Safe Use of Lorry Loaders

CPA - ALLMI Best Practice Guide

The Management of Lifting Operations with Lorry Loaders

CPA - ALLMI Best Practice Guide

Working in Partnership

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Foreword

Every year, the construction industry is responsible for causing deaths and serious injury. The industry has done much to improve its performance which I welcome, but there is still room for improvement. Our industry is innovative and is constantly evolving new equipment and processes to increase efficiency. This has consequences for site management who must ensure that operations are planned, supervised and carried out safely by competent people.

In recent years lorry loaders have developed significantly, to the stage where they are able to carry out many of the tasks traditionally undertaken out by mobile and tower cranes. When used they safely make a valuable contribution to the carrying out of lifting operations, however it should not be forgotten that all lifting operations must be planned and executed to the same standard, irrespective of the type of lifting equipment being used.

Unfortunately over the past few years there have been a significant number of accidents involving the use of lorry loaders, which have tragically included fatalities. These could have been prevented by correct planning, supervision, use and maintenance. In addition to the terrible cost in human suffering, accidents have a financial cost. There is a very strong business case for improving safety performance.

This guidance has been prepared by the industry in conjunction with HSE to provide clarity about the safe use of lorry loaders; including planning, role of personnel, training and familiarization of personnel, siting, safe use, maintenance, inspection and thorough examination. The guidance is straightforward, comprehensive and easy to adopt.

I thank those who have been involved in its preparation and commend the guidance to anyone who owns, supplies or controls the operation of lorry loaders. Please read the publication and turn the advice into action.

Phillip White
HM Chief Inspector of Construction
Chair of the Health and Safety Executive's Construction Industry Advisory Committee (CONIAC).

1.0 Introduction

The Health and Safety at Work, etc Act 1974 demands that employers have safe systems of work, so that their employees are protected from any risk, so far as is reasonably practicable. Using lorry loaders without a safe system of work is a breach of this Act.

This document aims to provide guidance on the planning, set up, safe use, maintenance and thorough examination of lorry loaders. It sets out in readily understandable terms what the user of a lorry loader needs to do to ensure that it can be used safely and efficiently, including advice on the training of personnel and further sources of information.

All lifting operations are potentially hazardous and should be planned to ensure that they are carried out safely and that all foreseeable risks have been taken into account. Poor planning is one of the major causes of accidents arising from lifting operations. This document provides both guidance and examples of the planning required for different types of lifts carried out in varied environments.

It is a requirement of the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER 98) and BS 7121 Part 4 that one person should be appointed to have overall control of each lifting operation to ensure that it is carried out safely. This person is normally called the *"Appointed Person"* and they should be competent to carry out the planning for the task in hand. The first step in planning is to carry out a risk assessment, followed by preparation of a method statement which will set out the safe system of work to be followed. The planning will look at both the load to be lifted and the environment in which the lift is to be carried out. This will indicate the extent of planning required - basic lifting operations will require a generic risk assessment and method statement which can be used in similar situations, whilst more complex lifts will require job specific planning.

All successful lifting operations require a team of people to work together. The number of people involved will vary depending on the type of lift. For example a basic lift will normally be carried out by the lorry loader operator alone. On the other hand a more complex lift will require a number of people, each with clearly defined roles. The document gives guidance on the selection, training and competency assessment of all members of the lifting team, together with the allocation and combination of roles, where appropriate.

The responsibility for planning and carrying out lifting operations will depend on the type of contractual arrangements between the lorry loader owner and the person requiring a load to be lifted. This document explains, in some detail, how *"crane hire"* and *"contract lift"* contractual arrangements apply to the use of lorry loaders, with some practical examples.

The document also covers the selection of the lorry loader, attachments and accessories, together with the importance of correct procedures for setting up on site and preparing the lorry loader for use. Advice is also given on operating procedures in various circumstances, together with guidance on the care of lifting accessories, and the maintenance and thorough examination of the lorry loader.

2.0 Planning

All lifting operations should be planned to ensure that they are carried out safely and that all foreseeable risks have been taken into account. Poor planning is one of the major causes of accidents arising from lifting operations.

The siting, setting up and use of a lorry loader requires careful planning if all these activities are to be carried out safely and efficiently. One person with sufficient training, practical and theoretical knowledge and experience should be appointed to be responsible for planning and supervising the tasks. This person is known as the *"Appointed Person"*.

The Appointed Person must ensure that the planning for each task includes the following:-

- Identifying the task to be undertaken;
- Identifying the hazards associated with the task;
- Carrying out a risk assessment;
- Identifying control measures;
- Developing the method to be used;
- Recording the planning in a Method Statement (including any contingency activities for rescue);
- Communicating the plan to all persons involved;
- Reviewing the plan before the tasks starts and incorporating any changing circumstances.

2.1 *Lift categories*

To enable lifts to be planned, supervised and carried out effectively, three categories of lift are detailed below. 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 can be seen from **Figure 1**, increases in either or both environmental or load complexity (the *"Complexity Index"*) 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.

The case study at **2.1.4** shows examples of where the same basic lifting task will fall into different lift categories depending on differing environmental or load complexities. Additional case studies are given in **Annex C**.

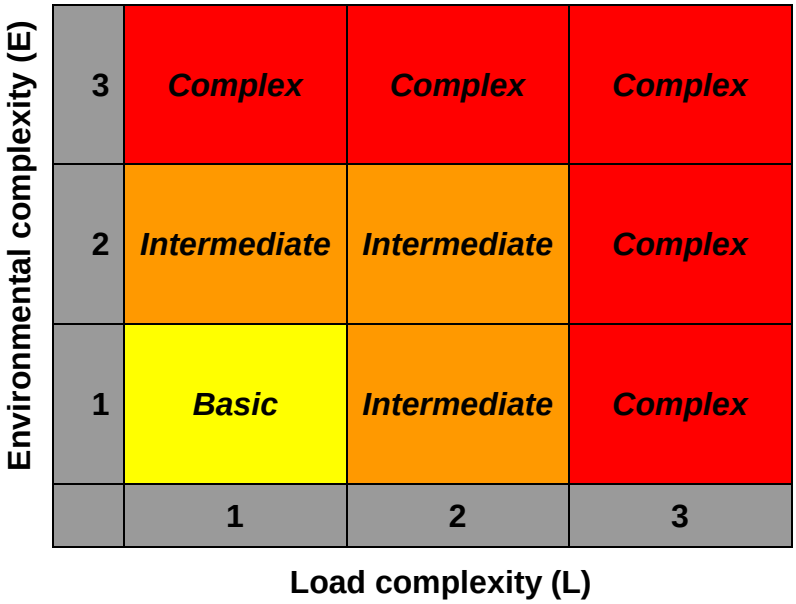


Figure 1 – Relationship between Complexity Index and Lift Category

2.1.1 Basic lift

For a basic lift the duties of the Appointed Person should include the following.

a) Establishing the complexity of the lifting operation, including load and environmental complexity:-

- Load complexity will include characteristics such as weight, centre of gravity and presence of suitable lifting points. This can be established by a reliable source of information, measuring and weighing the load, or calculation;

  NOTE: *Where the weight of the load cannot be accurately established the notional weight must be multiplied by an appropriate factor (typically 1.5) to allow for possible inaccuracies.*

- Consideration of environmental hazards at the location of the operation will include the access and egress required for the lorry loader and the suitability of the ground to take the loads imposed by the lorry loader during preparation for the lift and during the lift itself;

b) Selection of the lorry loader, based on the load characteristics, including weight of the load and any lifting accessories; the maximum height of lift and the maximum radius required. The rated capacity of the lorry loader should be specified by the manufacturer/installer in the information for use supplied with the lorry loader. In cases where the lorry loader has been derated at time of thorough examination, the rated capacity stated on the current Report of Thorough Examination, issued by the competent person, should be used. Manufacturer's sales leaflets should not be relied on for the rated capacity for a specific lorry loader;

c) Ensuring that the lorry loader is not operated in wind speeds in excess of those given in the instruction manual for the lorry loader. The wind area of the load should also be taken into account to ensure that its movement in the wind does not present a hazard; (See **Annex I** Beaufort Scale)

d) Ensuring that the lorry loader has been thoroughly examined at least within the previous 12 months (or 6 months for the lifting of persons), inspected and checked before use. It is essential that the Report of Thorough Examination which confirms that the equipment is safe to use is available;

