

Working at Height and Edge Protection Plan

Project name and reference:

Yapton Road, Barnham, 502004



Working At Height and Edge Protection Plan

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1. Purpose and Key Roles

The purpose of this document is to ensure solutions for working at height and edge protection are discussed and decided on at bid stage and implemented during the construction phase.

This document shall be completed by the Bid operational Lead with assistance from the SHE Advisor and forwarded to the construction team when the construction phase commences. The plan will form part of the Construction Phase Plan and be filed under Appendices.

2. Scope

The Work at Height Regulations places a duty on Employers / Principal Contractors to prevent injury to persons where there is a risk of a fall liable to cause personal injury or where there is a risk of objects falling which could cause harm.

If operatives or objects are above ground level, could fall from an edge, through an opening or fragile service or could fall from ground level into a floor opening or hole in the ground you will be working at height and the risk of falling and falling objects must be assessed and control measures implemented.

Measures that prevent the fall of materials or objects are the primary means by which persons must be protected from injury. Only where this is not reasonably practicable should other suitable measures (tethers, exclusion zones, crash decks etc.) be used as the primary measures to prevent persons from being struck by falling items.

3. Procedure

The key to preventing injury from work at height is to carry out a risk assessment, selecting the most appropriate precautions, and ensuring they are implemented.

This "plan" shall be used to establish relevant information to develop the safe system for working at height with suitable edge protection. A risk assessment must be undertaken for all work activities.

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4. Hierarchy of Fall Protection

The Work at Height Regulations set out a simple hierarchy for managing and selecting equipment when planning work at height.

Category of work equipment		Examples of protective measures	
		Collective	Personal
Highest	Work equipment which prevents a fall	- Working platforms with barriers - Advanced Guardrail systems - Multi-user mobile elevating work platforms (MEWP'S)	- Personal fall prevention systems (e.g. valley frames) - Personal fall protection equipment (work restraint systems) - Single-user MEWP's
	Work equipment which minimizes the height and consequences of a fall	- Safety nets at high level (rigged close to the work) - Soft landing systems installed close to the work	Other personal fall protection equipment (rope access, work positioning and fall arrest systems (see note 2)
	Work equipment which minimizes the consequences of a fall	- Soft landing systems - Safety nets rigged at low level (7m below the work)	- Inflatable injury prevention systems e.g. air jackets - Other personal protective equipment not normally associated with fall protection e.g. lifejackets for work over water
Lowest	Work equipment which does neither - (ladders, step ladders, hop-ups, trestles etc.)	Instruction, supervision and training of users to minimize the risk of them suffering a fall.	

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5. Training and Supervision

Any person undertaking work at height must be suitably trained to understand the risks, the safe system of work and safe use of any work equipment.

- A general work at height course highlighting the risks and general precautions
- The use of safety harnesses and personal fall protection equipment. Mandatory when this type of equipment is used
- Relevant IPAF training or similar (CPCS) when using MEWPs
- PASMA for the erection of alloy towers
- FASET Training for netting installations
- IRATA Rope access and Abseiling

All works at height must be supervised by a competent person; the level of supervision (continual or at regular intervals etc) will be dependent on the level of risk.

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6. Work at Height and Edge Protection Plan

6.1 Design

Have designers considered working at height?

Can we influence design safety?

Areas of design	Improvement to safety during construction phase
Groundworks/ Excavations	Edge protection to openings with signage
Scaffold	- Access and loading loading for building of envelope and roof - Edge protection to first floor stair openings - Edge proection to apartment block roofs - Haki stair type system for scaffold
Internal fitout WAH equipment (Podiums and mobile towers)	Access equipment for internal fitout works
NO HOP UPS	

6.2 Project Specific Information - Demolition

Demolition Risk consideration	Details of groundwork's working at height and protection measures
Details of working at height protection measures e.g. scaffold protection: Exclusion Zones during demolition	Not applicable

6.3 Project Specific Information - Groundworks

Note; Project Specific Information for tower cranes will be contained In the Tower Crane Procurement Document

Groundwork's	Details of groundwork's working at height and protection Measures
Details of proposed working at height control measures during	- Potentially use scaffold A-Frame handrails to areas of trenches that will be left open for long periods of time - Crowd barrier signed up relevantly with ladder/ trench

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groundwork's eg handrails: suitable
entry exit to excavations

stairs(where applicable)

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6.4 Project Specific Information - Frame Construction

Frame	Details; scope and formwork system considerations
Reinforced Concrete (RC) Frame	Not applicable
Steel Frame	Not applicable
Timber Frame	Please talk to your SHE Advisor when considering protection measures for Timber Frame Buildings Not applicable
Traditional Brick & Block	- Built off scaffold - Internal and external skins of brick and blockwork with cavities - Internal scaffold edge protection
Refurbishment	Not applicable
Other	Not applicable

