



Lifting Operations Standards

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1. Introduction

The purpose of these standards are to give site management and crane/ HIAB/ excavator users, guidance when carrying out lifting operations using a crane/ HIAB/ excavator. This guidance can also be used for all operations which require the lifting materials as they also need the same planning and supervision that is expected for a crane/ HIAB/ excavator lift.

These standards outline the minimum and essential requirements for the safe planning, organisation, coordination, supervision and the execution of lifting operations undertaken on site.

2. Categories of lifts

Lifting operations vary in complexity from the most basic to the most complex involving a wide range of lifting equipment and accessories. The failure of any lifting operation is potentially very serious and can lead to severe or even fatal consequences.

There are 3 categories of lifts:

Basic

The weight of the load can be easily established and there are no significant hazards within the working area or access route for the crane/ HIAB/ excavator to the working area. For example, offloading material from a lorry on level ground.

Intermediate

There are significant hazards within the working area or access route. For example, lifting material with limited access and a restricted view of the load.

Complex

Where two or more cranes/ HIABs/ excavators are used to lift the load or where the lifting operation is carried out at a location with exceptional hazards.

Generally, all crane/ HIAB/ excavator lifts carried out on site are intermediate category lifts. We may sometimes undertake a complex category lift. For example, if two cranes/ HIABs/ excavators are



required to jointly lift material or there are exceptional hazards in the working area, such as overhead power lines.

3. Organisation of Lifting Operations

All operations, using lifting equipment must be:

- Properly **Planned** by a competent person
- Appropriately **Supervised**
- Carried out in a **Safe** manner

There are two types of arrangements for crane/ HIAB/ excavator lifts:

1. Contact crane/ HIAB/ excavator lifts
2. Hire and manage crane/ HIAB/ excavator lifts

4. Organisation of Crane/ HIAB/ Excavator Lifting Operations

Contract Crane/ HIAB/ Excavator Lifts

The crane/ HIAB/ excavator contractor is responsible for the lift and they must ensure that it is planned, supervised and executed safely using their own documentation. Contract lifts should always be the preferred arrangement, as using a contract lift takes the planning and supervision element away for the site teams, freeing them up to carry out their duties to manage the site. Even if a contract lift has been arranged we still have the overarching duty to ensure that the lift is being done safely. This is achieved by site management ensuring the crane/ HIAB/ excavator contractors RAMS/ Lift Plan have been approved and are present on site. Also that the crane/ HIAB/ excavator contractor is following their RAMS/ Lift Plan, stopping work immediately if safe practices are not being followed.

Hire and Manage Crane/ HIAB/ Excavator Lifts

The site team plan the lift, hire the crane/ HIAB/ excavator and supervise the lift. A member of the site team must be the 'Appointed Person' following completion of a 5 day CPCS Appointed Person course and complete the required documentation including a Lift Plan. That person will plan the lift, they will also supervise the lift unless another member of the site team has attended the 3 day CPCS Supervisors course and is undertaking this role. In addition, there must be sufficient trained Slings/ Signallers present to ensure the lift is carried out safely. Hire and manage crane/ HIAB/ excavator lifts should be avoided wherever possible and must be approved by the local Group HS&E Advisor before being carried out. This is to ensure that a check of the lift is carried out so that the local Group HS&E Advisor is satisfied that it will be undertaken safely.

4.1 Personnel Required for Crane/ HIAB/ Excavator Lift

The table below shows the roles and responsibilities, required when conducting crane/ HIAB/ excavator lifts.

Appointed Person (AP)	A competent person with adequate practical, theoretical knowledge and experience, responsible for the planning and management of all lifting operations. This shall include the development of lift plans developed in accordance with all applicable legislation and industry standards.
Lift Supervisor	A competent person with adequate practical, theoretical knowledge and experience, responsible for controlling the on-site lifting operation and ensuring that it is carried out in accordance with the lift plan



Crane/ HIAB/ Excavator Operator	A competent person with adequate practical, theoretical knowledge and experience, responsible for the correct operation of the lifting equipment in accordance with the lift plan and manufacturer's instructions
Slinger / Signaler	A competent person(s) with adequate practical, theoretical knowledge and experience, responsible for attaching and detaching the load to and from the lifting equipment and the correct selection and use of lifting accessories, for directing the lifting equipment operator to ensure safe movement of the lifting equipment and load.