NOTE: *The Report of Thorough Examination for the lorry loader should be carried with the vehicle*

e) Selecting appropriate lifting accessories, including their method of attachment to the load, configuration and any protection used to prevent damage;

f) Ensuring that lifting accessories have been thoroughly examined, at least within the previous 6 months, inspected and checked before use. It is essential that the Report of Thorough Examination is available to confirm that the lifting accessories are safe to use;

g) Ensuring that a system for reporting and rectifying defects is in place;

h) Designating a suitable person to check the lifting accessories and any lifting points that are provided on the load to ensure they are free from any obvious defect before attaching the load to the lorry loader;

i) Ensuring that the outcomes of the planning process are recorded in a risk assessment and method statement which should be signed by the Appointed Person;

NOTE: *In many instances a basic lift may be covered by a generic risk assessment and a generic method statement provided that no additional hazards are identified on site*

j) Selecting and defining the roles of the members of the lifting team. In many instances it may be possible to combine some of the roles of members of the lifting team (See **4.6**);

k) Briefing all persons involved in the lifting operation to ensure that the safe system of work described in the method statement is understood. All persons involved in the lifting operation should be instructed to seek advice from the Appointed Person if any change is required to the lifting operation, or if any doubts about safety arise. If one or more handlines/taglines are required to give more control of the load, the Appointed Person should designate persons to handle the lines;

l) Checking, if numerous loads are to be lifted over a long period that no changes are required in the safe system of work;

m) Ensuring that there is a crane supervisor (see **4.2**) designated to direct personnel and that the operation is carried out in accordance with the method statement.

The Appointed Person and crane supervisor should be aware of the limits of their knowledge and experience concerning lifting operations, and when conditions exceed these limits, further advice should be sought.

2.1.2 Intermediate lift

For an intermediate lift the duties of the Appointed Person should include the following, in addition to the duties listed in **2.1.1**

a) Identifying all significant hazards in the operating area, including any areas required for access or setting up of the lorry loader;

NOTE: *This may involve the AP visiting site if he has any concerns about the detail and quality of the information with which he has been provided;*

b) Ensuring that a site/task specific risk assessment and method statement, detailing control measures for the identified risks, is prepared;

c) Liaison with any other person or authority, as required to overcome any hazard, by including any necessary corrective action or special measures in the safe system of work;

d) Determining any requirement for personnel in addition to the lorry loader operator, such as a slinger, signaller or dedicated crane supervisor;

e) Consideration of the effect of the lifting operation on surrounding property or persons, including the general public. This should lead to arranging for appropriate

action to minimize any adverse effects, and to giving appropriate notice to all persons concerned.

2.1.3 Complex lift

For a complex lift the duties of the Appointed Person should include the following, in addition to the duties listed in **2.1.1** and **2.1.2**:

a) Identifying all exceptional hazards in the operating area, including any areas required for access or setting up of the lorry loader. This will require the Appointed Person to visit the location of the planned lifting operation as part of the planning process;

b) Liaison with any other person or authority, as required to overcome any hazard, by including any necessary corrective action or special measures in the safe system of work;

c) Ensuring that the method statement includes the exact sequence of operations when lifting the load;

d) Preparing a sufficiently detailed and dimensioned drawing of the site, lorry loader and the load, identifying the load path, pick up and set down areas, together with the position of any exceptional hazards in the area. The information provided should be sufficient to enable the operator to position the lorry loader accurately;

e) Ensuring that where persons are being lifted, the requirements of **7.8** are met;

f) Ensuring that where the lifting operation requires more than one lorry loader or other crane to lift the load, the requirements of **7.7** are met.

NOTE: *This does not apply to purpose designed vehicle mounted container handling cranes with twin lifting units.*

It is good practice for the Appointed Person to be present on the site during a complex lift.

2.1.4 Case Study

The case study in **Figure 2** illustrates the way in which both the complexity of the load being lifted and the environment in which the lift is taking place affect the overall complexity of the lift. The case study takes a typical lifting operation carried out by a lorry loader, the lifting of timber roof trusses. Three different situations are evaluated with examples of the hazards encountered and the control measures required to eliminate or reduce those hazards to an acceptable level. It should be noted that this is an example only and does not identify all the hazards that may be present in a given circumstance.

Additional case studies are given in **Annex C.**

2.2 ***Identifying the task to be undertaken***

As the first stage in the planning process, the task to be undertaken should be clearly identified, together with the location and sequence.

Certain lifting operations require particular care and attention. Further advice can be found in BS 7121 Part 4. The Appointed Person should be familiar with these and plan the lift accordingly.

These operations include:

- lifting of persons (See **Annex K**);
- operating in hazardous environments (chemical, nuclear, power stations etc).

2.3 *Site surveys*

The planning of a lift using a lorry loader may involve a site survey, carried out by the Appointed Person or his representative. This involves visiting the location where the task is to be carried out so that both the task and any hazards involved can be identified. For simple tasks the remainder of the planning process may be completed at the same time, whilst for more complicated jobs the person carrying out the survey may need to complete the process off site. The survey should include assessment of ground conditions (See **6.0**).

2.4 *Identifying the hazards associated with the task*

The hazards associated with the task should be identified. These might be associated with the location where the work is to be carried out, the nature of the lorry loader, load to be lifted or the people associated with the task or located in the vicinity.

2.5 *Carrying out a risk assessment*

Having identified the hazards associated with the task, a risk assessment should be carried out to identify who might be harmed, the chance of them being harmed and the consequences of any harm. This assessment should be recorded.

2.6 *Identifying control measures*

Once the risk assessment has highlighted the risks involved in the task, the procedures and measures required to control them should be identified.

2.7 *Developing the method to be used*

Having identified the hazards, evaluated the risks and worked out the control measures required to carry out the task safely; these components should be developed into a coherent plan. Any contingency measures and rescue procedures should be included in the plan.

2.8 *Selection of lorry loader and lifting accessories*

When selecting a lorry loader for a particular task the following points should be considered:-

- The weight, dimensions and characteristics of the loader and the loads to be lifted ;
- The operation, speed, radii, height of lift and areas of movement;
- The number, frequency and types of lifting operation;
- The space available for lorry loader access, deployment, operation and stowage including the space required for correct deployment of stabilizers;
- The control position which will be most suitable for the lifting operation[1)]. The control position should be selected to ensure that the operator has an adequate view of the load path and that he is adequately protected from crushing hazards;
- The need for motion limiting devices such as slewing arc or height limiters;
- The effect of the operating environment on the lorry loader.

NOTE: *Forestry timber handling cranes are specialist equipment and should not be used for general lifting operations unless suitably equipped.*

NOTE: *The selection of lifting accessories is dealt with in Section* ***8.0***

[1)] A choice is normally available which includes dual position, high seat or remote controls.

Figure 2 - Illustrative Lorry Loader Case Study

Example Activity – Lifting of Timber Roof Trusses with a Lorry Loader

Situation 1	Trusses being lifted off delivery vehicle and placed on an adjacent set down area on a secure site with no pedestrian access or other environmental hazards		
Environment - 1	***Load -*** 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Basic		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess weight and max radius of load Selection of lorry loader and lifting accessories
		Overturning of lorry loader through ground bearing failure	Assessment of ground conditions and use of appropriate spreader plates
Lifting Team • Appointed Person prepares generic RA & MS • Operator takes role of Crane Supervisor, Slinger/Signaller and Operator		***Planning Requirements*** • Generic Risk Assessment and Method Statement • Onsite review of RA and MS by Crane Supervisor	

Situation 2	Trusses being lifted off the delivery vehicle and placed directly on to the roof structure with personnel standing on the roof at height.		
Environment - 2	***Load -*** 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Intermediate		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess weight and max radius of load Selection of lorry loader and lifting accessories
		Overturning of lorry loader through ground bearing failure	Assessment of ground conditions and use of appropriate spreader plates
		Crushing or striking of personnel on roof structure	Slinger/signaller situated adjacent to landing area with agreed system of signalling (radio if line of sight obscured)
		Overhead lines -electric shock	Isolate power lines
		Lifting near and over persons	Control path of the load using tag lines
Lifting Team • Appointed Person prepares task and/or site specific RA & MS • Operator takes role of Crane Supervisor and Operator • Separate Slinger/signaller required on the roof		***Planning Requirements*** • Task and/or site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor	

