

SRM Minimum Standards

Lifting & Rigging operations for subcontractors

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¹A lifting appliance, for the purposes of this document, is a machine or device that can raise, lower, or suspend a load, with or without horizontal movement. Examples of lifting appliances include cranes, hoists, jacks, and forklifts

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1. Introduction

This document details the scope of lifting & rigging operation requirements when working on Sir Robert McAlpine projects.

The document is intended to provide information to trade/sub-contractors to ensure that they make adequate provision for planning and managing lifting operations on site.

Although this document provides outline requirements to meet SRM standards for lifting & rigging operations, the sub-contractor shall make their own assessment of actual requirements based upon the complexity of the operations.

This will affect the choice of equipment, level of detail required in plans, the planning process and the on-site supervision.

2. Categorisation of lifting operations

There are 3 categories of lift²: basic, intermediate, and complex:

- **Basic** – a known weight, or a weight easily estimated with no significant environmental hazards
- **Intermediate** – there are some hazards, or significant hazards, in the working area of the crane or on the access route for the equipment.

Note:
All pick and carry operations will be classed, as a minimum, as intermediate

- **Complex** – a complex load being lifted including: all man-riding operations, multi-crane lifts or where there are exceptional hazards where the lifting operation is taking place. Complex lifting requires a competent AP to be in attendance or a suitably competent person i.e. experienced crane supervisor with the appointed person present on project, provided the lift plan permits this.

See following table for non-exhaustive samples of lift categorisation:

Load Hazards:		
Basic	Intermediate	Complex
<ul style="list-style-type: none"> ▪ Standard slinging arrangement ▪ Controlled environment ▪ Centre of gravity easily identified/estimated or known ▪ Known weight or easily estimated weight 	<ul style="list-style-type: none"> ▪ Non- standard loads ▪ Defined slinging arrangements ▪ Unknown centre of gravity ▪ Higher centre of gravity, where there is a risk of load instability ▪ Difficult Access to load ▪ Sharp edges ▪ Delicate or fragile loads ▪ Load requires rotation (use of single appliance) ▪ Pick and carry operations ▪ Blind lifting operations ▪ IBC's 	<ul style="list-style-type: none"> ▪ Lifting of persons ▪ Centre of gravity unknown ▪ Hot temperature of load ▪ Unsecured elements ▪ Multiple crane lifting ('Tandem Lift') ▪ High surface area or high drag coefficient ▪ Arial load transfer ▪ Complex load shapes ▪ Complex or nonstandard lifting arrangements ▪ Engineering input required ▪ Floating platform/loads ▪ Lifting associated with high temperatures (smelting) or radiation.
Environmental Hazards:		
<ul style="list-style-type: none"> ▪ Lifting equipment used from a fixed position ▪ Controlled environment ▪ Firm level ground ▪ Clear visibility of load and load path 	<ul style="list-style-type: none"> ▪ Adverse weather conditions ▪ Confined or limited area(s) of lifting operation. ▪ Public walkways ▪ Access to sling point via work at height 	<ul style="list-style-type: none"> ▪ Power lines overhead & underground ▪ Extreme weather conditions ▪ Sea state needing to be considered ▪ Obscured load path ▪ Uneven and or unstable ground

Note:

Lifting operations using construction hoists, pallets on telehandler forks, will be 'Basic' and as such the operator will act as their own supervisor or an area black hat / supervisor can be utilised.

² BS7121 part 1 provides more detail on the classification of lift categories.

The individual's employer will still have responsibility to ensure that they are working to an approved lift plan.

Lift Category - Complexity of the lifting operation

The category into which a particular lift will fall depends on the assessment of the hazards associated with both the **environment** in which the lift is to be carried out, and those associated with the **load and lifting equipment**.

As part of the planning process for each lifting operation, the environmental and load/lifting appliance & accessory complexities should be evaluated and categorised as either 1 (low), 2 (medium) or 3 (high).

<i>Environmental complexity [E in tables following]</i>	3	Complex	Complex	Complex
	2	Intermediate	Intermediate	Complex
	1	Basic	Intermediate	Complex
		1	2	3
<i>Load/Lifting equipment complexity [L in tables following]</i>				

This will then enable the complexity of the lift to be established, as shown in the examples in the tables below.

Please note:

Increases in either or both environmental or load complexity will lead to the lift being allocated a higher category.

Having identified the hazards associated with a particular lift, a hierarchy of control measures should be applied to eliminate or control those hazards.

Table 1. Shows an example of an increasing environmental complexity while the load/equipment complexity remains low.

Complexity variables and constants	Lift category		
	Basic	Intermediate	Complex
Increasing environmental complexity	The operator has clear sight of the load path, and the load is to be placed on the ground.	The load is to be placed over an obstruction such that the operator might not have clear sight (blind lifting) of the landing area from the control position	The load is to be placed into an area of limited space behind an existing structure, without line of sight, and with proximity hazards, such as scaffolding or overhead power lines
Constant low load/lifting equipment complexity	A load of known weight with designated top lifting points or standard lifting arrangement and a central centre of gravity.		
	E = 1 & L = 1	E = 2 & L = 1	E = 3 & L = 1

Table 2. Shows an example of an increasing load/equipment complexity while the load/equipment complexity remains low.

Complexity variables and constants	Lift category		
	Basic	Intermediate	Complex
Increasing load/lifting equipment complexity	A load of known weight with designated top lifting points or standard lifting arrangement and a central centre of gravity.	A load of estimated weight not easily identified with an estimated centre of gravity and without designated lifting points.	A load of estimated weight and centre of gravity and without designated lifting points.
Constant low environmental complexity	The operator has clear sight of the load path, and the load is lifted to and from the ground in a controlled environment		
	E = 1 & L = 1	E = 1 & L = 2	E = 1 & L = 3

3. Personnel competency requirements

a) General lifting operations:

The sub-contractor or supply chain partner is required to demonstrate that their personnel have the correct accredited training from a recognised training body.

