

Practical Considerations for Key Site Personnel when using Hoists and Transport Platforms



Making Hoists and Transport Platforms Safe

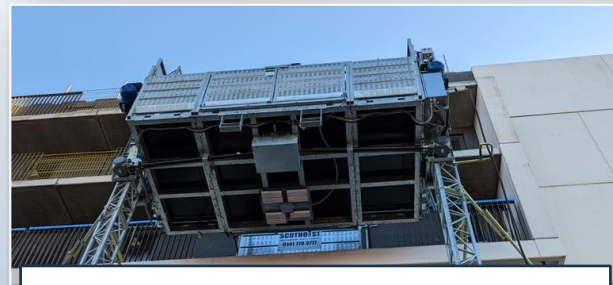
SCOTHOLST
PROFESSIONALISM - RESPECT - INTEGRITY

Finding the correct hoist supplier:

- Ensure they are established, experienced, competent, and well respected in the hoist Industry. Request references and examples of previous projects if you haven't used them before.
- Confirm that all installers, engineers, and supervisors are suitably qualified to minimum NVQ Level 2, and that Trainees are registered on the CSCS training scheme. Ask for proof.
- How comprehensive is their fleet, and does it meet current industry standards, regulations, and legislation?
- Are they members of CHIG (Construction Hoist Interest Group (CPA) and do they conform to current industry standards?
- Confirm the level of operator training provided and that it is adequate for your company standards (**iPAF is the new industry industry standard**)
- Are they Safecontractor, Constructionline, SSIP, Achillies, etc. accredited?

Deciding on the correct hoist:

- Goods Only or Transport Platform? (are you moving goods only, personnel, or both?)
- Physical size of the load – length / height of the load?
- Max weight of the materials you are loading.
- Power supply required (415v, 240v, mains or generator)
- Clashes with off load aperture on the structure or scaffolding.
- Type and weight of any loading and unloading device (forklift, powered pallet truck, sheet/board carrier, etc.)
- Interface with the structure, building, or scaffold.
- Tie points suitability for the hoist - Substraight (concrete, steel, sandstone, etc.) or scaffold.
- Ground condition suitability for hoist load points.
- Check availability and lead time of the hoist you require.



2300kg Goods & Passenger



1500kg – 2000kg
Goods & Passenger



500kg – 850kg
Goods & Passenger



200kg – 300kg
Goods Only



Early Planning – Engage Your Hoist Supplier at the Design Stage!

- Arrange a full and thorough site survey with your hoist supplier to discuss your requirements.
- Involve all relevant site personnel in this meeting (Project and Site Managers, Temporary Works, Health & Safety, Site Logistics, etc.) **and your Scaffold Contractor** if required.
- Consider hoist location and orientation (how are you loading and unloading the hoist and what space do you have for this) and the hoist base area (do you need a ramp or step to access the hoist at ground level)
- Is there safe access for vehicles and pedestrians on site whilst the hoist is being installed and used on site.
- Consider off loading points for all Landing Gate Levels and the suitability for installing these gates.
- If the hoist is off loading to scaffold, do your scaffold levels meet your building floor levels, or will you need run off ramps from the scaffold decks to the building floors?
- Will scaffold bay heights impede the offloading from the hoist?

Continued ...

Early Planning contd.

- Hoist Power – do you have adequate mains power on site, or is a generator required?
- Does the site logistics team understand the full installation and removal process, interfaces, and logistical challenges of bringing the hoist to and from site? (Is there HIAB, crane, and telehandler requirements?)
- Is a Lift Plan required for unloading the hoist, and could this involve road closures, traffic management, etc?
- Does the Site Safety and Logistics Teams understand the requirements and procedures for the delivery/installation and dismantle/uplift of the hoist?
- Environmental concerns – Noise, lighting, working hours, any local restrictions or proximity hazards (i.e. overhead lines, railways, etc.)
- Consider time for delivery, installation, commissioning, handover and operator training.

