CORPORATE PROCEDURE

WORKING AT HEIGHT

1 Aims of the procedure

1.1 The aims of this Corporate Procedure is to ensure that Neath Port Talbot County Borough Council (NPTCBC) complies with its legal obligations under relevant legislation, and that the risk to the employees from working at height is kept to the lowest level reasonably practical.

1.2 Compliance with this procedure is mandatory for all work at height (and where work is carried out adjacent to excavations) where an operative could fall any distance likely to cause personal injury.

2 Responsibilities

2.1 Corporate Directors

Corporate Directors shall be responsible for the overall implementation of this Corporate Procedure.

2.2 Heads of Service

Heads of Service shall be responsible for the day-to-day implementation of this Corporate Procedure and will ensure the provision of the necessary resources to ensure a safe system of work, comply with the requirements of the policy and the regulations.

2.3 Governing Bodies of Schools Maintained by Education Authority

There is a shared overall responsibility for health, safety and welfare between the LEA, governing body and headteacher.

2.4 Managers/ Team Leaders/Headteachers

Managers/ Team Leaders/Headteachers are responsible for ensuring the implementation of this Corporate Procedure within their workplaces to comply with management guidance.

2.5 Employees

Each employee of the Authority shall: -

- Take reasonable care to ensure their safety and that of others and adhere to the Authority's Policy on managing the risk of working at height.
- Adhere to the Risk Assessments carried out and control measures required.
- Inform their managers of any change in their health status which may be affected while working at height.
- Use appropriate controls where provided for a task in order to avoid or reduce the risks associated with working at height. The controls should be used in the manner in which the employee has been instructed and for its intended purpose.
- Co-operate with Managers / Team Leaders to ensure they have attended the necessary training. Adhere to the information given and convey relevant information to other colleagues where necessary.
- The employee has the right to refuse to carry out (according to the Management of Health and Safety at Work Regulations (MHAWR)), a task where the potential risk of injury is likely and unreasonably high; and where the risk could reasonably and practicably be avoided by the provision of training, instruction, information, supervision and appropriate resources.
- Comply with the Authority's accident and hazard reporting procedures in all cases involving injuries, incidents or near misses affecting themselves, other colleagues, service users or non-employees.

3 Requirements for safe work at height

3.1 The overriding principle for Work at Height is to prevent, so far as is reasonably practicable, any person falling a distance liable to cause personal injury.