Operatives must show evidence of knowledge, training, & experience in their relevant competency.

All operatives undertaking lifting operations shall be appointed to their role.

Trade/Sub-Contractor Roles to be appointed:

- Appointed Person – [CPCS A61 Lifting operations](#) –Trained or Competent
- Crane Coordinator - [CPCS A62 Crane Supervisor](#) – Trained or Competent
- Crane Supervisor/Lifting Supervisor – [CPCS A62 Crane Supervisor](#) – Trained or Competent
- Slinger-Signaller - [CPCS A40 a/b³](#) or [NPORS Slinger Signaller \(N402\)⁴](#) Trained or Competent

Please note:

CSCS Steel Erector slinger accreditation will not be accepted for the control of lifting operations i.e. directing Tower/Mobile/Crawler cranes. An in date CPCS/NPORS card as stated above is required.

Appointments within sub-contractor lifting teams:

Sub-contractors will formally appoint all appointed persons, lift supervisors & crane coordinators in writing and issue to the Sir Robert McAlpine project appointed person.

Where the sub-contractor uses Sub-Sub-Contractors, they are responsible for reviewing all lift plans internally by an Appointed Person prior to submission to Sir Robert McAlpine.

³ When booking personnel on the A40 course ensure that the A40a accreditation is selected where the slinger is to work in a pick and carry scenario

⁴ Please note that NPORS accreditation will only be accepted with a CSCS logo imprinted on the card

Competency matrix when planning lifting operations

The following table shows the minimum accreditation to be held by lift teams through different compositions & categorisations.

The lifting complexity is described across the top line...

Lifting Operation Complexity:	Basic			Intermediate			Complex (subject to a High Risk Review workshop)	
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...with the various lifting team compositions listed in the columns below the second line.

Lift team composition scenario:	A	B	C	A	B	C	A	B
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 Denotes 'Trained' or red card

 Denotes 'Competent' or blue card

Minimum competency level required in relation to complexity of general lifting operations								
Lifting Operation Complexity:	Basic			Intermediate			Complex (subject to a High Risk Review workshop)	
Lift team composition scenario:	A	B	C	A	B	C	A	B
Sub-contractor internally reviewing appointed person level of competency:	Not applicable: Review by Sir Robert McAlpine appointed person			CPCS A61 – 'Competent' (Blue) if the authoring appointed person is 'Trained' – Red			Not applicable: Review by Sir Robert McAlpine appointed person	
Authoring appointed person ⁵ :								
Appliance operator:								
Crane supervisor:								
Slinger-signaller:								
Notes:	<p><i>The stated criteria represent a mandatory minimum requirement. All accreditation is subject to the final decision of Sir Robert McAlpine Appointed Person.</i></p> <ul style="list-style-type: none"> ▪ <i>The appointed person must only plan lifting operations they are capable of doing and where they have the required knowledge, training & experience to do so.</i> ▪ <i>Personnel with blue card competencies can be used where red cards are shown in the above table, but not vice versa</i> ▪ <i>Lift team compositions where all operatives involved with practical operations are 'Trained', or red, only are not permitted.</i> 							

⁵ Appointed persons with the ALLMI Appointed Person course accreditation can only create lifting plans attending to Lorry Loader operations. When planning 'Complex' operations with this accreditation, the operation is subject to a 'High Risk Review' workshop & the appointed person must only plan lifting operations they are capable of doing and that they have the required knowledge, training & experience to do so.

b) Rigging operations:

Rigging operations include the following:

- Vertical lifting with manual or powered chain hoists.
- Vertical lifting with material lifters, A-Frame gantries.
- Horizontal movements with transport skates, tifors, lever hoists.
- Bespoke attachment to structural beams via bolted lifting eyes or girder trolley / beam clamps.

Note:

Where chain blocks or other lifting appliances are attached to structural steel or precast concrete elements, a temporary work's design (including calculations) and permit to load must be issued by SRM before commencing any activity.

Minimum level of competency required:

'Basic' rigging operations:

Where the rigging operation is categorised as 'Basic', the appointed person creating the rigging plan shall demonstrate a thorough knowledge in the safe use of all appliance(s) and ancillary equipment/accessories utilised in the rigging operation with the A61 accreditation being sufficient for the planned works.

Operatives involved in the practical implementation of these lifting operations would be required to have undergone a familiarisation (where applicable) on the appliances utilised.

'Intermediate' rigging operations:

Where the rigging operation is classed as 'Intermediate' the rigging plan shall be internally reviewed by the sub-contractor with the internally reviewing appointed person holding the [NPORS N046 Rigging and Fleeting Loads-Lift Planner](#) accreditation.

Supervision required for 'Intermediate' rigging operations would hold the CPCS A62 Crane Supervisor as a minimum.

Operatives involved in the practical implementation of these lifting operations shall be familiarised (where applicable) on the appliances utilised & hold the NPORS N047 rigging and fleeting loads qualification 'trained' or 'competent' or Opito Stage 03 dependant on their role in the lifting operation, and type of ancillary device being utilised.

'Complex' rigging operations:

Where the rigging operation is classed as 'Complex' then the operation shall be subject to a 'High-Risk Activity Workshop' ⁶ with the person who creates the rigging plan holding the NPORS N046 Rigging and Fleeting Loads-Lift Planner 'competent' accreditation.

Operatives undertaking these categorised lifting operations shall hold the NPORS N047 rigging and fleeting loads 'trained' or 'competent' dependant on their role in the lifting operation⁷ and type of ancillary device being utilised.