4.2 Planning the Crane/ HIAB/ Excavator Lift

All lifting operations must be planned in order that they are carried out safely with any foreseeable risks taken into account. The AP is responsible for planning the lift, completing the Lift Plan making sure it is site and lift specific. To ensure that the lifting operation is carried out safely the plan will need to assess the risks, set out the resources required, the procedures for the lift and detail individual responsibilities.

Refer to HSMS form [034](#) – Lift Plan

4.3 Lift Plan and Risk Assessments for Crane/ HIAB/ Excavator Lifts

The Lift Plan and associated Risk Assessments must be completed by the AP, it must include the following information:

- Details of the load(s) to be lifted.
- Method of lift.
- Position of pick up and landing points, including ground conditions.
- Crane/ HIAB/ excavator requirements – size, type, load capabilities configurations etc.
- Lifting positions – a single lift plan cannot be used for multiple lift locations as the ground conditions can change, there can be different heights of existing structures and other environmental considerations would need to be considered.
- Inspections/ Test documentation.
- Lifting equipment – slings, chains, shackles etc.
- Competency documentation for:
 - Lift supervisor
 - Banksman/ slingers
 - Driver/ operator
- Site conditions.
- Access and egress routes.
- Service locations for overhead and underground services.
- Weather conditions.
- Protection requirements for third parties.
- Emergency procedure should unplanned incident occur.

The documentation must not be altered without the approval of the lift AP. The documentation must be available on site throughout the lift operation as the safe system of work. Each person involved during the lift must be briefed on the Lift Plan.

4.4 Crane/ HIAB/ Excavator Lift Operation

Lift Supervisor



The AP may supervise the lift, however, this task would normally be delegated to the "Lift Supervisor". The Lift Supervisor must be competent and suitably trained and should have sufficient experience to carry out all relevant duties and authority to stop the lifting operation if it is judged dangerous to proceed. For basic and intermediate lifts, the crane/ HIAB/ Excavator operator can be the lift supervisor, if he can see the load at all times.

The Lift Supervisor must directly supervise the lifting operation and ensure that it is carried out in accordance with the method statement.

Slinger/ Signallers

Slinger/ Signallers will be responsible for attaching the load to the strops or chains and disconnecting the load once in place and secured. Slinger/ Signallers must be trained and competent to carry out their role. Non trained persons must never connect or disconnect a load. Slingers/ signallers must wear an orange hard hat to make them distinctive and visible to the Crane/ HIAB/ Excavator Operator.

Crane/ HIAB/ Excavator Operator

Prior to any lift, the Crane/ HIAB/ Excavator Operator must complete a visual inspection of the crane/ HIAB/ excavator to ensure no obvious defects.

The crane/ HIAB/ excavator will be rigged and derigged by the Crane/ HIAB/ Excavator Operator who must ensure that the crane/ HIAB/ excavator is used in a safe manner.

The Crane/ HIAB/ Excavator Operator must check the wind speed and ensure that the wind speed parameters for the crane/ HIAB/ excavator are not exceeded. Also that the outriggers are deployed fully and that if necessary that a stabilizer support plate is used.

Timber crane/ HIAB/ excavator pads would only be acceptable if it has been evidenced that they have been designed and tested for that use.

The Crane/ HIAB/ excavator operator must never exceed the rated capacity of the crane/ HIAB/ excavator and ignore the rated capacity indicator alarm.