3.2 The prescribed hierarchy for safe work at height is as follows:

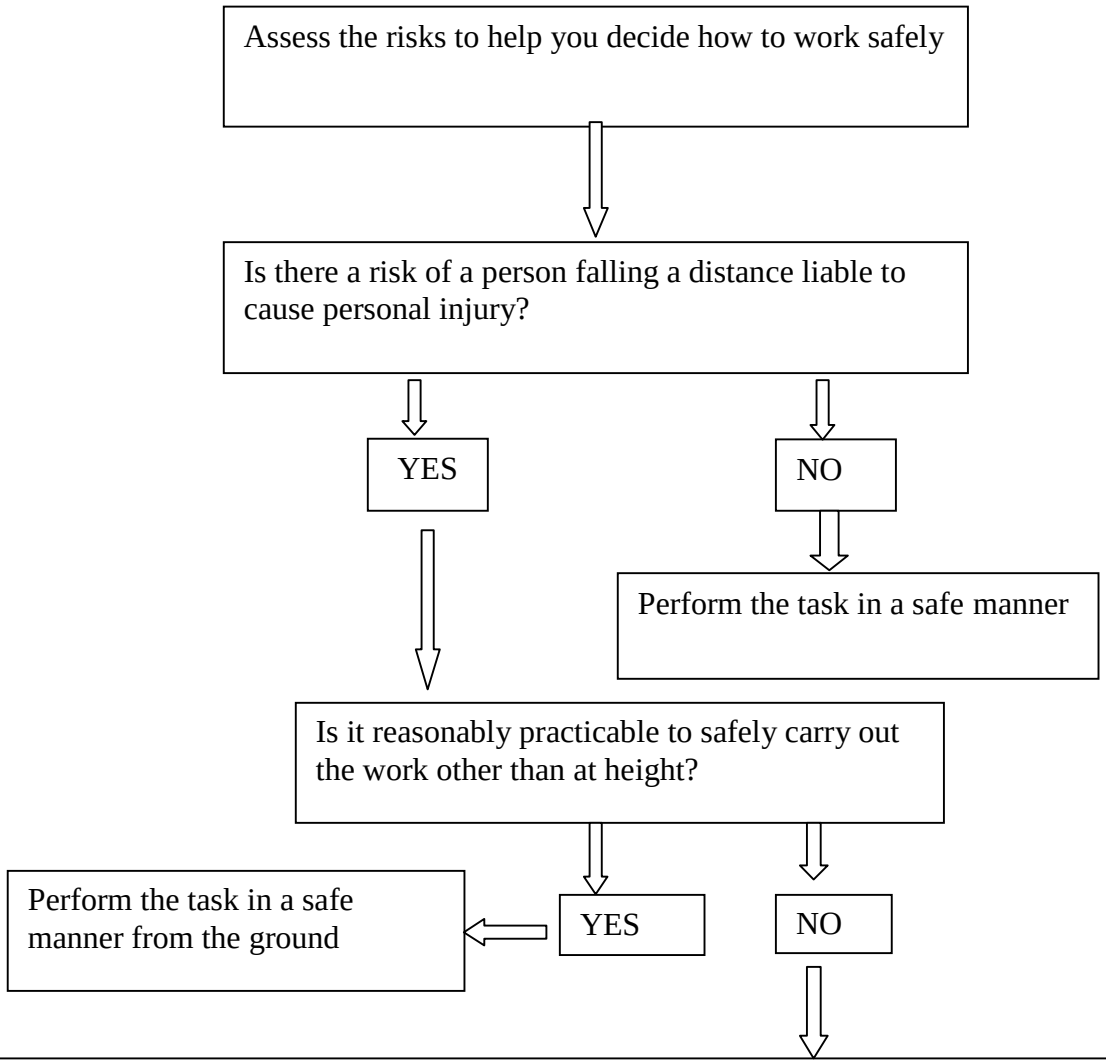
- *AVOID* the risk by not working at height. Where it is reasonably practicable to carry out the work safely other than at a height do so.
- *PREVENT* falls - where it is not reasonably practicable to avoid work at height, all those affected should assess the risks and take measures to allow the work to be done whilst preventing so far as is reasonably practicable people or objects falling. This might include ensuring the work is carried out safely from an existing place of work or choosing the right work equipment to prevent falls.
- *MITIGATE* the consequences of a fall - where the risk of people or objects falling still remains you should take steps to minimise the distance and consequences of such falls. This also involves the selection and use of work equipment and preventing those not involved with the work entering the hazardous area.

At all stages give collective protective measures (e. g. guard rails nets, airbags, etc.), precedence over personal (e.g. safety harnesses) protective measures.

3.3 The Work at Height Regulations (WAHR) requires:

- Assessment of the risk to determine a safe way to work.
- The application of the Avoid, Prevent, Mitigate hierarchy.
- That work is planned and organised taking account of emergency measures, possible weather and environmental conditions.
- That those Working at Height are competent to do so, understand the risks and the 'Risk Assessments/Safe System of Work'.
- That appropriate work equipment is used.
- That the risks from working round or on fragile surfaces are suitably managed.
- Inspections to be carried out on equipment to be used and the work area itself.

3.4 Flowchart for Work at Height.



Take suitable and sufficient steps to…

PREVENT the risk of a fall, including:

Using an existing work place in compliance with Schedule 1 of the WAHR; and in other cases.

Selecting the most suitable work equipment in accordance with Regulation7 of the Working at Height Regulations.

Where the risk of a person or object falling still remains take suitable and sufficient measures

MINIMISE the distance and consequences of any fall.

Steps should include the selection of work equipment in accordance with Regulation 7.

When selecting work equipment give collective protection priority over personal protection.