⁶ During this work shop the accreditations of the operatives enacting the rigging plan will be reviewed with the rigging supervisor holding the NPORS N047 rigging and fleeting loads 'competent' accreditation and A62 Crane supervisor as a minimum requirement.

⁷ Sub-contractors are to seek advice from the SRM project appointed person when in doubt of any accreditation requirements involving in these rigging operations

Competency matrix for rigging operations:

The following table shows the minimum accreditation to be held by lift teams through different compositions & categorisations of rigging operations

Minimum competencies required in relation to complexity of planned rigging operation			
Required competency: Rigging operation complexity:	Basic	Intermediate (categorisation subject to Sir Robert McAlpine appointed person review)	Complex (subject to a High-Risk Review workshop)
Sub-contractor internally reviewing appointed person accreditation:	Not applicable: Review by Sir Robert McAlpine appointed person	CPCS A61 – ‘Competent’ (Blue) & NPORS N046 - ‘Competent’	CPCS A61 – ‘Competent’ (Blue) & NPORS N046 - ‘Competent’
Authoring appointed person accreditation:	CPCS A61 – ‘Competent’ (Blue)	CPCS A61 – ‘Competent’ (Blue)	CPCS A61 – ‘Competent’ (Blue) & NPORS N046 - ‘Competent’
Rigging operation supervisor accreditation:	CPCS A62 – ‘Competent’ (Blue) with all appliances specific familiarisation	CPCS A62 – ‘Competent’ (Blue) &/or NPORS N047 – ‘Competent’ with all appliances specific familiarisation	CPCS A62 – ‘Competent’ (Blue) as a minimum &/or NPORS N047 – ‘Competent’ with all appliances specific familiarisation
Practical rigging operative accreditation:	Appliance operated specific familiarisation*	NPORS N047 – ‘Trained’ or ‘Competent’ with appliance operated specific familiarisation*	NPORS N046 – ‘Competent’ with appliance operated specific familiarisation*
Notes:	<p><i>* Opito accreditation: Opito Stage 03 & 04 are acceptable when the operative is utilised in the practical element of a ‘Basic’, ‘Intermediate’ & ‘Complex’ rigging operation rigging operation.</i></p> <p><i>ECITB-ACE Level 2 card: ECITB can provide ACE card training, which would be acceptable, but is not mandated here.</i></p>		

c) Elevator (Lift) Installation activities:

Elevator (Lift) installers are exempt from the table above whilst reviews of the elevator manufacturer training and competence assessment is undertaken. Refer to the status of this with the project appointed person for lifting operations.

Notwithstanding the above, it is a legal requirement that anyone using a piece of lifting equipment or lifting accessory is formally trained to use it and has been familiarised in the use of the specific make/model.

A competent supervisor may familiarise an operative in the use of equipment, provided they have evidence of being familiarised by a supplier.

Weekly checks on all lifting equipment and lifting accessories must be undertaken by a competent person, who may be the supervisor, and keep a written or electronic record of them.

Daily checks; pre-use and during use, shall also be required.

The appointed person shall review the elevator(lift) package proposals and advise where additional information is required to confirm that installation(s) are planned by a competent person, appropriately supervised and that there is a competent work force.

d) Mobile Elevated Work Platforms (MEWPs) accreditation requirements:

The sub-contractor must ensure that their operatives have the correct category of training for the MEWP they are operating.

Each sub-contractor using MEWP shall appoint a MEWP manager / coordinator
These MEWP managers or coordinators shall hold the following accreditation:

- **MM: MEWPs for Managers**

MEWP operators must demonstrate general training as well as familiarisation in the specific equipment specific they are using via the IPAF app⁸, including holding a copy of the relevant competency accreditations relative to the model and type of MEWP to be operated.

- **1a: Static vertical** - Vertical personnel platforms (static)
- **1b, 1b+: Static boom** - Self-propelled booms (with outriggers), trailers, vehicle-mounted platforms
- **3a, 3a+: Mobile vertical** - Scissor lifts, vertical personnel platforms (mobile)
- **3b, 3b+: Mobile boom** - Self-propelled booms
- **PAV: Push Around Vertical**⁹ - Push around verticals
- **SPECIAL: Special** - Specialist machines
- **MCWP¹⁰**: Mast Climbing Work Platforms
- **IAD: Insulated Aerial Devices**
- **GH: Goods Hoist**
- **PH: Passenger hoist**
- **TPH: Transport Platform**

Where there is an overhead crushing hazard that cannot be eliminated, MEWPs shall be equipped with secondary guarding.

Type 3b machines shall have a 'Harness on' or similar system as an assurance of compliance for the required use of harness.

A dedicated ground attendant in the vicinity of the MEWP will be utilised in all MEWP operations.

Further requirements are given in the [HS&W Minimum Standards](#) including medicals amongst other matters.

⁸ Google Play store [link](#), Apple store [link](#)

⁹ PAV training can be demonstrated by familiarisation from a competent person

¹⁰ No MCWP use is permitted without consultation and express permission of the Head of McAlpine Lifting Solutions. Please discuss proposal with the project team who will arrange a meeting with the Head of MLS.

4. SRM Minimum Standards

SRM Minimum Lifting & HS&W Standards:

Lifting operations must adhere to the following:

- All lifting personnel must be SRM lifting inducted;
- Adhere to the SRM minimum standards for rigging and lifting for subcontractors;
- SRM issued Lifting Information Alerts;¹¹
- Attendance by either the appointed person or lift supervisor of the subcontractor to:
 - I. The daily coordination meeting
 - II. The monthly lift team meetings

5. Appliances, including cranes, rigging appliances & attachments for MEWPs

Lifting appliance refers to all items of plant used to lift or move a load both vertically and horizontally. All of the below ¹² listed items must have a lift plan prepared by an appointed person and reviewed as per 'Competency matrix when planning lifting operations' table.