<table>
<tr><td colspan="2">Situation 3</td><td colspan="2">Trusses being lifted off the delivery vehicle in a busy suburban street and placed directly on to the roof structure out of line of site of the operator and with personnel standing on the roof at height</td></tr>
<tr><td>Environment - 3</td><td>Load - 1</td><td>Example Hazards</td><td>Example Control Measures</td></tr>
<tr><td colspan="2">Lift Categorisation - Complex</td><td rowspan="6">Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory</td><td rowspan="6">Accurately assess weight and max radius of load
Selection of lorry loader and lifting accessories</td></tr>
<tr><td colspan="2" rowspan="6"> </td></tr>
<tr><td>Overturning of lorry loader through ground bearing failure</td><td>Assessment of ground conditions and use of appropriate spreader plates</td></tr>
<tr><td>Crushing or striking of personnel on roof structure</td><td>Slinger/signaller situated adjacent to landing area with agreed system of signalling (radio if line of sight obscured)</td></tr>
<tr><td>Lifting near and over persons</td><td>Control path of the load using tag lines</td></tr>
<tr><td>Injury of members of public in street.</td><td>Segregation of public from working area</td></tr>
<tr><td>Collision with passing traffic</td><td>Implement traffic management plan</td></tr>
<tr><td colspan="2">Lifting Team
Appointed Person prepares site specific RA & MS
Separate Crane Supervisor oversees lifting operation
Operator takes role of Operator only
Separate Slinger/signaller required on roof
Temporary traffic management operative (if required)</td><td colspan="2">Planning Requirements
Site specific Risk Assessment and Method Statement
Onsite review of RA and MS by the Crane Supervisor
Traffic management scheme</td></tr>
</table>

2.9 *Recording the planning in a Method Statement*

Once the plan has been developed it should be recorded in a Method Statement. The length and detail of this document depends on the complexity of the task to be undertaken and on the risks involved. A simple low risk job such as a routine delivery and unloading of bulk materials or blocks to site might only require the use of a brief generic method statement, whilst a more complex and high risk job such delivering, unloading, and assembling and lifting into position of a loading platform on a construction site would require a more detailed job specific method statement. The method statement covering all planned lifting on a site is often referred to as the *"lift plan"*. The method statement should include a *"lifting schedule"* listing each type of item to be lifted together with the following information:

- Item description;
- Weight;
- Dimensions;
- Lifting points/method;
- Type of lifting accessories to be used and configuration;
- Pick up and landing locations referenced to the site plan.

An example of a lifting schedule is shown in **Annex D** and an example of a method statement in **Annex E**.

2.10 *Communicating the plan to all persons involved*

One of the most important aspects of successful planning is to ensure that the contents of the plan are communicated effectively to and between all parties involved, taking account of language differences. Arrangements should be made to ensure that copies of any method statements are given to the appropriate people and that others involved in the job are fully briefed. Similarly any changes to the plan should be communicated to all parties.

2.11 *Reviewing the plan before the job starts*

Immediately before a job starts, the risk assessment and method should be reviewed to check if any aspect of the job has changed and the effect that these changes could have on the safety of the operation. If any modifications to the plan are required these should be communicated to all those involved. The Appointed Person should amend the method statement (lift plan) and initial any significant changes.

2.12 *Further guidance*

Further guidance on planning of lifting and installation is given in:

- BS 7121 *Code of practice for safe use of cranes* – Part 1 *General* and Part 4 *Lorry Loaders;*
- L113 *Safe Use of Lifting Equipment - Lifting Operations and Lifting Equipment Regulations 1998 Code of Practice* - ISBN 0 7176 1628 2;
- HSE Leaflet INDG218 – Guide to Risk Assessment;
- HSE Leaflet INDG163 – Five Steps to Risk Assessment.
- CIRIA publication C703 - *Crane Stability on Site.*

3.0 Types of Hire Contract

3.1 *General*

It is important to ensure that the planning, organisation, control and management of lifting operations are not compromised by commercial contractual arrangements.

In general, any person or organisation who requires a lifting operation to be carried out using a lorry loader and which does not have its own cranage, has two basic options:-

- Hiring a lorry loader from a lorry loader owner and managing (planning and supervising) the lifting operation themselves. In this case they are responsible for ensuring there is a safe system of work in place and that all lifting operations are carried out safely.
- Employing a contractor to carry out the lifting operation (Contract Lift), in which case the planning, supervision and execution of the lifting operation(s) will be carried out by the lorry loader owner.

The difference between the two options is summarized in **Figure 3**. In the case of lorry loaders the Contract Lift includes three possibilities:-

- A formal contract lift, as with a mobile crane, where a lorry loader owner is contracted by a customer to move a load on their behalf, using a lorry loader.
- Lifting operations as part of the supply and delivery of goods to a non–domestic customer e.g. where a builders merchant is delivering packs of blocks to a construction site on a vehicle and unloads the blocks using a loader crane mounted on the delivery vehicle.
- Lifting operations as part of the supply and delivery of goods to a domestic customer e.g. where a builders merchant is delivering packs of blocks to a householder on a vehicle and unloads the blocks using a knuckle jib crane mounted on the delivery vehicle.

NOTE: *In the last option the lorry loader supplier will assume full responsibility for all aspects of the lifting operation as the householder would not be expected to have sufficient knowledge to advise the supplier of any significant hazards or be aware of the requirements of LOLER and BS7121.*

If a customer does not have expertise in lifting operations they should not hire lorry loaders but should opt for a contract lift. Before entering into a contract, customers should satisfy themselves that the contractor has the necessary competence to carry out the work.

Where the customer (apart from domestic customers) opts for a contract lift they have a duty to provide information, such as ground bearing capacity and the weight of the load to be lifted, to the lorry loader owner to assist them with their planning. As the customer is in control of the site and has access to the expertise required to assess the ground on which the lorry loader will stand, they are responsible for assessment and preparation of the ground.

NOTE: *Responsibilities for insurance in terms of the lorry loader, personnel, the load and third parties might also need to be clarified.*

3.2 *Contract lifting operations*

3.2.1 Formally contracted lifting

The customer may enter into a contract with a contractor who undertakes the work on their behalf.

The parties to the contract should ensure that:

- all work is carried out in accordance with the BS 7121 series;

- the contractor appoints a person, in accordance with 4.1 to the satisfaction of the customer;
- all information or services provided by the customer to facilitate compliance with the BS 7121 series are notified to the contractor in writing.

The contractor should carry out lifting operations in accordance with the BS 7121 series. The contractor should be given full authority by the customer to work in accordance with the BS 7121 series including, where appropriate, authority to control and instruct the customer's personnel.