4 Risk Assessment

4.1 When working at height, regardless of the type of work, a safe place of work must be provided at all times. Using the corporate risk assessment form CF/04/02 the following points must be considered: -

- How falls are to be prevented
- How dangers to those below and to the public from falling materials are to be prevented
- How risks to health are to be controlled
- How other risks, identified at planning and survey stages, are to be controlled. (e.g. hot bitumen)
- What equipment will be required
- What training/competence is required
- The supervisory arrangements for the work
- How the operatives will escape from the roof or platform in the event of a fire in the building
- How any changes in the planned work will be undertaken without prejudicing safe working methods.
- The monitoring arrangements to ensure that the safeguards are working.

4.2 If work at height cannot be avoided, a safe working platform incorporating physical safeguards such as guardrails, toe boards and barriers should be provided.

4.3 Only where the above level of protection cannot be provided should alternative systems of work utilising fall arrest equipment be considered. Fall arrest systems do not prevent falls; they are designed to reduce injury

4.4 Where incorporated in a building, fall arrest systems must be properly installed, maintained, and suitable for those who will be using them with suitable training given before use.

5 Work on roofs

5.1 Inspection - All roof work is dangerous, no matter how short-lived and safe means of access and egress must be provided.

The use of alternative arrangements such as using adjacent buildings or powered access equipment should be considered when carrying out surveys on roofs that do not have safe access.

5.2 Maintenance - Many accidents occur during routine and unplanned maintenance, including cleaning, on roofs, gable ends and similar work. Fragile roofs, roof lights and the like should also be considered in the Risk Assessment (form CF/04/01) for the job.

The cleaning of valley gutters and gutters should be carefully considered and closely managed.

5.3 Short duration work - Where the Risk Assessment indicates that it is not reasonably practicable to install safeguards, for example for work taking minutes as opposed to hours, the assessment should be recorded before proceeding and have taken account of the following: -

- Duration of the Work
- Complexity of the work.
- Pitch of the roof.
- Condition of the roof.
- Weather conditions.
- The risk associated with providing edge protection when balanced against that without.
- Any risks to others who may be affected.

5.4 Travel restraint - Where edge protection or the use of mobile access equipment is not considered suitable, then travel restraint and fall arrest should be used.

The risk assessment and method statement for any work requiring the use of fall arrest equipment MUST consider recovering operatives following a fall.

5.5 Work other than short duration - The complexity of the safe access to and ongoing worker protection for roof work prevents a simple guidance note within this document. Suffice it to say that any such work must be planned and executed with great care. Specific guidance for carrying out most routine jobs can be found in *Health and safety in roof work (*1999) (HSG33).

5.6 Protection of those not directly involved - Other employees and the general public may be at risk from falling materials, or the erection of any access equipment itself.

Where such risks are apparent, the manager or supervisor in charge of the work should liaise with local users to ensure all are aware.

6 Training

6.1 All roof work is potentially dangerous and anyone carrying out or planning work on roofs or utilising access equipment shall ensure that those involved are suitably trained in the following as necessary: -

- Erecting scaffolding, regardless of type or intricacy.
- Setting up and using hoists.
- Operating and checking mobile access equipment.
- Rigging and inspecting safety nets, edge protection and the like.

6.2 Managers/Team Leaders/Headteachers shall be trained in order to ensure that they are competent to ensure adequate site standards and: -

- Assess and prioritise the risks associated with the work.
- Design safe systems of work that are appropriate to specific tasks and conditions.
- Prepare clear, simple safety method statements that can be used and understood by the workers involved.
- Recognise their own limitations and seek advice as necessary.

7 Associated Health Risks

Whilst this procedure is concerned with the risks to NPTCBC employees involved in access and roof work, those planning and executing the work should not allow other considerations to be overlooked, including: -

- Manual handling
- Hazardous substances (Control of Substances Hazardous to Health).
- Asbestos (fragile roofs and the dangers of fibres).
- Lead (lead flashings etc).
- Hot work (bitumen and asphalt see also Control of Substances Hazardous to Health).
- Glues and Solvents.
- Ultraviolet radiation.