Note:

For rigging appliances see the 'Competency matrix for rigging operations' table on [page 5](#).

a) Lifting appliances: [non-exhaustive]

- Tower cranes – All types (inclusive of Self Erectors)
- Mobile cranes – All types
- Mini cranes (Spider)
- Tracked & Wheeled excavators¹³
- Telehandlers – All types (inclusive of suspended loads)
- Construction hoists, transport platforms, MCWPs
- Lorry loader cranes
- 360 Roto telehandlers
- Forklift truck
- Overhead gantry cranes
- MEWPs including truck mounts

b) Specialist appliances: [non-exhaustive]

- Lift & Lock systems
- Self-Propelled Modular Transport (SPMT)
- Container lifter (reach stacker)
- Load platform (scissor)

c) Rigging appliances: [non- exhaustive]

- Mobile aluminium gantries
- Lever hoists
- Jacking systems
- Tirfors
- Chain block/hoists (manual and powered)
- Beam clamps
- Transportation skates – All types

¹¹ Copies of the Lifting information alerts will be provided to the sub-contractor/supply chain partner prior to works commencing on the project by the SRM appointed person / SRM roving appointed person.

¹² If in any doubt as to whether a lift plan is required, the subcontractor is to seek advice from the SRM appointed person

¹³ For guidance on excavator lifting operations see CPA publication '[Lifting operations with 180 – 360 excavators](#)' & reference the SRM document 'Guide to Excavator lift planning'

d) MEWPs: [non-exhaustive]

Although MEWPs are primarily used for lifting persons there are attachments available that allow materials to be carried on the MEWP structure. These operations would require a separate lift plan along with MEWP manufacturer confirmation that using the attachment does not compromise the safe operation of the MEWP.

MEWP attachments shall be used where possible to assist in handling loads, but these shall be risk assessed, and specific familiarisation provided - a non-exhaustive list is supplied below.

- Skyraks
- Material or board carriers for all types of scissors
- Pipe cradles
- Basket nets

Activating the emergency stop on a MEWP must not disable the safety related parts of the machine's control system such as overload monitoring, inclination monitoring, stabiliser / outrigger monitoring. The subcontractor should discuss this with the MEWP supplier.

6. Risk Analysis

The Management of Health and Safety at Work Regulations require employers to carry out risk assessments for all work activities, including lifting operations.

- a) These risk assessments should:
 - I. Identify the hazards, which are anything that could cause injury, illness or a dangerous occurrence.
 - II. Decide how likely it is that someone could be harmed by a hazard, and how serious it would be if they were.
 - III. Decide how likely it is that other plant, temporary or permanent structures could be damaged by part of the operation and how serious it would be.
 - IV. Detail the action required to eliminate the hazard or reduce and control the risk.

When preparing risk assessments, as a minimum, the risks to be assessed should include (where relevant):

- The competence of those planning, those supervising and those carrying out the lifting operation.
- The siting of the equipment and any temporary works or checks to be carried out.
- Failure or collapse of equipment.
- Failure of accessories
- Loss of load.
- All environmental hazards/risks relevant to the lifting operation.
- Situational awareness of lift team – *Hands Off, Step Away, Safe Space!*, including exclusion zones and restricted access zones
- Entrapment of hands, arms, and clothing in lifting appliances / accessories etc.
- Site coordination and interface, including members of the public and other operatives not directly involved in the operation.
- All access & egress elements of the operation.
- All work at height included in the works to be carried out.
- Rescue plan (where required).

- How delivery and collection of plant and materials shall be controlled- unloading and any vertical and horizontal transportation.

Note:

The risk assessment shall specifically address how materials are to be unloaded on site with an emphasis that goods loaded, i.e. shipping containers, articulated vehicles etc., can be unloaded safely on site. This includes selection of the correct type of pallet (with bottom deck boards) where there is a risk of instability of loads on forks during unloading and transportation. Where the subcontractor notes a risk that they cannot mitigate, this should be communicated to SRM.

b) Material movement Sheet:

Sir Robert McAlpine uses a 'Material Movement Review Sheet' which provides a means for the subcontractor to communicate the subcontractor's requirements for materials handling. This form is available from Sir Robert McAlpine lifting teams & package managers. It is used to communicate weight & configuration of loads as well as slinging arrangements required, prior to a delivery arriving to site.

The document's primary purpose is to identify hazards and eliminate/mitigate risks involved in abnormal loads and not general every day lifting of items, as these would be covered in schedule of lifts for various appliances.

However, if projects find that they are having issues with consistently unannounced or problematic deliveries from a sub-contractor or a supply chain partner, then the review sheet will be utilised to ensure that the sub-contractor/supply chain partner delivers items that are ready to be moved in a safe manner.

If items arrive to the project where this is not the case, the delivery will be rejected and will be taken away, until all issues identified have been resolved prior to return to the project.

7. Lift Planning

All lifting / rigging operations must be planned by a trained and competent appointed person that has relevant knowledge and experience as per section 2. Personnel competency.

Lift plans will require a 14-day review period¹⁴. Within the 14 days, the SRM appointed person will review, make comment (if needed) and send an acceptance or rejection email of the lift plan, along with the reasons for the decision. Where revisions and management of change alterations are needed to a lift plan, this can be reviewed within a shorter period.

Note:

The SRM appointed person will not have responsibility for the sub-contractor/supply chain lift plan, that responsibility will rest with their appointed person.

¹⁴ Lift plans must be submitted to SRM for review a minimum of '14 days prior to the activity commencing' - Ref: HS&W Minimum Standards.