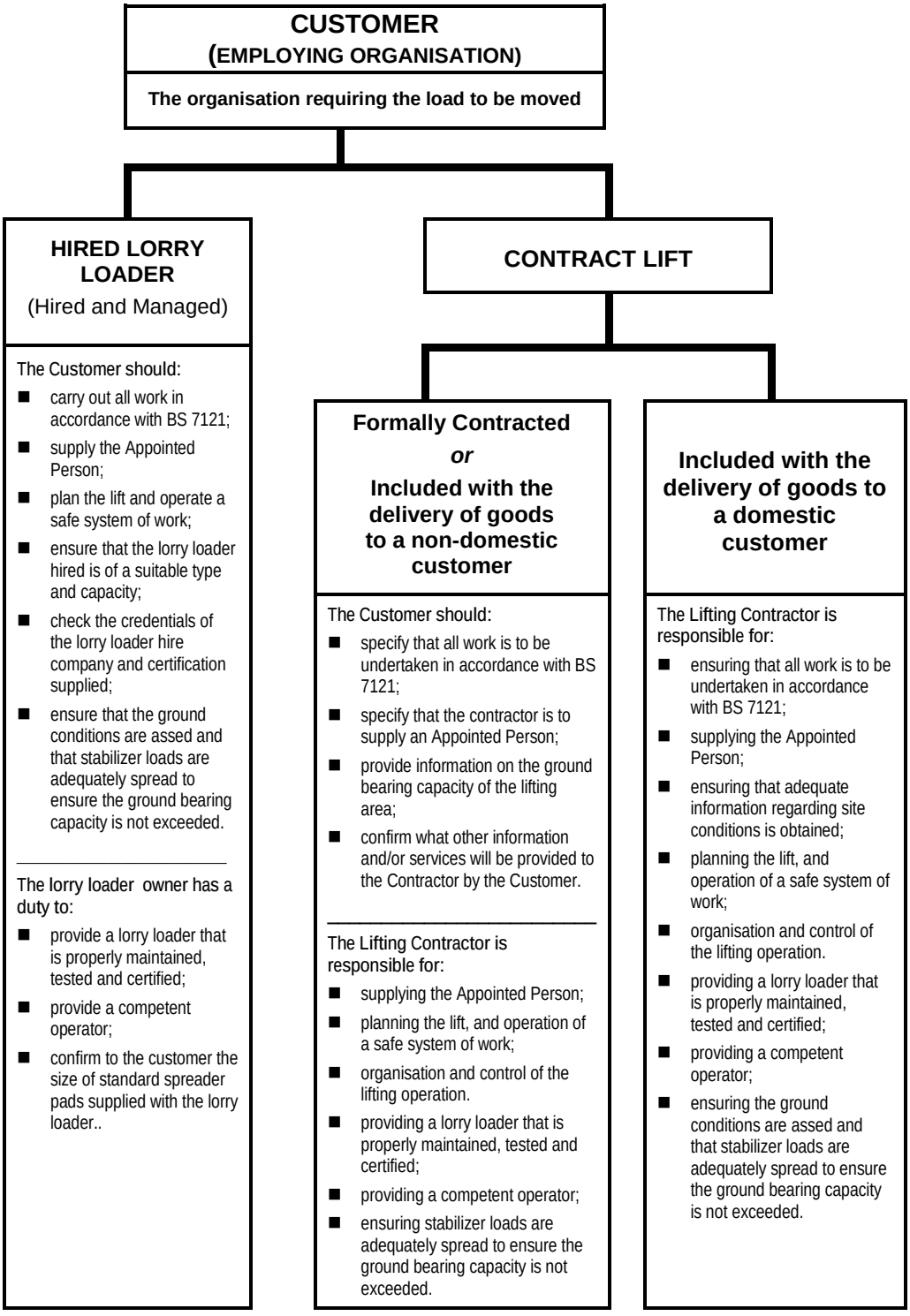


Figure 3 – Contract Options

Before entering into a contract, the customer should ensure that the contractor has the necessary competence to carry out the work in accordance with the BS 7121 series.

NOTE: *Although the BS 7121 series is intended to assist organisations to comply with their statutory and common law obligations, it does not relieve them from these obligations.*

3.2.2 Contract lifting as part of the supply and delivery of goods to a non-domestic customer

A customer requesting the supply and delivery of goods (the employing organisation) which involves a lifting operation with a lorry loader to unload the goods from the delivery vehicle, is entering into a de facto contract lift agreement with the person delivering the goods (the contractor).

The parties to the contract for supply should ensure that:

- all work is carried out in accordance with the BS 7121 series;
- the contractor appoints a person, in accordance with 4.1 to the satisfaction of the customer;
- all information or services provided by the customer to facilitate compliance with the BS 7121 series are notified to the contractor in writing.

The contractor should carry out lifting operations in accordance with the BS 7121 series. The contractor should be given full authority by the customer to work in accordance with the BS 7121 series including, where appropriate, authority to control and instruct the customer's personnel.

NOTE: *Although the BS 7121 series is intended to assist organisations to comply with their statutory and common law obligations, it does not relieve them from these obligations.*

Before entering into a contract, customers should ensure that the contractor has the necessary competence to carry out the work in accordance with the BS 7121 series.

NOTE: *In this case the supplier of the goods is responsible for the detailed planning and appointment of the Appointed Person. The main contractor / principal contractor would still have responsibilities under CDM for co-ordination and provision of information but the detailed planning should be the responsibility of the supplier who should know the load details and who also selects the equipment (or at least the carrier). The supplier could delegate the duties to the carrier.*

3.2.3 Contract lifting as part of the supply and delivery of goods to a domestic customer

The domestic customer requesting the supply and delivery of goods which involves a lifting operation with a lorry loader to unload the goods from the delivery vehicle is entering into a de facto contract lift agreement with the person delivering the goods (the contractor).

The contractor should ensure that:

- a person is appointed, in accordance with 4.1;
- adequate information regarding site conditions is obtained;
- the lift is planned and that a safe system of work is followed;
- the lifting operation is appropriately supervised and carried out in a safe manner;
- the lorry loader provided is properly maintained, inspected and thoroughly examined;
- a competent operator is provided.

The contractor should carry out lifting operations in accordance with the BS 7121 series.

NOTE: *Although the BS 7121 series is intended to assist organisations to comply with their statutory and common law obligations, it does not relieve them from these obligations.*

NOTE: *The lorry loader supplier will assume full responsibility for all aspects of the lifting operation as the householder would not be expected to have sufficient knowledge to advise the supplier of any significant hazards or be aware of the requirements of LOLER and BS7121.*

3.3 *Customer's duties when using hired lorry loaders*

When a lorry loader is hired out together with an operator to a customer for the customer to plan and manage lifting operations, the lorry loader owner should provide a competent operator and a lorry loader that is properly maintained, inspected and tested in accordance with BS 7121-2, and has a current Report of Thorough Examination.

The customer retains the responsibility for nominating the Appointed Person in accordance with **4.1** and for following the recommendations given in the BS 7121 series. Although the lorry loader owner has a duty to provide, on request, certain technical information about the lorry loader such as stabilizer loadings and duty charts to assist the customer with their planning, the responsibility for ensuring that the crane is of a suitable type, size and capacity for the task being undertaken and for planning the operation remains with the customer.

Therefore if a customer does not have expertise in lifting operations, they should not hire lorry loaders but should opt for a contract lift.

NOTE: *In the event that a lorry loader is hired without an operator, all of the above points will apply.*

3.4 *Insurance issues*

It is essential that when a lorry loader is hired or a contract lift is undertaken that both parties are clear about the provision of adequate insurance cover. This should at least cover:-

- Loss of or damage to the lorry loader or other vehicles/equipment whilst on site;
- Continuing hire charges whilst the lorry loader or other vehicles/equipment is off the road for repairs following damage;
- Injury to the lorry loader operator or other employees on site;
- Injury to other parties, including damage to their property arising from the lorry loader operations;
- Loss or damage to the goods being lifted.

4.0 Roles and Duties of Personnel Involved in Lifting Operations

4.1 *The Duties of the Appointed Person*

The Appointed Person is nominated by management of the company or organisation carrying out the lifting operations, to be in overall control of the lifting operations and the members of the lifting team. This person must have had training, experience, and be competent.

His duties include:-

- Assessing the lifting operation to provide such planning (including approval of all risk assessments, lift categorisation and method statements), selection of lorry loader(s) and lifting accessories, instruction and supervision as is necessary for the task to be undertaken safely. This may include consultation with other responsible bodies to ensure effective collaboration;
- Ensuring that the condition of the ground on which the lorry loader will stand is assessed for its ground bearing capacity and that the stabilizer loads are adequately spread;
- Ensuring that adequate pre operational checks, intermediate inspections, maintenance and thorough examination of the equipment has been carried out. For further information see BS 7121-2;
- Ensuring that there is an effective procedure for reporting defects and incidents and taking any necessary corrective action;
- Taking responsibility for the organisation and control of the lifting operation;
- Ensuring that the crane supervisor and other members of the lifting team are fully briefed on the contents, scope and limits of the method statement (see **6.3**);
- Being familiar with the relevant parts of the project Health and Safety Plan where the lifting operation is being carried out on a site where the Construction (Design and Management) Regulations apply.

The Appointed Person needs to appoint a crane supervisor to be present throughout the lifting operation in order to control it and ensure that it is carried out in accordance with the planning. The Appointed Person may choose to act as the crane supervisor. The lorry loader operator must know who the crane supervisor is and, if they have any problems whilst on site, they should consult him. In certain circumstances it may be possible to combine some of the roles of members of the lifting team (see **4.6**).

The Appointed Person retains overall responsibility for the lifting operation and has the authority to stop the lifting operation at any time if it is considered that there is a risk to safety. If the Appointed Person is not present, then this authority passes to the crane supervisor.

On multi-crane sites the Appointed Person should appoint a crane co-ordinator for the site and a crane supervisor for each crane or lorry loader.

4.2 *The Duties of the Crane Supervisor*

The crane supervisor's duties include:-

- ensuring that the lorry loader and other equipment are in accordance with the lifting plan prepared by the Appointed Person;
- ensuring that sufficient personnel are available to safely carry out the lifting operation;

- ensuring that the conditions on site are the same as those identified by the lifting plan;
- reporting back to the Appointed Person if there are any problems;
- briefing the personnel before the lifting operation begins;
- supervising and directing the slinger, signaller and lorry loader operator;
- only lifting items that have been detailed in the lifting plan;
- stopping the operation in the event of any risk to safety.