8 Access and Fall Protection Equipment

8.1 Ladders - There are many types and sizes of ladders; including portable, suspended, step, interlocking, extension, mobile and fixed ladders. They all, regardless of their use, need to meet the requirements of the WAHR. Ladders are work equipment as defined by The Provision and Use of Workplace Equipment Regulations (PUWER) and must be suitable for the task. For example, they should be strong enough to take the loads placed upon them. New ladders are marked in accordance with their conditions and class of use. Ladders or stepladders procured and used by employees of NPTCBC shall be of industrial purpose and marked as follows: -

- Timber BS1129: 1990 Kite marked Class 1 Industrial
- Aluminium BS2037: 1994 Kite Marked Class 1 Industrial
- Glass Fibre BSEN131: 1993 Kite Marked Industrial; and
- Step stools BS7377: 1994

8.2 All employees considering using a ladder to perform work at height, or as a means of access of egress, shall where necessary be involved in carrying out risk assessments. The assessment should be proportionate to the risk involved – for example, a generic assessment may be quite suitable for simple, routine or repetitive tasks, but more complex work will need specific planning, and doing a written assessment will ensure that the risks are recorded. Such a risk assessment should cover factors such as the height to be negotiated, the site conditions (including weather), the duration and extent of the work, the frequency of access etc.

8.3 It is important to remember that:

- Ladders should only be used as a place to work when other, potentially safer, means such as tower scaffolds are not reasonably practicable;

8.4 It is quite common for ladder users to be lone workers, therefore providing ladder stabilisers or other non-slip devices is a viable solution to reduce the risk of falls.

8.5 As well as being properly maintained, regular visual checks should be made for damage such as cracked/bent stiles or rungs, corrosion and defective or missing fittings or feet. The surface on or against a ladder is placed must be strong enough to support any loads placed upon it – for example plastic gutters and glass are unlikely to be able to support the weight of a ladder and worker. The surface on which ladders are leant onto must be flat unless special provisions made such as the use of a levelling device. Weather and other factors will affect the surface, for

example ice, rain will reduce the friction of the surface. Where a worker needs to gain access to a platform the stiles of the ladder should protrude sufficiently to enable a safe handhold, and if necessary have a handhold when working at the higher level. Even a stepladder should not be positioned where there is access to a doorway or where passing traffic is likely to strike it.

8.6 Portable ladders (not step-ladders) should always be placed at the correct angle, which is around 75 degrees, or roughly one meter out for every four meters up. The feet of portable ladders should be prevented from slipping during use, e.g. by:

- Tying them effectively to an existing structure – securing them at the top is the best method; securing at the bottom or middle is not very effective to prevent sideways slip unless it is done properly with equipment designed for the purpose;
- Using an appropriate ladder stabilisers or anti-slip devices;
- Having another worker "foot" the ladder. This is where someone stands on the bottom rung, and is only suitable when it is not practicable to secure the ladder in another way.

8.7 As well as the physical strength of the ladder, certain environments require additional though. Workers close to electrical circuitry should be using non-conductive access equipment e.g. made of timer or glass fibre. However, if the electricity is isolated, workers on an aluminium tower scaffold will get far greater protection from falling than from being on a ladder.

8.8 Other factors that can improve the safe use of ladders include facing the ladder at all times when climbing or dismounting and maintaining contact with both feet and at least one hand.

8.9 "A secure handhold should be available" means that the user can grasp an upper rung or handrail on the ladder or stepladder (if as recommended the user is not working from the topmost 2 or 3 rungs/steps this should be possible). It does not mean that the user is expected to be holding the rung or handrail at all times as this would clearly make it impossible to carry out many tasks for which two hand are needed.

8.10 The use of a stepladder in particular for such tasks should give consideration to, for example, its suitability for the site conditions and the task (e.g. is it of short duration and light duty). Other factors to consider would be the height of the task; whether the user can balance properly; whether the stepladder can be positioned close to the task to avoid overreaching; whether the task does not involve side loading that could cause the stepladder to fall over; and if it is sited on firm level ground.

8.11 Overreaching while working from a ladder is a major cause of falls. Always go down and move the ladder rather than be tempted to overreach.

8.12 Stepladders can be used sideways, but not for any work that puts a side loading on them of any significance. When it becomes significant depends on the height and the floor type. As a rule of thumb, cable pulling, drilling and sawing should not be undertaken sideways, but inspection work, painting and operating switches can be done with the stepladder sideways. There should never be more than one person on a stepladder and he/she should never try and stand or rest a foot on the top handrail to gain extra height.