Minimum requirements for planning:

The following is a minimum standard expected:

1. All lifting operations must be submitted in a lift plan/rigging plan document that is separate from any associated RAMS. Any associated RAMS should be referenced within the lift plan/rigging plan document;¹⁵
2. Produce lifting plans using either the SRM lift plan templates or their own template as long as it meets the requirements of the SRM Lift Plan Review template (available from the project appointed person).
3. All lift plans and rigging plans must include a risk assessment that identifies the major risks to the operation. Standardised or generic risk assessments will not be accepted, as these should be covered within the general RAMS document;
4. All lift plans & rigging plans ¹⁶ are to be written by a CPCS A61 accredited 'Trained' or 'Competent' person;
5. All lift plans shall include a copy of the front and back of the AP's accreditation for the person writing the lift plan and the person reviewing the lift plan.
6. Lift plans submitted should have clear headings throughout the document to enable an efficient review by SRM.

Any documents that are confused, ill thought out and overly long will be rejected. The document shall be easily read and easily briefed to the lifting team.

Lift plans & rigging plans to cover as a minimum:

- Where the lifting/rigging operations are taking place and an awareness of any risks associated with that location.
- List the appliances that are being utilised with reference to make/model etc. Only show the duties and configurations required to be used by the appliance in the lift plan.
- Composition of the lifting team required on site and method of communication.
- Exclusion and restricted access zones, including how they are to be marshalled / barriered.
- Lift plan to contain any loading imposed on temporary works or supporting surface that is required to support the lifting appliance. This shall be in a concise and clear format. Reference should be made to any anchor points and the testing thereof, angles of lift through the raising and fleeting process, selection of the appropriate equipment including familiarisation of operatives using the appliance.
- The SRM temporary works permit to load shall be in operation for lifting operations i.e. track bearing pressures, outrigger bearing pressures, temporary attachment to structures;

¹⁵ Any methodologies or reference to temporary works required by the lifting operation must be included in the lift plan, along with a sequenced method statement for the lifting operation

¹⁶ For specific requirements for rigging plans see the '[Competency matrix for rigging operations](#)'

- Detailed method statement for the lifting operation including initial conditions prior to set-up or lifting, the method of lifting and final removal from the work area of all appliances, accessories & ancillary equipment.
- A numbered schedule ¹⁷of lifts that will include:
 - I. Description of load
 - II. Dimensions of load
 - III. Net weight of load and gross weight of load (the gross weight of the load includes accessories, and any ancillary equipment used)
 - IV. Calculations for each load of the accessories used in their stated configuration.
 - V. The [lift classification](#)
 - VI. Pictorial imagery to show lifting methodology that is relevant to the methodology stated.
 - VII. Lift/load/environmental specific safe considerations.

Note:

The subcontractor is to keep a register of lift plans, including records of regular reviews and submittals. These reviews must not exceed 3 months as per HS&W minimum standards.

7. Where the lifting of personnel by crane is anticipated then this operation will be detailed in a separate lift plan and will be subject to a 'High-Risk Activity Workshop' & can only be carried out after acceptance by SRM. It is preferred that MEWPs incl. truck mounted platforms are prioritised due to the easier rescue from height.
8. Not deviate from the manufacturer's equipment specifications, limitations and safe use requirements
9. Not deviate from the lift plan;

Note:

If deviation cannot be avoided, works must stop, and a management of change is applied.

This must be in writing, approved, and countersigned by the SRM appointed person;

10. Where practicable lift plans should include the RoTE (report of thorough examination) for the appliance used in the lift / rigging plan. If this is not possible the RoTE must be issued to the SRM appointed person, or SRM lift supervisor responsible for overwatch of the operation, prior to work commencing.
11. Where lifting reinforcement cages, then a 'Safe Lifting of Reinforcement Cages Check' will need to be completed & an identifying 'Safe to lift' tag attached ¹⁸
12. Teams must be briefed on the lifting plan and operation and must have a clear understanding of the task undertaken. The briefing shall be signed for, along with any re-briefing where approved changes are made to the lift plan;
13. Exclusion zones or restricted access zones must be established and managed by the contracting organisation undertaking the works;

¹⁷ An example 'benchmark' schedule is available for reference in [Appendix 4](#)

¹⁸ Sub-contractors should seek advice on the requirements for lifting cages and the identification of attachment points from the SRM TW Supervisor/Coordinator.

14. ‘Hands off, Step away, Safe space’ to briefed to operatives, with the principals of the initiative being adhered to when handling loads.¹⁹
15. Lifting personnel must receive a daily briefing;

Note:

The SRM Appointed Person(s) will be periodically monitoring the lift teams to ensure that they are working safely and to the agreed plan.

¹⁹ See [Appendix 3](#) for an updated Sir Robert McAlpine version of the ILLPAG *Guidance note*

8. Certification, inspection and maintenance

a) Appliances:

All lifting/rigging ²⁰ appliances must be maintained in line with the manufacturer's specifications, planning, record keeping and reviewing as per LOLER 98 & PUWER 98.

All appliances must be accompanied with a RoTE and/or DoC (declaration of conformity).

If the appliance is used for the lifting of personnel, certification must be within 6 months of the last examination.

Note:

The lifting of people by lorry loader or excavator is not permitted.

If the appliance is not used for lifting personnel, then the certification must be within 12 months of the last examination.

An appliance register will be maintained listing the appliance description i.e. Inclusive of certification number and expiry date.

b) Accessories:

All accessories must be maintained in line with the manufacturer's specifications, planning, record keeping and examination as per LOLER 98 & PUWER 98.

All accessories must have a RoTE and/or DoC (declaration of conformity) within 6 months of last examination.