In certain circumstances it may be possible to combine some of the roles of members of the lifting team (see **4.6**).

4.3 *The Duties of the Lorry Loader Operator*

The lorry loader operator's duties include:-

- establishing who is in charge of the lifting operation and the other members of the team and their roles;
- establishing which signalling system is to be used and following instructions from only one nominated signaller at a time;
- stopping operations if given any instructions that would take the lorry loader outside its permitted duties;
- informing the crane supervisor if any problems arise which would affect the lifting operation;
- carrying out the daily checks;
- carrying out specified maintenance in accordance with the manufacturers and employer’s instruction and training;
- using the lorry loader to lift only the loads that are identified in the lift plan.

If the lorry loader operator believes that the operation they are being asked to carry out is unsafe, they should initially speak to the crane supervisor or Appointed Person. In the event that there is a disagreement between the operator and the crane supervisor or Appointed Person the operator should notify his employer.

4.4 *The Duties of the Slinger*

The slinger's duties include:-

- attaching and detaching the load to and from the lorry loader;
- using the correct lifting accessories in accordance with the lifting plan or procedure;
- visually checking the lifting accessories for damage before and after each use;
- initiating and directing the movement of the load by giving the appropriate signals;
- to place the load safely.

On some occasions the Appointed Person may ask the slinger to act as the signaller.

4.5 *The Duties of the Signaller*

The signaller's duties include:

- relaying signals from the slinger to the lorry loader operator.

NOTE: *The roles of slinger and signaller are generally combined in one person.*

4.6 *Combination of roles*

In certain circumstances it may be possible to combine some of the roles of members of the lifting team. **Figure 4** illustrates where this may take place, however the table should not be taken as definitive for every circumstance. Role combination should only take place following review of the lifting operation by the Appointed Person.

It should be noted that an Appointed Person is required to plan all lifting operations. It is good practice for the appointed person to be present on the site during a complex lift.

In some circumstances it may be appropriate for the Appointed Person to also assume other roles such as crane supervisor, slinger/signaller or operator.

The combination of roles requires that the person undertaking the combined role has achieved the necessary competence for each role (See **5.0**)

<table>
<tr><th rowspan="2">Activity</th><th rowspan="2">Role</th><th colspan="3">Lift Category</th></tr>
<tr><th>Basic</th><th>Intermediate</th><th>Complex</th></tr>
<tr><td>Planning</td><td>Appointed Person</td><td>Required</td><td>Required</td><td>Required</td></tr>
<tr><td>Site Visit</td><td>Appointed Person</td><td>Not essential</td><td>May be required</td><td>Required</td></tr>
<tr><td rowspan="4">Lifting Operation</td><td>Appointed Person</td><td>Not essential</td><td>May be required</td><td>Required</td></tr>
<tr><td>Crane Supervisor</td><td rowspan="2">Roles may be combined.</td><td rowspan="2">Roles may be combined.</td><td>Required</td></tr>
<tr><td>Operator</td><td>Required</td></tr>
<tr><td>Slinger/Signaller</td><td>Required</td><td>Required</td></tr>
</table>

Note: *This table is for guidance. It is the Appointed Persons responsibility to determine the combination of roles for each lifting operation.*

Figure 4 – Combination of Lifting Team Roles

5.0 Selection and Training of Personnel

The Provision and Use of Work Equipment Regulations 1998 require that all persons involved in the operation, maintenance and thorough examination of a lorry loader must be adequately trained and assessed as competent. Current arrangements, including those that are nationally accredited, are shown in the table below:-

Activity	Provided By	Qualification
Slinger	CPCS Accredited Training Provider	CPCS Scheme - Category A40
	ALLMI Accredited Training Provider	ALLMI Scheme
Signaller	CPCS Accredited Training Provider	CPCS Scheme - Category A40
	ALLMI Accredited Training Provider	ALLMI Scheme
Lorry Loader Operators	CPCS Accredited Training Provider	CPCS Scheme - Category A36 A: Hook B: Clamshell Bucket C: Hydraulic Clamp
	ALLMI Accredited Training Provider	ALLMI Scheme Categories **a** to **f** & **1** to **7**
Crane Supervisor	CPCS Accredited Training Provider	CPCS Scheme - Category A62
	ALLMI Accredited Training Provider	ALLMI Competency Assessment Card
Maintenance	Lorry loader manufacturer to lorry loader owner for each model of lorry loader	In-house assessment by a competent assessor
Competent Person (Thorough Examination)	ALLMI UKAS	ALLMI Competency Assessment Card UKAS accredited Competent Person
Operator familiarisation	Lorry loader owner to operator for each model of lorry loader	In-house assessment by a competent assessor
Appointed Person	CPCS Accredited Training Provider	CPCS Scheme - Category A61
	ALLMI Accredited Training Provider	ALLMI Competency Assessment Card
Site survey - fundamental	Lorry loader owner to representative	In-house assessment by a competent assessor
Site survey - familiarisation	Lorry loader owner to representative for each model of lorry loader	In-house assessment by a competent assessor
Information on CPCS accredited training providers can be obtained from the Construction Plant Certification Scheme on 0870 417 7274 or http://www.cskills.org/supportbusiness/cardschemes/availablecardschemes/cpcs.aspx *Information on ALLMI accredited training providers can be obtained from the Association of Lorry Loader Manufacturers and Importers on 0844 858 4334 or* http://www.allmi.com/allmitraining/trainingproviders/trainprov.html *Information on UKAS accredited companies can be found at* www.ukas.com		
In addition to initial assessment on appointment/employment, arrangements should be made to reassess/review the competence of personnel at periodic intervals.		
Operator Familiarisation Lorry loaders come in many shapes and sizes with significant differences in control layouts and operating characteristics. It is therefore essential that operators are given adequate familiarisation on an unfamiliar type or model of lorry loader before they begin lifting operations. This is generally carried out by an experienced person employed by the lorry loader owner. An example of an operator familiarization template is shown in **Annex H**		

6.0 Siting of Lorry Loaders

The area in which a lorry loader is to be sited must be carefully assessed to ensure that it is suitable before the lorry loader is taken to site and put into service. During this assessment, the following points should be considered.

6.1 *Clearances*

The area chosen must be of a sufficient size to enable the lorry loader to be manoeuvred into position, set up, operated and stowed, with sufficient clearances between the lorry loader and surrounding structures, as detailed in the manufacturer's operation and instruction manual. This is to ensure that trapping points are not created and that damage does not occur to either the lorry loader or the surrounding structures. The Guidance to LOLER specifies a minimum gap for areas into which persons may enter of 0.6m.

6.2 *Ground conditions*

Insufficient consideration and assessment of ground conditions has been found to be a major cause of accidents with lorry loaders.

All lorry loaders rely for their stability on the ability of the ground on which they are standing to safely absorb the loads imposed by the lorry loader. Most lorry loader manufacturers supply information on the loads imposed by the machine on the ground in the various operating and set up configurations of the lorry loader. These generally consist of:-

- Maximum vertical load per stabilizer;
- Dimensions of stabilizer support plate (pad);
- Ground-level pressure on stabilizer support plate

An assessment of the ability of the ground to accept these loads should be made by a competent person. This assessment may indicate that the ground has insufficient bearing capacity to accept the loads imposed by the lorry loader, in which case additional measures will need to be taken before the lorry loader can be set up. These may include using timber sleepers, proprietary mats, or in extreme cases, concrete pads to spread the applied load to an acceptable bearing pressure.

Where timber is to be used it is important that the timber sections employed are of sufficient dimensions and strength to transmit the applied loads to the ground and that the timbers are pinned together to form a grillage. The use of individual loose timbers has been found to be a major cause of accidents (see **Figure 5 & 6**).

It is essential that stabilizers are deployed in the manner specified by the lorry loader manufacturer.