6.5 Frame Installation Method

Frame	Details and scope and formwork system considerations
RC Frame: Slip / jump - Form cores and traditional false-work	Not applicable
RC Frame traditional false-work	Not applicable
Steel Frame erected via: • Craneage • MEWPS	Not applicable
Refurbishment of existing Frame / Cladding	Not applicable
Other	Traditionally built brick and blockwork houses and apartments with progressive system scaffold

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6.6 Edge Protection / Falling Material Control measures during Frame erection

Note; The anchor system securing the edge protection to the slab must have structural engineers approval and where necessary have pull out tests to 10% of anchors to prove integrity - please liaise with your SHE Advisor:

Mesh Barrier Systems: Concrete Frame Applications	Mesh barrier edge protection systems are fall prevention systems that offer a high level of protection through a full mesh-in-filled guardrail and a performance-tested design to BS EN13374. Toe-boards are typically integral to each panel.
Comments: To be used or similar during frame construction period	
Mesh Barrier Systems: Steel Frame Applications	It is important that protection is in place at the earliest stage; equipment is available which can be clamped, bolted or welded to the leading edge steelwork. The fixing of these components can be done prior to construction, or by means of telescopic/ articulating booms or similar to avoid operatives working in more exposed conditions
Comments: Not applicable	
Net Barrier systems	Net barrier systems are typically used with steep or curving roofs and also in large bay-sized industrial roofs where the ability to meet the static test deflection criteria of Class A and B is complicated by the bay size.
Comments: Not applicable	
Refurbishment	Ensure all penetrations, open apertures and leading edges are suitably protected to prevent materials or people falling. Consider edge protection to parapets and balconies.
Comments: Not applicable	
Roof work	Ensure a safe system of work and suitable protection measures are in place for works on or adjacent to fragile roofs and roof lights. Ensure materials and people cannot fall from edges or through roofs and consult your SHE Advisor when working on pitched roofs in excess of 400 as edge protection will require additional design.
Comments: - Scaffold handrails to gable ends of properties for roofers	

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Other Edge Protection / Falling Material Control measures

Comments:

- Due to the houses and apartments being a maximum of 2 stories high and scaffold being progressively build, the falling of materials is not seen as a major issue
- End of day checks and weekly scaffold checks will be done as normal so as to ensure loose materials are not left on high level flat areas or overloaded

6.7 Edge Protection / Falling Material Control measures during Refurbishment, Frame erection and Roof work

Roofing Free Standing Systems

Free standing weighted edge protection systems are designed to comply with the Class A requirements of BS EN 13374. These systems derive their support from weighted components, fixed to lever arms and connected in turn to barrier frames at the edge of the building. You will need Wates temporary works engineer approval prior to utilising this product.

Comments:

Not applicable

Climbing Screen Protection systems

Storey height climbing screen protection systems enclose the perimeter of the building by means of mesh or plywood screens. Vertically, the screens cover between 2 1/2 to 3 1/4 floors in height and are built in sections, horizontally, and then crane handled, vertically, into position as the concrete frame structure progresses.

Comments:

Not applicable

Tubular Guardrail solutions

Traditional scaffold tube and fittings.
Purpose-designed clamp on systems.

Comments:

- As part of scaffold erected for building of houses and apartments envelopes and roofs
- Double guardrail edge protection to roof gable ends
- Potential double guardrail A-frames to excavation openings that will be left open for long periods of time

6.8 Further Risk Considerations

Frame

Details and scope and formwork system considerations

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Manual Handling	- Materials and Deliveries etc to be taken as close as possible to the working area to ensure manual handling is reduced as much as physically practicable - Mechanical lifting equipment to be used (forklifts, pallet trucks, etc) to ensure unnecessary and excessive manual handling is reduced - Manual handling assessments will be required for all types of manual handling
Inadequate working space	Not applicable
Inadequate access to height	- MEWP's, Scissor lifts and other forms of mechanically operated WAH equipment may be used following scaffold strikes for snagging and desnagging works
Lifting and lowering of loads	- To be carried out by forklift trucks - To be carried out by delivery supplier offsites - To be carried out by pallet trucks
Plant and machinery operator competence	- Operatives to have the suitable CSCS, CPCS and IPAF cards as required for the intended tasks
Structural integrity	Not applicable
Other	Not applicable

6.9 Safe Systems of Work

All edge protection activities shall be undertaken in accordance with a safe system of work ensuring that hazards are eliminated, or otherwise minimised, by the application of appropriate control measures. It has been estimated that at least a quarter of all accidents at work involve failures in systems of work. Therefore, it is essential that the entire process of edge protection erection and dismantling, including all associated activities, such as storage and material handling, is covered by a comprehensive system of work.