An accessory register will be maintained listing the accessory description & WLL (i.e. 4 Leg chain sling, 6m long, WLL of 8.4t) inclusive of certification number and expiry date.

All accessories should be identified with a coloured tag that identifies the current inspection period

Note:

Lifting accessories that have been used by excavators or telehandlers are not to be used on other crane related lifting (i.e. Tower/Mobile/Crawler etc.). Such lifting accessories shall be marked with a pink tag to mark them as not for general lifting.

c) MEWPs:

All MEWPs in use on an SRM project shall be properly inspected, thoroughly examined and maintained.

The following documentation must be provided with every MEWP arriving on one of our sites:

- Evidence of an in-date report of thorough examination;
- Manufacturer's machine specific operator manual, relevant to the age of the MEWP;
- Pre-Delivery Inspection sheet;
- If an operator is supplied with the MEWP, then the operator's competency must be checked.
- If operator not supplied with the MEWP, evidence of competence and familiarisation
- Evidence of daily and weekly inspections

²⁰ Rigging equipment, as a minimum requirement, must be within 12 months of the last examination, if beam clamps are used to lift loads as well as suspending lifting equipment, these must be within 6 months of the last examination. The time frame parameter of the RoTE reduces to 3 months for accessories when working near Network Rail.

- Demonstrate a viable rescue plan to SRM, prior to commencing use

9. Environmental Impact

a) Maximum permissible wind speeds:

Lifting appliances should be marked with their maximum permissible working wind speed in which they can safely operate. These wind speeds must never be exceeded.

These winds speeds may need to be reduced (and recorded in lift plans & schedule of lifts) ²¹ when loads;

- become problematic based on the height they are being lifted from or to.
- are of a surface area that could cause a 'windsail' effect
- are of such a weight that it can be affected by the wind and conversely when the load is of such a weight that it will become dangerous & uncontrollable if the wind causes uncontrollable rotation.
- require turning prior to delivery/install.

Note:

There may be components of a lift that require calm conditions to achieve a safe install e.g. cladding panel attachment

- are slung utilising lifting arrangements that are of such a length that could cause a pendulum effect in unsettled conditions.

b) Environmental impact performing maintenance and repairs:

When conducting repairs to hydraulic hoses or fuel/oil leaks on appliances, a safe system of work must be created to prevent any contamination and avoid environmental impact. The plan shall be written down.

See non-exhaustive list below of examples of considerations required when creating a safe system of work.

- Set up spill containment systems, such as trays/plant nappies to capture any leaks or spills during these activities.
- Keep absorbent pads or granules on hand to quickly contain and absorb any spills that may occur during the repair process.
- Carefully disassemble damaged hoses and components to minimize the release of fluids. Use tools and techniques that reduce the risk of spillage.
- Store hydraulic fluids, oils, and fuels in secure, labelled containers to prevent accidental spills. Ensure containers are in good condition and appropriately sealed.

²¹ For further information see [Liebherr - Influence of wind on crane operations](#) & [CPA TCIG 2507 – Planning Control of Lifting operations in Wind v1 July 2025](#)

- Conduct routine inspections of appliances to identify wear and tear on hydraulic hoses and connections, addressing issues before they result in leaks.
- Follow established maintenance protocols to ensure proper handling and disposal of hydraulic fluids and oils.
- Develop an emergency response plan for spills, including immediate steps to take, containment measures, and reporting procedures.
- Ensure that all waste materials, including damaged hoses and contaminated absorbents, are disposed of according to local regulations and environmental guidelines.
- Monitor the area for signs of contamination during and after repairs to assess any potential impacts on the surrounding environment - Establish a reporting system for any incidents.
- Have suitably trained competent personnel, in sufficient numbers, to allow for safe management of environmental impact on projects through the appliance(s) present

c) Environmental impact when refuelling:

When refuelling machinery/appliance, to take specific environmental protection precautions to prevent spills, leaks, and pollution. Key measures to consider are (non-exhaustive):

- Choose a designated, spill-proof area for refuelling that is away from watercourses and sensitive environments.
- Use spill containment trays or berms to catch any drips or spills during the refuelling process.
- Use nozzles with automatic shut-off features to reduce the risk of overfilling and spills.
- Keep refuelling equipment in good condition to prevent leaks and ensure proper function.
- Train personnel on proper refuelling procedures and ensure that refuelling is monitored by trained personnel to quickly address any spills or issues
- Have spill response kits readily available at the refuelling site, including absorbent materials, pads, and disposal bags.
- Avoid refuelling during adverse weather conditions (e.g., heavy rain or high winds) that could increase the risk of spills.
- Dispose of used absorbents and any contaminated materials according to local regulations to prevent further environmental harm.
- Develop and communicate a clear emergency response plan for dealing with spills, including contact information for local environmental authorities.

d) Environmental impact when near watercourses:

When operating machinery/appliances near watercourses or open drainage channels, the sub-contractor/supply chain partner is required to implement environmental protection precautions to minimize potential harm to the ecosystem. Key measures to consider are (non-exhaustive):

- The establishing of buffer zones to limit the proximity of machinery/appliances to watercourses. This will involve maintaining a specified distance where no machinery is allowed.
- Use silt fences, sediment basins, or other erosion control measures to prevent sediment runoff into water bodies.
- Oil and Fuel Spill Prevention - See *previous section*
- Avoid using harmful chemicals near water - If possible, use biodegradable options and ensure proper containment.
- Have suitably trained competent staff, in sufficient numbers, to allow for the safe management of environmental impact on watercourses through the machinery/appliance(s) present.
- Regularly monitor the project for signs of pollution or environmental impact - Establish a reporting system for any incidents.
- Properly dispose of any waste generated by machinery/appliance operations, ensuring it does not enter watercourses.
- Be aware of local wildlife and their habitats - Implement measures to avoid disturbing nesting sites or breeding grounds.
- Prepare and implement an emergency response plan for potential spills or other environmental incidents.