8.13 Further reading on the selection and use of ladders and stepladders can be accessed through the Health & Safety's Executives website www.hse.gov.uk/falls/index.htm, which are as follows:

- Safe use of ladders and stepladders: An employers' guide
  Leaflet INDG402.
- A toolbox talk on leaning ladder and stepladder safety
  Leaflet INDG403
- Top tips for ladder safety Pocket card INDG405

9 Mobile Access Equipment - Mobile Elevated Work Platforms (MEWPs) can provide a safe means of working at height is used properly in accordance with their instructions. Those responsible for the use of MEWPs will need to assess the risks of the user falling from or being thrown from the basket, and take precautions to eliminate or control those risks. The precautions for safe work from a MEWP include:

- A guard rail and a mid rail round the edge of the basket to stop the user falling;
- A slip-resistant floor;
- Toe-boards round the edge of the platform;
- Deadman controls clearly marked to show their method of operation;
- Use stability devices, e.g. outriggers, provided to make the machine stable, which are interlocked such that the MEWP will not operate unless they are fully extended; and
- Locking-out controls (other than those in the basket) to prevent inadvertent operation.

A safe system of work should be in place that includes:

- Making sure that the MEWP selected is suitable for the task;

- Consideration of access to and exit from where the work is being carried out;
- Planning the job to address the risks form overhead hazards and passing traffic, including precautions to prevent collision;
- Use only trained/experienced operators;
- Use of harnesses;
- Instructions to the workers about safety issues;
- Instructions in emergency procedures, such as evacuation, should the power be lost.

MEWPs are also lifting equipment for lifting people as defined by The Lifting Operation and Lifting Equipment Regulations (LOLER). You should, therefore, ensure that a MEWP has a thorough examination be a competent person at least every 6 months, or in accordance with an examination scheme drawn up by a competent person. You should also ensure that routine maintenance is performed in accordance with the manufactures instructions.

In addition to purpose built access equipment such as a MEWP, access to work at height may also be achieved by the use of working platforms fitted to counter-balanced for lift trucks (FLT), very narrow aisle trucks (VNAT) and/or telehandlers.

FLT are not specifically designed to carry people. This means that the use of working platform on a forklift truck is restricted to exceptional use only.

For more information on MEWPs and working platforms for use on FLT and telehandlers, see HSE's guidance:

- PM 28
- Information Sheet MISC614

Scaffolds - Scaffolds should be designed, erected, altered and dismantled by a competent people. A competent person (s) should also supervise the work. System scaffolds should be installed in accordance with the manufacturer's instructions.

Scaffolds must be based on a stable foundation that is firm and level in order to support the loads to be placed upon it. If necessary, extra support should be provided. If the scaffolding needs to take heavy-duty loads, proper consideration will be needed to make sure it is designed and erected to suitable specification.

Workers erecting any scaffolds must look out for voids such as basements or drains, or patches of soft ground, which could give way when loads are placed upon them, this should be considered regardless of loading.

Scaffolds should be correctly braced and tied onto a permanent structure or otherwise stabilised. If a tie is removed to allow work to proceed, an equivalent tie should be provided nearby to maintain stability. This work must be undertaken under the supervision of a competent person. The Construction (Design & Management) Regulations places duties on clients, designers and principal contractors to eliminate/reduce the risks to workers during the construction phase. As part of this duty they should take reasonable steps to ensure that suitable anchorage points are provided within the building structure.

"Depending on the complexity of the scaffolding selected" means that plans are needed for special or unusual designs where structural members could be overloaded or the scaffolding could become unstable if not reinforced or erected in a particular way. Guidance on the safe design, installation and erection of scaffolds is contained in BS 5973 1992 'Code of Practice for Access and Working Scaffolds and Special Scaffold Structures in Steel' and BS 5974 1990 'Code of practice for temporarily installed suspended scaffolds and access equipment.

Tower scaffolds can provide quick, easy and safe access. However, like any scaffolding they should be erected, used, maintained, and dismantled in accordance with the manufacturer's instructions. If you are hiring a tower scaffold you should ensure that you are provided with the manufactures manual or instructions. Similarly, they must be secure when in use so any wheels are locked and stabilisers in place. In certain circumstances, e.g.; if over the manufacturer's recommended base to height ratio or if being used to carry out grit blasting or water jetting, they will also need to be tied to the tower.

