

Further advice can be found from Property Design and Maintenance (PDM), HSG 33 Working on roofs and the Corporate Health and Safety Team (CHST).

**WARNING KEEP CLEAR OF MICROWAVE DISHES AND TRANSMITTERS**

1. **Temporary Works**

As mentioned in previous paragraphs, many temporary works involve work at height and include; all scaffold types, excavations, Hoardings, Vault bridges, false work and Shoring etc. Competency to conduct inspections is based on the experience of the operator, task designation etc. i.e. Temporary Works Designer (TWD), Temporary Works Coordinator (TWC) or Temporary Works Supervisor (TWS) and is dependent on the knowledge of the TW involved.

These inspectors must be appointed in writing prior to undertaking inspections.

Further advice can be found from Property Projects and Technical Services, in Council Guidance on Temporary Works and the Code of Practice BS 5975:2008+A1:2011,and

HSE L153 Managing Health and Safety in Construction

SEE FORM TW001 TEMPORARY WORKS REGISTER

1. **DSEAR and Miscellaneous**

Entry into fuel tanks is prohibited unless authorized by an appropriately qualified Petroleum Engineer. This is due to the special requirements involving work in a flammable / explosive environment.

 Entry into above and below ground tanks also fall within the scope afforded y the work at height regulations. Rescue plans are required.

SEE FORM WAH 002 RESCUE PLAN

It should be noted that although this guidance sets out to give an overview of the types of equipment that can be used within the hierarchy of measures, other legislation maybe applicable and must be considered e.g.

1. Control of Asbestos at Work Regulations
2. Construction (Design & Management) Regulations
3. Control of Substances Hazardous to Health
4. Lifting Operations and Lifting Equipment Regulations,
5. Manual Handling Operations,
6. Noise & Vibration,
7. Personal Protective Equipment Regulations
8. Provisions and Use Work Equipment Regulations,
9. Regulatory Reform (Fire Safety) Regulations,

**If in doubt consult the Corporate Health and Safety Team (CHST).**

SEE FORM DS001 DSEAR RISK ASSESSMENTS

1. **Rescue Plans**

All Work at Height need to be planned, where MEWPS, Scaffolding, Ropes are used a rescue plan is required. The Council have a template for drafting rescue plans, these need to be completed by a competent person who has sufficient knowledge of the procedures / plant to be used. First Aid needs to be incorporated into the rescue plan. Rescue plans are not required for work at height that is deemed ‘Low level’ working.

SEE FORM WAH 002 RESCUE PLAN

**18. Limitation of Access Permit (LOAP)**

 LOAP’s apply to any employee or contractor accessing the roof space or undertaking work at height activities including; window cleaning, maintenance or inspection. It does not imply the area is ‘safe’. This must be determined by a risk assessment undertaken by a competent person. The onus is on the recipient to demonstrate they have the correct measures in place i.e. Risk assessment, method statement and rescue plan where appropriate.

The person completing the permit must have sufficient knowledge of the work at height activity and or the environment where the activity takes place. For example, Arborists who will use the LOAP for works outlined on the hierarchy of control flow chart. Street Pride teams will only use the LOAP when undertaking work at height for activities other than street lamping e.g. festive decorations.

SEE FORM WAH 001 LIMITATION OF ACCESS PERMIT & FORM WAH 002 RESCUE PLAN

1. **Arborists**

Arborists are required to complete a Limitation of Access permit when additional hazards are incurred specifically when working above a ‘Live carriageway’, above water, above Active railway lines or in close proximity to overhead power lines.

Much arboriculture activity uses hazardous equipment / plant and involves work at height; only those trained and deemed competent are permitted to undertake this work.

A rescue plan will be required whenever harnesses are in use and must be specific to the hazards encountered.