10. Reference documents:

The following links²² are to provide the sub-contractor with an extensive library of industry publications to reference when planning the operations covered in this document.

The Lifting Operations and Lifting Equipment Regulations 1998 - [LOLER 98](#)

Provision and Use of Work Equipment Regulations 1998 - [PUWER 98](#)

British Standard for the safe use of cranes - [BS7121](#)

LEEA Handbook - [Edition 9.1](#)

[Interactive version](#)

The Construction Plant Association - [CPA Website](#)

The Crane Interest Group - [CIG](#)

The Crane Interest Group - [Mobile & Crawler crane guidance](#)

The Tower Crane Interest Group - [TIG](#)

The Plant Safety Group - [Publications](#)

²² Where possible we have tried to include links that will take you straight to the documents referenced and free of charge. Please note that some links require a payment to either download or view and with these links we urge the sub-contractor to contact their HS&W depts. regarding the acquisition of these publications

Appendix 1 – Competency matrix for operating various appliances

Notes for the following table(s):

- *All operatives referenced will require an in-date safety critical medical²³*
- *All lift plans referenced must have been reviewed and authorised by the SRM appointed person with a Category A – Accepted Lift plan review and acceptance document, 07LOS-4FM-17, completed – This acceptance sheet must be attached to the front of the lift plan prior to the lift plan briefing.*
- *Prior to any lifting operation beginning, the lift plan and associated risk assessment must be briefed to all operatives involved, with each operative to sign as a record of confirmation of having understood the contents and parameters of the lift plan*

²³ This does not include the authoring appointed person unless they play an active part in an operation.

Lifting Operations: Summary of lift plan, documentation, and competency requirements for lifting operations					
Lifting appliance type	Mobile crane (inclusive of static and pick and carry duties)	Crawler crane – (fixed and telescopic jibs)	Tower crane - (inclusive of luffing, saddle, 'swan neck' jibs & self-erecting)	Piling Rig	Lorry loader
Competency requirements	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A60a/b/c <u>Crane/Lift Supervisor:</u> CPCS: A62 <u>Slinger/Signaller:</u> CPCS: A40a/b; NPORS: N402 CSCS logo	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A02a/b - above/below 10t <u>Crane/Lift Supervisor:</u> CPCS: A62 <u>Slinger/Signaller:</u> CPCS: A40a/b; NPORS: N402 CSCS logo	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A04a/b/c <u>Crane/Lift Supervisor:</u> CPCS: A62 <u>Slinger/Signaller:</u> CPCS: A40a/b; NPORS: N402 CSCS logo	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A45/46 - driven below/above 20t & A47/48 - bored below/above 20t <u>Crane/Lift Supervisor:</u> CPCS: A62 <u>Slinger/Signaller:</u> CPCS: A40a/b; NPORS: N402 CSCS logo	<u>Authoring appointed Person:</u> CPCS: A61; ALLMI: Appointed Person <u>Appliance Operator:</u> CPCS: A36a/b/c ALLMI: Operator Training <u>Crane/Lift Supervisor:</u> CPCS: A62; ALLMI: Crane Supervisor <u>Slinger/Signaller:</u> CPCS: A40a/b/c ALLMI: Slinger/Signaller
Temporary works and permit to load required	Yes	Yes	Yes	Yes	Yes
Lift Supervision required	Yes	Yes	Yes	Yes	<i>Lift category dependant</i>
Is the lift plan required to be held at operation location and/or within the appliance structure	Yes	Yes	<i>No – To be held in project offices</i>	<i>No – To be held in project office</i>	Yes

Lifting Operations: Summary of lift plan, documentation and competency requirements for lifting operations					
Lifting appliance type	Telehandler	360 Roto telehandler	Rough terrain masted forklift truck	Counter balanced forklift truck	Moffet type forklift truck
²⁴ Competency requirements	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> A17a/b/c; A17e - underslung loads <u>Crane/Lift Supervisor:</u> CPCS: A62 <u>Slinger/Signaller:</u> CPCS: A40a/b/e	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A77c; A77e - underslung loads. <u>Crane/Lift Supervisor:</u> CPCS: A62 <u>Slinger/Signaller:</u> CPCS: A40a/b/e	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A14 Rough Terrain	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A16 RTITB: LTG10-Vehicle mounted LT	<u>Authoring appointed Person:</u> CPCS: A61 <u>Appliance Operator:</u> CPCS: A14 Rough Terrain RTITB: LTG10-Vehicle mounted LT
²⁵ Temporary works and permit to load required	Dependant on working area and configuration of any outriggers to be employed	Dependant on working area and configuration of outriggers to be employed	Dependant on working area	Dependant on working area	Dependant on working area
Lift Supervision required	Not for On-forks duties ----- Yes, for suspended loads and when outriggers employed (if applicable)	Not for On-forks duties ----- Yes, for suspended loads and when outriggers employed	No - Work area black hat is sufficient	No - Work area black hat is sufficient	No - Work area black hat is sufficient
Is the lift plan required to be held at operation location and/or within the appliance structure	Yes	Yes	Yes	Yes	Yes

²⁴ For full list of CPCS categories see [link here](#)

²⁵ If in any doubt as to whether TW's or a permit is required, then check with the SRM TW's supervisor/coordinator or SRM section appointed person