Temporary Works Design

- Ensure the hoist suppliers Temporary Works Designer is impartial and independent from the installation team.
- Request initial Temporary Works information from your hoist supplier on Ground and Tie loads.
- Ground Loadings – Ensure that your proposed base area is suitable for the ground and point loadings of the hoist when fully installed.
 - Consider any basements, under ground cabling, manholes, or future trench works.
 - Confirm that the correct point spreading equipment is used– steel road plates, crane spreader pads, etc. **NOT** scaffold boards!
 - Consider a hoist pit to negate the need for steps or a ramp at the hoist ground loading level.

Temporary Works Design contd.

- Tie Points – Identify and establish that all hoist tie points are suitable for the dynamic tie loads imposed by the hoist. Confirm the following ...
 - Make up of the sub straight – Concrete, sandstone, masonry, steel, etc.
 - Do the tie points clash with any fixing brackets, mullions, post tensioning ducts, windows, etc?
 - Will ties need to be moved later in the project? Check the hoist manufacturers recommended hoist tie spacings.
 - Check that all tie points are adequate for the loads outlined in the initial Temporary Works information from your hoist supplier.
 - Ensure all tie points can be accessed for future daily, weekly, monthly, and annual inspection.
- Once the Temporary Works Design is agreed upon by all relevant parties, make sure it is signed off as 'Ready for Construction'.



Ground conditions
and other works



Bad housekeeping by site
resulting in damage



Incorrect load causing severe damage

New Project Enquiry Form

Site Details

Project Name		Project Location	
Contact Name		Contact Number	
Contact Email			

Temporary Works Details

Company		Contact Name	
Contact Number		Contact Email	

Scaffold Contractor Details

Company		Contact Name	
Contact Number		Contact Email	

Hoist Details

Hoist Type		Hoist Height (metres)	
Payload Required (kg)		No. Landing of Gates	
Preferred Platform Size		Power Supply Available	
Types of Materials			
Anticipated Install Date		Anticipated Hire Duration	

Temporary Works Details

Tie Substraight		Scaffold Type	
Floor Slab Type		Scaffold Bay Size	
Floor Slab Thickness (mm)		Scaffold Bay Height	
Hoist Base Makeup			

IF YOU HAVE ANY QUESTIONS PLEASE DON'T HESITATE TO CONTACT US ON

Tel: 0141 778 3777 Email: info@scothoist.co.uk



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Planning the Hoist Installation

1. INTRODUCTION

The following information describes the processes involved in the hire and implementation of construction hoists and transport platforms.

Each aspect of the hire is described, with potential problems highlighted, and at the end of this section there is a checklist which will come in useful for site management / the on-site hoist coordinator.

The responsibility for the safe operation of construction hoists and transport platforms lies with the Principal Contractor.

Reference should be made to LOLER to ensure responsibilities for planning and management are understood by those managing the procurement, installation and use of the hoist

2. CHOOSING A HOIST (The Tender Stage)

How many and what sort of hoists do you need to make your site logistics work?

The most effective way to ensure that any hoist on a construction site is both safe and productive is to consider entire project life cycle, particularly the fit out stages.

Look at any site constraints at the tender stage. It is a good idea to seek advice from the technical department of the hoist supplier at the earliest possible stage. They will be able to identify any structural or logistical issues with your proposal.

Remember you need to not only look at not how to get the hoist installed, but how it will be removed.

Your hoist supplier can advise on specification and additional costs that may be needed to facilitate the installation and removal of the hoist.

Top tip – Make sure you allow for level floor entry where possible to avoid ramps in and out of hoists – i.e. leave upstands down, sink bases so hoist entry is at ground level, look at entry points at all levels.

Top tip – Floors - make sure they are strong enough to take your proposed load, think duration and how hard they will be worked. If you need vehicle access ramps at ground floor level make sure these are plated to withstand any loading plant i.e. fork lifts, electric pallet trucks, etc.