While moving a tower scaffold you should ensure that no one is on it; beware of any overhead obstructions or power lines; check there are no unsecured tools on the platform; and ensure that there are no depressions or holes in the floor surface.

Further reading on tower scaffolds is contained in HSE guidance:

- Information Sheet CIS 10

Collective Safeguards for Arresting Falls - Collective safeguards for arresting falls include nets, mats and inflated devices that are designed to catch a falling person. They may be anchored to prevent movement, but the manufacturer's instructions will need to be followed. If there are gaps in the supports for collective safeguards, which could compromise safety, these should be filled or covered. Specific consideration should be given before the work starts to rescue procedures which may need to be carried out, and to the effect of landing.

Where a collective safeguard is designed to be suspended and required a clear zone in which to deflect, that zone should be kept clear of obstructions to allow the

safeguard to operate properly, i.e. so that a falling person would not come into contact with anything else if and when the safeguard is used.

Where the design of a collective safeguard requires an external power source (such as a pump for an airbag) or restraints (such as brickwork enclosing bags) to make it effective, these power sources or restraints must be sufficient to maintain the effectiveness of the equipment in the event of a fall and rescue.

Personal Fall Protection Systems - The guidance regarding travel restraint and fall arrest equipment is contained within other sections of this procedure.

Personal fall protection systems are defined in the Regulations as a fall prevention, work restraint, work positioning, fall arrest or rescue system, other than a system in which the only safeguards are collective safeguards; or rope access and positing techniques.

A CE mark does not necessarily mean that a piece of equipment is safe for the task. Check the manufacturer's instructions, for example, to consider whether the particular piece of equipment is compatible with other being used. Some equipment may have a lifespan date given by the manufacturer and should be disposed of after this date.

All equipment used in the personal fall protection systems should be strong enough to withstand any forces placed upon it and should include an adequate margin for safety above those forces. Check the equipment's safe working loads, working load limits or maximum rated loads. It is usual with much personal fall protection equipment to be supplied quoting a minimum static strength, rather than safe working loads. Check too that any accessories or other equipment meets those requirements.

Workers performing rope access work should be properly clothed. You should consider:

- Avoiding clothing with loose flaps that may become caught in any moving equipment;
- Suitable footwear to give protection and good grip
- Weather conditions, e.g. provision of gloves in the cold and sun block in hot conditions; and
- Provision of appropriate personal protective equipment such as head protection (for personal fall protection systems these should always have a chin-strap that prevents the hat from falling off during use).

The need for rapid and effective rescue is particularly important when using personal protective systems where a delay might have severe consequences, e.g. when someone is left hanging motionless in a harness after a fall.

Rope Access and Positioning Techniques - Further information is contained in BS 7985:2002 'Code of Practiced for the use or rope access methods for industrial purpose', which gives guidance for those who commission or use rope access methods. It is appropriate where ropes are used as the primary means of access, egress or support. The standard is not applicable to the use of ropes in arboriculture. Guidance is also contained in the Industrial Rope Access Trade Association's (IRATA) 'Guidelines on the use of rope access methods for industrial purposes'.

Further Information

For further information there are several useful documents that can be referred to:

- Work at Height Regulations 2005
- Height Safe Absolutely Essential health and safety information for people who work at height. HSE publication, no reference given by HSE.
- BS5973:1993 Code of practice for access and working scaffolds and special scaffold structures in steel.
- Construction Information Sheet: No 10: - Tower Scaffolds
- Construction Information Sheet: No 49:- General Access scaffolds and ladders
- Health and safety in roof work (1999) (HSG33), HMSO, London, - contains useful references and guidance on other aspects of work on roofs including: -

- (HSG33) - Method statements for industrial roof work.
- (HSG33) - Use of safety nets.
- (HSG33) - Use of safety harnesses and running line systems.
- (HSG33) - Fragility: tests and specifications.
- (HSG33) - Demolition involving asbestos cement roof sheets.
- (HSG33) - Safe operation of bitumen boilers.