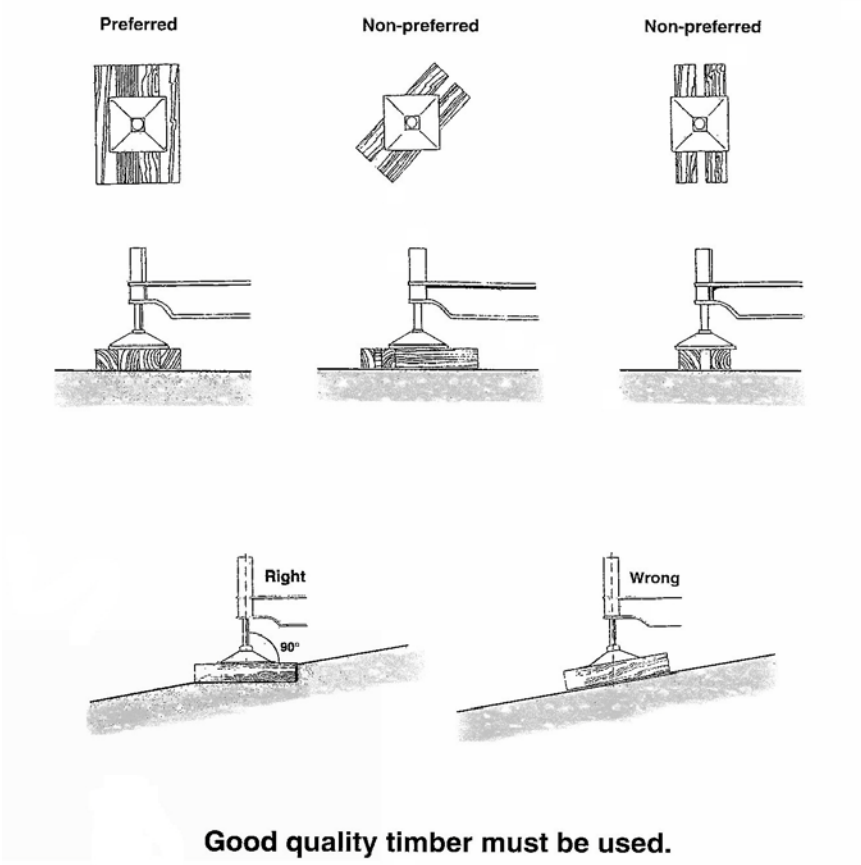


Figure 5 – Timber Packing Under Stabilizers

When siting the lorry loader, consideration should be given to the length of time that the lorry loader will be erected in one position and the likely deterioration of the supporting ground or foundation over time (e.g. timber rotting, undermining by water or frost, drying out, adjacent excavations)

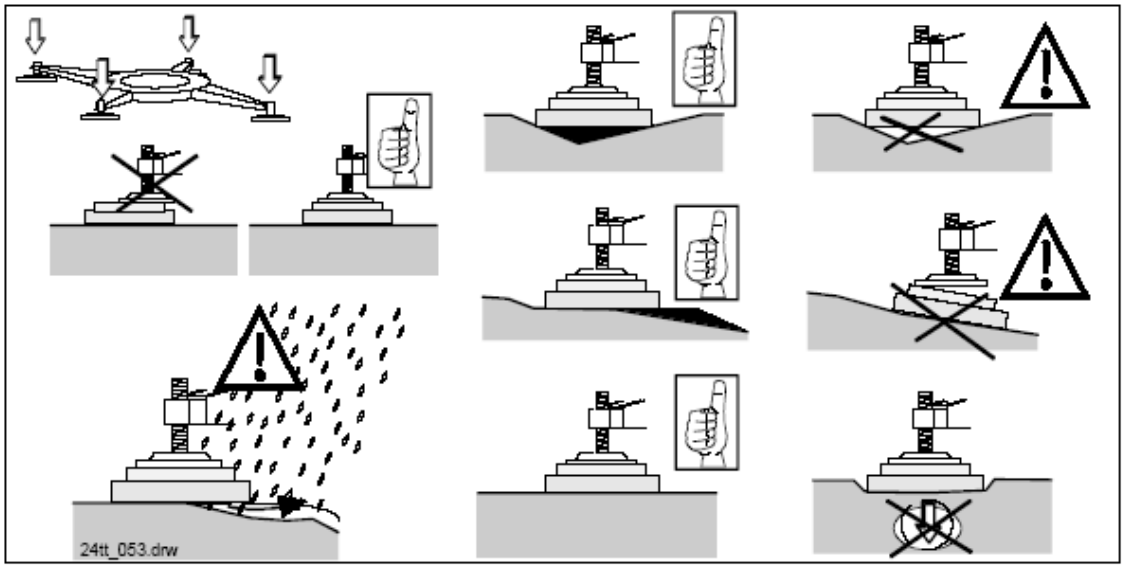


Figure 6 - Siting of Stabilizers

Some of the hazards that need to be considered when assessing ground include:-

- Underground services;
- Paved areas;
- Uncompacted fill;
- Open excavations;
- High water table;
- Basements;
- Cellars;
- Proximity to canals and rivers;
- Changes to site conditions during construction;
- Slope and camber of ground.

Details of any foundation or load spreading arrangements should be recorded in the method statement by the Appointed Person.

Further guidance on assessment of ground conditions and lorry loader/crane foundations is given in the CIRIA publication C703 - *Crane Stability on Site*

6.3 *Overhead hazards*

When siting a lorry loader care must be taken to ensure that the extending structure will not contact or approach overhead hazards such as power lines, communications cables or overhead structures.

Advice on siting lorry loaders near to overhead power lines can be found in HSE Guidance Note GS6 - *Avoidance of danger from overhead electric power lines*.

6.4 *Noise*

Some locations where lorry loaders are used may have restrictions on noise, particularly at night and the Appointed Person should ensure that any such restrictions are taken into account in the planning process.

6.5 *Exhaust gas emissions*

If the lorry loader is to be used in a confined space the Appointed Person should consider the effect of vehicle exhaust gas emissions on persons in the vicinity and take appropriate measures such as forced ventilation or the use of fume extraction ducts.

6.6 *Proximity to railways and airports*

If the lorry loader is to be sited adjacent to a railway or in the vicinity of an airfield or airport the Appointed Person should contact the operator of the facility as they may well impose restrictions on the height, lifting capacity and use of the lorry loader.

The Appointed Person should consult the aerodrome/airfield manager for permission to work if a crane is to be used within 6km of the aerodrome/airfield and its height exceeds 10m or that of the surrounding structures or trees.

NOTE: *The Air Navigation Order makes it an offence to act recklessly or negligently in a manner likely to endanger aircraft.*

Further guidance on the use of cranes (including lorry loaders) in the vicinity of airfields is given in:-

- *Cranes and planes - A guide to procedures for operation of cranes in the vicinity of aerodromes*. Airport Operators Association (AOA).
- *A voluntary code of practice for the safe use of cranes in and around airports. Off-highway Plant and Equipment Research Centre.*

6.7 *Access & egress to and from the site*

It is important when siting a lorry loader to ensure that there is adequate access to the set up position for both the machine and any supporting transport. It is equally important to ensure that adequate egress will be available when the lorry loader is removed from site.

6.8 *Wind*

The lorry loader supplier/manufacturer will be able to advise on the maximum in-service and out of service wind conditions for the specific model of lorry loader to be used.

Wind speeds should be monitored by the use of handheld anemometers, bearing in mind that wind speed increases with height and that the wind pressure on the load may increase as it is lifted. All operating personnel should be aware of the maximum in-service wind speed for the particular lorry loader being used. This value may need to be significantly reduced for loads with a large wind sail area. Wind speeds may be estimated by use of the Beaufort Scale (See **Annex I**).

6.9 *Radio communication systems*

Lorry loaders often work on congested construction sites where the signaller is out of sight of the lorry loader operator and the standard hand signals specified in BS 7121 cannot be used. As an alternative, hand held VHF/UHF radios are often used. This however, can lead to a number of problems which may interfere with the clear communication vital for safe lifting operations:-

- Loss of signal and thus communication, leading to loss of control of the lifting operation;
- Interference from radios on adjacent sites, which can lead to loss of communication or directions being given to the lorry loader/crane operator;
- Misunderstanding between the lorry loader operator and the signaller, leading to problems such as a load being lifted before the slinger has his hands clear, loads colliding with the building structure and the load being lowered before people are clear of the landing area.

Further details on radio communications, including call signs and standard commands are given in **Annex J**.

NOTE: *The use of remote controls requiring both hands may necessitate the provision of "hands free" radio equipment.*

6.10 *Dimensioned sketch*

After completion of the assessment the Appointed Person should prepare, or have drawn up under his direction, a dimensioned sketch of the site. The sketch should include, where appropriate, the following information:-

- Plan and side elevation views;
- Outline envelope of any structures adjacent to the lifting area ;

- The planned location of the lorry loader with dimensions to reference points to aid location;
- The make and model of lorry loader selected;
- The radius that the lorry loader can reach;
- Rated Capacity at max radius;
- Height under hook;
- Proximity hazards and delivery vehicle unloading areas.