5. Thorough Examination

All lifting equipment must be inspected annually and any lifting accessories must be inspected 6 monthly by a competent person. The examination will usually be arranged by the crane/ HIAB/ Excavator hire company, although it is the responsibility of the AP to ensure that all necessary examinations have been carried out inspecting the thorough examination certificate(s) prior to use, also that the crane/ HIAB/ Excavator is in a good state of repair. Records of thorough examinations and tests must be readily available for inspection.

6. Site Management Requirements

Site management must check that an AP has prepared a Lift Plan and a Lift Supervisor will be present to supervise the lift.

All Lift Plans must be checked and approved by a Site Manager, who must have completed the NHBC Control of Lifting Operations 2 day course/ refresher course every 3 years.

As part of the checking of the Lift Plan the Site Manager must ensure:

- That no loads will be slewed/ lifted over other workers on site or members of the public. Where necessary barriers must be used to ensure that the crane/ HIAB/ Excavator and the lifting zone are fenced off. Site management may have to change the traffic management plan if roads and pedestrian routes have been closed off.



- That the crane/ HIAB/ Excavator and any necessary accessories have an in date thorough examination certificate.
- That the personnel involved in the lift have the required competency, including the checking of training certificates and competency cards.

Site management have the final decision on giving permission for the lift to commence after taking into consideration the practical site conditions and weather on the day of operation. The hazard board must be updated to include the crane/ HIAB/ Excavator lift and to ensure that all involved in the lift are thoroughly briefed. All trades on site that day must also be briefed on any changes to the traffic management plan and access restrictions imposed during the lift(s).

7. Positioning the Crane/ HIAB/ Excavator

The Lift Plan will detail where the crane/ HIAB/ Excavator and the load(s) will be positioned before, during and after the operation, the Lift Supervisor is responsible to ensure that the crane/ HIAB/ Excavator is in the correct position.

The crane/ HIAB/ Excavator should always be positioned on a firm level ground and it must never be assumed that a topped off road is suitable without undertaking the necessary pressure test first as there is the potential for underground services to be present or the compaction has not been completed to specification.

Ground bearing pressure tests must be carried out where the makeup of the ground is unknown and the ground conditions cannot be effectively assessed or they are unsuitable to support the crane/ HIAB/ Excavator.

8. Tall Equipment Permit

If we are required to operate a crane/ HIAB/ Excavator or use other tall equipment within 6 kilometres of the Aerodrome/ Airport boundary or at heights of more than 10 metres above ground level/ working area you must receive prior permission and a Tall Equipment Permit from the Airport, Airfield Operations, Safety and Compliance.

This must be done at least 21 days before the crane/ HIAB/ Excavator will attend site.

Consult the local HS&E Advisor where the hazard of an Aerodrome/ Airport has been identified in the Lift Plan.

9. Requirements Alongside Railways Controlled by Network Rail

Network Rail must be consulted by the AP in all circumstances where the compound collapse radius of the crane/ HIAB/ Excavator and its load is within 4 metres of a railway asset or property boundary, prior to a Lift Plan being completed.

If the compound collapse radius is near to but greater than 4 metres from the railway asset or property boundary, the Lift Plan demonstrating that this must be sent to Network Rail, who may require further details to be submitted.

Where it is necessary to carry out lifting operations over or adjacent to a live railway, Network Rail infrastructure or railway public areas, a line block or isolation may be required, and Network Rail must be consulted at the earliest stage of planning. There will be a considerable lead time for a line block and, if needed, isolation.

If trains are stopped due to dangerous crane/ HIAB/ Excavator site activities, significant fines can be issued.



Consult the local HS&E Advisor where the hazard of a railway has been identified in the Lift Plan.

10. **Monitoring**

Site management are responsible for monitoring all lifting arrangements undertaken on site to ensure they carried out safely.

The Group HS&E Department will monitor compliance with these standards during routine HS&E inspections and will carry out checks of Lift Plans and other associated documentation.

11. **Further Reading**

[HSE guidance - lifting operations](#)

[HSE ACOP - Safe use of lifting equipment](#)

[HSE guidance - LOLER](#)

[CPA guidance - Mobile and crawler crane guidance](#)

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