Safe systems of Work, Competency and Quality	
Quality: <i>What quality system is in place to ensure equipment arrives on site in good condition? EG – quality system to ensure falsework props beams are in robust condition;</i>	- Plant and machinery to be inspected by the relevant supervisor/ manager upon delivery for condition of fitness and arrival with instruction manuals and certificates - Scaffold and all its components to be checked for quality during erection and monitored during normal use of scaffold and during weekly checks

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Can any of the proposed work at height be avoided by changing the procedures? <i>Pre-fabrication / off site / assembly at ground level, etc.</i>	Not applicable
Tool tethering requirements	Not applicable
All operatives are required to be competent in the erection; dismantling and inspection of edge protection systems.	Details: • evidence of competence to install the edge protection system • evidence of competence to inspect the edge protection system • evidence to use any access or lifting equipment As above with relevant evidence of checks
Have you considered access to the elevated position? <i>Is there anything stopping the installation of primary stair access?</i>	Not applicable
What is the most practicable type of access equipment for this work? • Hoist • Mobile elevating work platforms (MEWP) • Towers • Scaffold • Ladders	Scaffold
Are there other factors that could affect the safety of the workers or of others from falls or falling objects? • Working over or near water • Working over or near traffic • Or close proximity to live Machinery / hoists • Working over or near public areas • Working over or near excavations	Not applicable
Is the work likely to be affected by the weather conditions?	Scaffolds to be checked during and after abnormal weather conditions
If the work is to be carried out in hours of darkness, what lighting requirements are need to be installed?	- Internal fitout works will require task lighting by Wates in the main walkway and communal access and egress routes - Task specific task lighting is to be supplied by the contractor - External lighting on hoardings, walkways and welfare areas will be provided Click here to enter text.
Are there any activities which require enhanced supervision; <i>For example: Flying tables, slip form.</i>	Not applicable
What methods of evacuation need to be in place to Ensure a safe rescue in the event of an emergency?	As per site specific emergency and evacuation processes

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7. Work at Height – Edge Protection Tender Settlement Review

To be completed at Tender Settlement and Signed off by Operations Director

Tender Settlement: ???	Date: ???	Project: ???
Operations Director: ???	SHE Advisor: ???	Bid Lead: ???

Question	Yes	No	Action
Has the hierarchy of fall protection been followed, for example when selecting work platform and equipment?	☒	☐	Click here to enter text.
Have the ground conditions been adequately assessed?	☐	☒	Outstanding
Has safe provision been made for power?	☐	☒	Outstanding
Have lifting arrangements been adequately considered? E.g. Crane, Hoist	☒	☐	
Has adequate lighting been considered?	☒	☐	Click here to enter text.
Will work take place over / adjacent water? If yes, are additional precautions adequate?	☐	☒	Click here to enter text.
Is work likely to be affected by extreme weather? If yes, are adequate precautions specified?	☒	☐	To be completed when on site. Open exposed site will attract high winds and potentially affect scaffold and brick/ block walls
Are there other activities or process in the area that could give rise to risks? If yes have adequate precaution / preventative measures been specified?	☐	☒	Click here to enter text.
Is the level of Wates supervision suitable and competent?	☒	☐	Supervision on site will be kept in line with site production requirements
Have those involved received appropriate training?	☐	☐	To be monitored by Wates management when on site
Have adequate precautions been specified to	☒	☐	- Scaffolders to wear

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prevent the fall of materials / objects or where this is not reasonably practical measures to prevent injury due to falls of items, examples may include lanyards and exclusion zones etc?			harnesses - Exclusion zones to be setup around excavations - Exclusion zones and banksmen to be in place during high level forklift operations
Has the safe storage of any material at height and or on the work platform been adequacy addressed, including the prevention of items falling or being blown over?	☒	☐	- No materials will be stored on scaffolds for long amounts of times - Materials that will be on loading bays are to be safely stacked/ stored
Other Considerations:	☐	☒	Click here to enter text.

8. Work at Height – Edge Protection Plan Sign off

Declaration;

I am satisfied that the risks regarding working at height have been adequately considered and the appropriate control measures have been put in place.

	<i>Name</i>	<i>Signature</i>	<i>Date</i>
Bid Lead	Matt Smith	Click here to enter text.	Click here to enter text.
SHE Advisor	Martin Glover	Click here to enter text.	Click here to enter text.
Operations Director	Lee Bushell	Click here to enter text.	Click here to enter text.
Commercial Lead	Anthony Fisher	Click here to enter text.	Click here to enter text.

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Summary

This Working at Height and Edge Protection Plan does not offer an exhaustive list of risks when working at height. We must ensure all working at height risks are appropriately assessed and a suitable safe system of work put in to place to prevent persons falling or materials falling and seriously injuring people. Please contact your SHE Advisor for further guidance.