Top tip – Scaffold packages must include how they will interface with hoist installation i.e. Hoist openings and closing of any potential gaps around Hoist gates on all floor levels that require Hoists to feed them, ensure ramps and any run off platforms are designed to cope with the loads from the hoists, particularly any point loads i.e. various types of pallet trucks, board carriers, etc.

Look at maintenance regimes and costing and for proven reliability with your hoist supplier as these can lead to compromises and further problems once the contract starts.

Poorly planned maintenance will lead to programme delays with consequent contra-charges from sub-contractors and may reduce safety due to the ongoing rush to get back on track.

Top tip – Remember hoist engineers will require safe access to install and inspect the hoist on a regular basis (as will your hoist operator to carry out Daily Pre-use Checks) so make sure this is included in your access plan and your scaffold packages.

Early consideration of certain site restraints will reduce the need for extra costs, programme delays, and counter charges once the scheme is put into action.

3. HIRING A HOIST (The Contract Stage)

The requirements for the hoists may have changed from tender stage to the contract stage due to other components of the construction programme

At the earliest stage, the Project Manager should appoint a hoist coordinator. This person must assess the hoist requirements and decide if further consultation is required with the hoist supplier. This may involve the design of additional components for ties due changes in building design, etc. If these changes are discovered early enough and a solution can be put into place, then design and commercial teams can eliminate the risk of any delays to the installation of the hoist.

It is important that the hoist coordinator is aware of any changes that may affect the installation and operation of the hoists. Minimising any risks prior to work commencing is the safest method of working.

Top tip – Ensure you allow for the training of hoist operators, make sure your hoist company can provide this service for you, do this as early as you can. Driverless hoists may be considered, but these still require appointment of a hoist supervisor on site to ensure that they are being used safely and maintained in good working order.

4. POST AWARD SITE SURVEY

Once the contract has been awarded for the hoist there will be a requirement for the hoist coordinator to meet the hoist supplier to look further into site requirements. It is important that the hoist coordinator is fully aware of the site's requirements so that they can pass this onto hoist installers. This means that procedures and solutions to any access problems can be understood and implemented. This will, in turn, ensure the hoist supplier is providing the correct and safest hoisting solution to the site.

5. PLANNING THE HOIST INSTALLATION

There are a number of planning stages that need to be completed prior to the Hoists being installed.

Firstly, site should provide logistics drawings. These drawings will show the Hoist Coordinator and the Site Logistics Coordinator how the hoist will work logistically in the overall plan of the site. This must be coordinated with the hoist supplier.

The hoist supplier should provide a full Temporary Works Design detailing the ties of the hoist, the tie levels, and the tie loadings and locations. This should also include elevations and sectional giving a full understanding of the hoist installation.

The Temporary Works Design for the hoist will need to be checked by the Site Temp Works Engineer to ensure that the structure can accommodate all of the specified tie loads and that the specified base area are adequate for the hoist base loadings. This may require the need for additional base supports such as steel road plates, etc..

Top tip – Ensure the Hoist Temporary Works Design is passed onto the Site Temp Works Engineer as soon as possible so that they can identify any major concerns about hoist loads.

Any concerns about the hoist loads should be brought to the attention of the Hoist Temporary Works Engineer asap so that they can discuss, revise, and re-submit a new design for approval.

Top tip – Redesigns normally incur additional costs, so it's important to be as thorough as possible at the initial design stage. Don't presume the hoist supplier or their Temporary Works Engineer is aware of specific ground conditions or sub-straight make up.

It's very important to get the Site Temp Works Engineer engaging with the Hoist Temp Works Engineer as early as possible.

6. HOIST POWER SUPPLY

You hoist supplier will provide site with the electrical requirements for the hoist. This will be in the form of a data sheet and it will also be included in their RAMS. Site must ensure they have the correct power supplies in place prior to the hoist installation.

Top tip - make sure you allow for the hoist electrical supplies early in your site planning. Liaise with the site electrical team when the scheme is first being planned. For critical hoists you may need to consider a backup supply.