Lifting Operations: Summary of lift plan, documentation, and competency requirements for lifting operations					
Lifting appliance type	Excavator – Wheeled and tracked	Place holder for 'other' to suit project specific appliances	Place holder for 'other' to suit project specific appliances	Place holder for 'other' to suit project specific appliances	Place holder for 'other' to suit project specific appliances
Competency requirements	<u>Authoring appointed Person:</u> <u>CPCS: A61</u> <u>Appliance Operator:</u> <u>CPCS: A58a/b/c - below 10t; A59a/b/c - above 10t</u> <u>Crane/Lift Supervisor:</u> <u>CPCS: A62</u> <u>Slinger/Signaller:</u> <u>CPCS: A40a/b/d</u>	<u>Authoring appointed Person:</u> <u>Appliance Operator:</u> <u>Crane/Lift Supervisor:</u> <u>Slinger/Signaller:</u>			
Temporary works and permit to load required ²⁶	<i>Dependant on working area and deployment of any outriggers</i>				
Lift Supervision required	<i>Not for lift classification 'Basic'</i> ----- <i>Yes for lift classifications 'Intermediate' & 'Complex'</i> ²⁷				
Is the lift plan required to be held at operation location and/or within the appliance structure	Yes				

²⁶ If in any doubt as to whether TW's or a permit is required, then check with the SRM TW's supervisor/coordinator or SRM appointed person

²⁷ Pick and carry operations with all excavators are always classed as 'Intermediate. Pick and carry operations are not allowed with wheeled excavators.

Appendix 2 - Hands Off – Step Away – Safe Space (HOSASS):

It is not a new concept to avoid putting yourself in harm's way.



Despite this, it is common to see people involved in lifting operations placing themselves in locations where, if something went wrong, they could easily be hurt, or worse.



If something appears to be going wrong, it is also common to see people acting instinctively to try and sort the issue, thereby exposing themselves to further danger, rather than stopping the lift and remaining in a safe place until the load is safe to approach.

Loads are more likely to move unexpectedly during the initial stages of a lifting operation, particularly when first lifted up (including for trial lift), compared to later stages of a lift.

HOSASS works on the simple principle of personnel assessing their surroundings, identifying hazards nearby, and moving to a place of safety, whenever reasonably practicable away from the load, before loads are lifted.



Personnel should only ever have their hands on a load through necessity, and not habit.

Prior to starting

Assess your surroundings and identify potential nearby hazards, for example any potential for slips, trips, and falls, crushing zones, falling objects, adjacent plant and activities, and areas where you may not be visible to others. Focus on eliminating hazards at source.

Before raising the load



Hands OFF

After slinging the load take your 'Hands Off'

Hands OFF

'Step away' from the load

Hands OFF

Stand in a 'Safe Space' before giving direction to the operator

If there's a problem during the lift



Stop - Stand in a safe space and stop the lift



Wait - Wait for the load to become steady



Safe? - Only approach if it is safe to do so

Appendix 3 – Example schedule template

Load description: Timber – Packs of ply		
		<u>Slinging methodology:</u> <ol style="list-style-type: none"> I. 4 leg chain slings will be attached to hook block of the crane. Only 2 legs required so any unused chains will be hung back to the master ring. II. 2no. webbing slings min WLL 3 t of sufficient length will be attached to the ply pack in a double wrap – choke configuration. III. Hooks of chain slings will then be attached to the webbing slings. IV. Ratchet strap or securing banding to be used around load.
Lift Category: Basic		
Dimensions of load: 1.6m [h] x 2.4m [l] x 1.2m [w] for standard pack of ply 18mm		
Weight of Load : 1.6 t for 18mm ply		
Lifting accessories used with weights of accessories: <p>From hook block: 4 Leg chain slings WLL 8.4 t @ 103kg</p> <p>-----</p> <p>2no. webbing slings 10m @ 7kg</p> <p>-----</p> <p>Gross weight inc. 10% FOS: 2.101 t</p>	WLL x Mode Factor 4 leg chain slings with 2 legs in use - WLL of one leg multiplied by 1.4 = 4.41 t	Resulting SWL 3.36 t over all accessories stated
	2 webbing slings used a set in a choke configuration = [WLL of one sling multiplied by 1.4] x .8 = 3.36 t	
Alternative methodology: If size of hook block allows, then the webbing slings can be directly attached.		  <p>DO NOT OVERCROWD THE BLOCK</p>
Safe lifting considerations: <ol style="list-style-type: none"> I. Check underside of ply for any materials that may have adhered themselves during transit or storage. II. Securing banding or ratchet strap to be used around the pack. III. When slinging 'used' ply ensure that all elements of the load are captured by using securing banding around the pack. IV. Check integrity of landed load after removal of accessories in case of collapse. 		

Example shown is for a tower crane lifting a pack of ply.

Appendix 4 - Internal reference documents

In addition to the Sir Robert McAlpine Minimum Standards: Lifting & Rigging operations for subcontractors, Sir Robert McAlpine maintains an internal suite of documents that provide detailed guidance on the execution of certain lifting tasks, preferred methodology, and specific restrictions or permissions for lifts on our projects.

These internal guidance documents are designed to ensure consistency and adherence to Sir Robert McAlpine's best practices, safety culture, and legal obligations when conducting lifting operations.

They contain mandatory requirements, including:

- Company-preferred methods for specific or complex lifts.
- Detailed procedures for high-risk or non-standard lifting scenarios.
- Absolute prohibitions on certain lifting techniques or equipment usage.
- Permissible equipment and configuration requirements.

The current suite of guidance documents is not included in this general Appendix.

The Sir Robert McAlpine project Appointed Person (or the designated site management representative) should make these available to the sub-contractor.

Accessing the Guidance:

The subcontractor's designated Appointed Person (AP) for lifting operations must consult these documents prior to planning or executing any lift on the project.

Compliance with both Sir Robert McAlpine Minimum Standards and the internal suite of Lifting Guidance Documents is mandatory.

Failure to adhere to either set of requirements may result in the suspension of lifting activities.