6.11 *Further guidance*

Further detailed guidance on the siting of lorry loaders is given in:

- BS 7121 *Code of practice for safe use of cranes* – Part 1 *General* and Part 4 *Lorry loaders.*
- CIRIA publication C703 - *Crane Stability on Site.*
- ALLMI Guidance Note 013 – *Stabilizer Forces.*

7.0 Lorry Loader Operation

Lorry loaders should be operated by operators who have been trained and assessed as competent (see **Section 5**).

7.1 *Manuals and signs*

All operations should be carried out in accordance with the manufacturer's operating instruction manual, a copy of which should be with the lorry loader at all times. Checks should be made by the supplier to ensure that the manual:-

- Is in the cab of the lorry loader at all times;
- Is the correct manual for the lorry loader supplied;
- Conveys information to the users in a simple and understandable format and is in a language (normally English) that is readily understood by the operator.

All signs, labels and decals on the lorry loader must be clear, legible and in a language (normally English) that is readily understood by the operator. A rated capacity chart for the specific lorry loader must be readily available to the operator.

NOTE: *Specifications for operating instructions, signs and symbols for lorry loaders are given in BS EN 12999:2002 + A2:2009 – Cranes –Loader cranes*

7.2 *Slinging, signalling and lorry loader operation*

The operator of a lorry loader has some flexibility in where he stands and may be able to take on the responsibilities normally undertaken by a slinger/signaller. Further Guidance on the combination of roles is given in **4.6**.

NOTE: *If the operator is carrying out the role of Slinger/Signaller he must isolate the control system before leaving the controls to attach a sling.*

7.3 *Pedestrian lorry loader operation*

The operation of lorry loader is frequently carried out by a pedestrian operator at ground level, using remote controls that may be hard wired or use a wireless data transmission system. Whilst pedestrian control provides flexibility with the possible combination of roles (see **4.6**) there are several potential disadvantages that must be taken into account in planning the lifting operations:-

- The lorry loader operator may well be at risk of tripping and falling when trying to move around the site over uneven ground whilst concentrating on controlling the lorry loader. Pedestrian operated lorry loaders should only be controlled whilst the operator is stationary;
- The operator may not have a good view of the load and any obstructions, consequently the operator must always have the lorry loader booms and load in sight at all times, unless he is working under the direction of a signaller who has a clear view of the load and load path.

7.4 *Radio remote controls*

To prevent unauthorized use, the operator of a lorry loader that is controlled by transmitted signals, such as radio signals, should retain the control station (transmitter) in their physical possession or remove the key from its key-lock switch and, for short periods, retain the key in their possession. For longer periods, or when the lorry loader is not in use, the transmitter should be kept in secure storage.

When the transmitter is fitted with a belt or harness, the operator should be wearing the harness before switching on the transmitter so that accidental operation of the lorry

loader is prevented. The transmitter should only be switched on when operating the lorry loader and should be switched off before removing the harness.

The design of controls and shrouding should comply with *BS EN 13557:2003 – Cranes – Controls and control stations* to prevent inadvertent operation.

7.5 *Rated capacity*

The rated capacity of a lorry loader should not be exceeded, except when testing the lorry loader under the supervision of a competent person.

Care should be taken to prevent pendulum swinging of the load, by careful control of the operating motions to match the swing of the load and to keep it under control at all times.

Rated capacities apply only to freely suspended loads. The hoisting, slewing, telescoping, or raising and lowering motions of a lorry loader should not be used to drag a load under any circumstances. Before lifting a load, the hook should be vertically above the centre of gravity of the load. Failure to observe these points can adversely affect the stability of the lorry loader or introduce loadings (stresses) into the lorry loader for which it has not been designed and, even with a rated capacity indicator/limiter fitted, a sudden structural failure or overturn can occur without warning.

Tag lines should be attached to loads where movement of the load during the lifting operation may be hazardous.

7.6 *Handling of loads near persons*

When loads have to be handled in the vicinity of persons, extreme care should be exercised and adequate clearances allowed. The route of the load should be planned to prevent lifting over persons. Operators and signallers should pay particular attention to possible dangers of persons working out of sight.

All persons should be instructed to stand clear of the load being lifted. When lifting from a stack, all persons should be instructed to stand away from the stack in case adjacent materials or objects are displaced. This also applies to the removal of part loads from the deck of a vehicle.

Where possible, lifting of loads over highways, railways, rivers or other places to which the public have access should be avoided. If this is not possible, permission should be obtained from the appropriate authority and the area kept clear of traffic and persons.

7.7 *Multiple lifting*

7.7.1 Weight of the load

The total weight of the load and its distribution should be either known or calculated. Where the information is taken from a drawing, due allowance should be made for manufacturing tolerances.

7.7.2 Centre of gravity

Owing to the variable effect of manufacturing tolerances, variable density etc., the centre of gravity of the load might not be known accurately and the proportion of the load being carried by each lorry loader/crane could therefore be uncertain.

7.7.3 Weight of the lifting accessories/attachments

The weight of the lifting accessories/attachments should be part of the calculated load on the lorry loader/crane. When handling heavy or awkwardly shaped loads, the deduction from the rated capacity of the lorry loader/crane to allow for the weight of the

lifting accessories/attachments might be significant. The weight of the lifting accessories/attachments, and hook blocks, where appropriate, and its distribution should therefore be accurately known.

In cases where the hoist ropes are reeved round pulleys that are part of a specially designed lifting accessory/attachment, e.g. a lifting beam, the weight of the removed hook block and hook may be taken into consideration when determining the net weight of the lifting accessories/attachments.

7.7.4 Capacities of the lifting accessories/attachments

The distribution within the lifting accessories/attachments of the forces that arise during the lifting operation should be established. The lifting accessories/attachments used should, unless specially designed for the particular lifting operation, have a capacity margin well in excess of that needed for its proportioned load.

NOTE *Special lifting accessories/attachments might be necessary to suit the maximum variation in distribution and direction of application of loads or forces that can occur during multiple lifting.*

7.7.5 Synchronization of lorry loader/crane motions

If the variations in the direction and magnitude of the forces acting on the lorry loader/crane during the multiple lift are to be kept to a minimum, it is essential that the lorry loader/crane motions are synchronous in their effect.

Lorry loaders/cranes of equal capacity and similar characteristics should therefore be used, whenever possible. In practice, there is always some variation due to differences in response to the activation of the control system.

The rated capacity of a lorry loader/crane is calculated on the assumption that the load is raised and lowered in a vertical plane. The lorry loader/crane structure is designed to withstand any lateral loads imposed by accelerations in the various crane motions, but it is unsafe to rely on this lateral strength to withstand horizontal components of *"out-of-vertical"* lifts.

If the lorry loaders/cranes have dissimilar characteristics, it is unlikely that the motions will be accurately synchronized. Therefore, an assessment should be made of the effect of variation in verticality of the hoist ropes, which could arise from inequalities of speed, together with a determination of the means for keeping such inequalities to a minimum.

7.7.6 Instrumentation

Instruments are available to monitor the angle of the load and verticality and the force in any hoist rope constantly throughout the lifting operation. The use of such instruments and the restriction of the motion speeds, together with the strict use of one motion at any one time, can assist in the control of the loads on the lorry loaders/cranes within the planned values.

7.7.7 Supervision

One competent person should be in attendance and in overall control of a multiple lorry loader/crane operation. Only this person should give instructions to personnel operating or driving machines, except in an emergency when a commonly recognized stop signal may be given by any person observing a situation leading to danger.

If all the necessary points cannot be observed from one position, other personnel should be positioned at various points to observe and report to the person in charge of the operation.

NOTE *It is essential that adequate means of signalling between the person in charge of the operation, the operators of the lorry loaders and cranes, and the slingers and signallers are provided.*

7.7.8 Recommended rated capacity during lifting

As all the factors cannot be accurately evaluated, an appropriate down-rating should be applied to all the lorry loaders/cranes involved. The down-rating might need to be 20% or more.

7.8 *Lifting of persons*

Raising and lowering of personnel by a lorry loader that is not specifically designed for this purpose should only be carried out in exceptional circumstances, when it is not practicable to do so by other less hazardous means (e.g scaffolding, mobile elevating work platform, mast climbing work platform).