7. RISK ASSESSMENT AND METHOD STATEMENT

Once all of the design checks have been completed and signed off, the hoist supplier should submit a full RAMS for the installation.

The RAMS should include the full method of installation including any specialist activity needed to be covered in the installation of ties to the structure, the methodology for the delivery and positioning of the hoist, and any COSHH and HAVS assessments. This needs to be approved by the Site Safety Team prior to the installation date.

The Hoist Coordinator and Site Safety Team must consider the processes outlined in the RAMS and decide if this is the safest method available for the activity. If there are any questions, then the hoist supplier should be notified, and the necessary precautions taken before the installation commences. No work should commence until the required RAMS approval has been received.

Once all of the required documentation is in place and signed off, the Hoist Coordinator can then confirm an installation date with the hoist supplier.

8. INSTALLING THE HOIST

Before work can start, the Hoist Supervisor must have an approved set of RAMS which is signed by all operatives involved in the install. This stage of the process is probably the stage with the highest associated risk, as the hoist is usually at its most unstable during installation. Minor mistakes can result in serious injury, so the RAMS for installation must be followed properly for the safety of all involved.

The hoist RAMS should contain an on-site alterations page allowing the hoist installers and/or site personnel to halt the activity if it falls out with the RAMS SSoW. **The revised alteration can be put into writing and signed for allowing the erection to continue in the safest manner possible.** It is important to note that any alterations must be confirmed by the site Project Team and Site Temporary Works Engineer. Some changes may affect calculations initially approved and will therefore need checking before the install can continue. This sometimes may take time as the Hoist Coordinator will have to discuss the findings with the Hoist and Site Temporary Works Engineer.

Safety is the No.1 priority and any revised calculations will need to adhere to the manufacturer's manual and prevailing legislation before being re-approved.

9. COMMISSIONING, TESTING, AND HANDOVER

Following the initial installation of the hoist (whether that be part or full install) the hoist must be tested and commissioned for safe operation. The testing should be carried out by a competent Loler Certified Engineer. Once the Loler Thorough Examination is complete the project should receive an examination certificate from the hoist supplier as soon as possible.

The Loler Thorough Examination must be in place before the hoist can be put into operation.

The individual undertaking the Loler Thorough Examination must be independent of the team who installed the equipment.

Any further alterations to the hoists will require another test and examination to be carried out and a new test certificate issued.

10. HOIST OPERATORS

For safe operation of the hoist **it is paramount** that a **Qualified** Hoist Operator is employed to operate and manage the hoist. The hoist operator must have received the correct training and hold a valid training card. All sub-contractors on site must be aware that the hoist can **only** be operated by a suitably qualified, trained and competent person who has been approved by the Hoist Coordinator.

The new industry standard is the **iPAF Hoist Operator Course** which carries a PAL Card upon qualification.

Top tip – Qualified Hoist Operators significantly reduce the likelihood of accidents and are instrumental in reducing hoist down time due to unauthorised operator errors, and poor house-keeping and maintenance.

11. DAILY PRE-USE CHECKS

It is the sole responsibility of the qualified hoist operator to perform Daily Pre-Use Checks on the hoist. During the iPAF training the operators are taught what to look for whilst going through the daily checklists and are made aware of any irregularities that they should report. This effective monitoring of the hoist allows site and the hoist supplier to react as soon as possible to any issues and helps keep delays and down time to an absolute minimum.

If these daily checks highlight and issue that could compromise the safe operation of the hoist, then the hoist should be isolated immediately and the hoist supplier notified. Only after the hoist suppliers qualified engineer has fully rectified and made good the issue can the hoist be put back into safe operation.

12. WEEKLY, 6 MONTHLY, AND 12 MONTHLY EXAMINATIONS

These examinations(required by legislation) should be carried out by the hoist suppliers qualified maintenance team and are carried out in accordance with the requirements outlined in PUWER and LOLER.

10. Alterations to the Hoist Installation

If during the time the hoist is on site alterations are required due to engineering requirements then this