Careful planning of the event should be carried out prior to each raising and lowering operation. Additional advice on the planning and operation of lifting of persons is given in **Annex K**.

8.0 Lifting Accessories

In preparing the method statement (lift plan) consideration should be made of the selection of lifting accessories such as wire rope slings, chains slings, webbing slings and shackles to ensure that they of adequate capacity for the anticipated loads to be handled.

All the lifting accessories on a site or carried with a lorry loader should be listed in a lifting accessory register (see **Annex F**).

The following points should be considered when selecting lifting accessories:-

- The secure storage of lifting accessories when not in use should be considered at the planning stage and suitable arrangements made;
- Lifting accessories should be protected with protective sleeves or suitable packing, where loads with sharp edges are to be lifted;
- For the lifting of awkward materials or items with a non-central centre of gravity, lifting beams, spreader bars or purpose designed lifting beams may be required;
- All accessories should be marked with a Working Load Limit (Maximum Safe Working Load);
- The type, size, rating and configuration of lifting accessories to be used for each load or generic type of load to be lifted should be recorded in the method statement (lift plan);
- Before each use of lifting accessories pre-use checks should be carried out to ensure that they are in good condition and that a current Report of Thorough Examination is available.
- LOLER requires that lifting accessories are thoroughly examined at intervals not exceeding six months.

NOTE: *If the lifting accessories are thoroughly examined under an examination scheme, the periodicity may be less frequent i.e. greater than 6 months.*

9.0 Maintenance, Checks and Inspections

The effective maintenance of a lorry loader is an essential part of safe operation. As with all lifting machines the lorry loader wears and deteriorates over time and the maintenance process, including checks and inspections, both monitors, prevents and rectifies this deterioration. It is important that the personnel asked to carry out these tasks have the necessary machine-specific training, experience and competence in both periodic and breakdown maintenance.

Lorry loaders are complex machines with electrical, mechanical and hydraulic systems that require the manufacturer's preventative maintenance instructions to be strictly complied with, if safety is to be maintained in use. Checks and inspections should be carried out taking account of the frequency of use of the lorry loader and the environmental conditions in which it regularly works. If the operator is considered to be competent, they may be authorized to carry out routine pre-use checks and intermediate inspections.

The employer of the person carrying out these checks should ensure that the machine is taken out of use for the period of time required to carry them out. Also, the employer or authorized person carrying out the checks and inspections should ensure that a safe system of work is in place to prevent personnel from being exposed to risk, for example from the inadvertent operation of the equipment.

9.1 *Daily pre-use checks*

At the beginning of each shift or working day before work commences and when taking over the machine for the first time, the following visual and functional routine checks, if appropriate for the type of lorry loader, should be carried out :-

- Carry out the checks required by the manufacturer's handbook;
- Check that appropriate documentation such as operator manuals and reports of through examination are available;
- Check PTO operation;
- Check that height warning signs are present;
- Visually check, by inspecting relevant levels and/or components, that no loss of fluids such as hydraulic fluid, lubricating oil and coolant is apparent;
- Check stabilizer beam locks;
- Check stabilizer hoses and pipework;
- Check loader crane structure;
- Check loader crane hoses and pipework;
- Check that any ropes are correctly routed and positioned on their sheaves or pulleys and are correctly wound on drums;
- Check the function of all limiting and indicating devices;
- Check that the load plate is appropriate and legible;
- Check that any working lights, operate efficiently;
- Without load, check that all lorry loader controls function correctly;
- Check that all audible warning devices operate satisfactorily;
- Check function of any remote controls;

- Check that the lorry loader is in a tidy condition and free from tins of oil, rags, tools and materials other than those for which storage provision is made, that access and egress are adequate;
- Check tyre pressure and condition if not already completed as part of vehicle checks.

A record of the daily check should be kept (for example on a timesheet) and a defect reporting system should be in place so that any defects are rectified promptly.

NOTE: *A sample pre-use check sheet is shown in* ***Annex G***

9.2 *Intermediate inspections*

Intermediate inspections should be carried out in accordance with the manufacturer's instructions. This may be supplemented by additional inspections specified by a competent person.

Enter the results of the checks in the record of inspections.

9.3 *Planned maintenance*

To ensure safe and satisfactory operation of the lorry loader, a planned maintenance system should be established and used.

Manufacturer's instruction manuals recommend that specific tasks be carried out at stated intervals, and these periods should not be exceeded. They also specify the lubrication points that require attention, the interval or frequency of greasing and oil changes and the grades and quality of lubricant to be used. Instruction manuals also cover other essential maintenance such as tightness of electrical connections, frequency for checking the security of fixing bolts, recommended torque settings, and functional testing.

LOLER requires a competent person to assess whether or not the lorry loader is fit for service at the time of the thorough examination. The thorough examination does not cover the absolute legal requirements to ensure that the equipment is properly maintained. Therefore a more frequent inspection should be carried out that takes account of the frequency of use of the lorry loader and the environmental conditions.

An effective planned maintenance system should recognize the possible need to prohibit the use of the lorry loader until essential maintenance work has been carried out.

NOTE: *See BS 7121-2:2003,* ***9.8*** *for further information.*

9.4 *Further guidance*

Further detailed guidance on maintenance and inspection of lorry loaders is given in

- BS 7121 *Code of practice for safe use of cranes* – Part 2: *Inspection, testing and examination.*
- BS 7121 *Code of practice for safe use of cranes* – Part 4: *Lorry loaders.*
- *Code of Practice for the Installation, Application and Operation of Lorry Loaders.* Association of Lorry Loader Manufacturers and Importers

10.0 Thorough Examination

The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) require that all lifting equipment, including lorry loaders, is thoroughly examined by a competent person in the following circumstances:-

- At regular intervals (a period not exceeding 12 months, if persons are not lifted, or a period not exceeding 6 months if persons are lifted);
- After any major alteration or damage (event).

NOTE: *As an alternative to the "periodic" approach to thorough examinations LOLER allows the use of an examination scheme. In the case of lorry loaders, the "examination scheme" approach should only be used where the lorry loader has been fitted with a data logger at the time of first supply so that a full history of usage, including load spectrum is available to the competent person drawing up the examination scheme.*

10.1 *Thorough Examination of Lorry Loaders*

The thorough examination of lorry loaders should be undertaken by a competent person who has such appropriate practical and theoretical knowledge and experience of the lifting equipment to be thoroughly examined as will enable them to detect defects **or** weaknesses and to assess their importance in relation to the safety and continued use of the lifting equipment. The lorry loader user should arrange for the lorry loader to be taken out of use for a sufficient period of time to allow the competent person to carry out the thorough examination.

The lorry loader user should ensure that facilities or services which are required by the competent person to carry out the thorough examination are provided and a safe system of work should be in place to prevent all persons involved in thorough examination from being exposed to danger.

It is essential that the calibration of a lorry loader's RCI/L is verified as part of the thorough examination.

10.2 *Thorough Examination of Lifting Accessories/Attachments*

LOLER requires that lifting accessories/attachments are thoroughly examined at intervals not exceeding six months.

10.3 *Further guidance*

Further detailed guidance on the thorough examination of lorry loaders is given in:-

- BS 7121 *Code of practice for safe use of cranes* – Part 2: *Inspection, testing and examination.*
- BS 7121 *Code of practice for safe use of cranes* – Part 4: *Lorry loaders.*
- Guidance Note 010 – *Thorough Examination and Testing of Loader Cranes.* Association of Lorry Loader Manufacturers and Importers.
- *Code of Practice for the Installation, Application and Operation of Lorry Loaders.* Association of Lorry Loader Manufacturers and Importers.
- L113 *Safe Use of Lifting Equipment - Lifting Operations and Lifting Equipment Regulations 1998 Code of Practice* - ISBN 0 7176 1628 2

Annex A – Definitions

appointed person

person with the training, practical and theoretical knowledge and experience required to comply with **4.0**

carrier

device that supports persons during lifting and lowering

NOTE:*This may also be known as a "manrider" or "personnel basket".*

competent person

A person with "such appropriate practical and theoretical knowledge and experience of the lifting equipment to be thoroughly examined as will enable them to detect defects or weaknesses and to assess their importance in relation to the safety and continued use of the lifting equipment." It is also "essential that the competent person is sufficiently independent and impartial to allow objective decisions to be made"

crane coordinator

person who plans and directs the sequence of operations of cranes (including lorry loaders) to ensure that they do not collide with other cranes, loads and other plant (e.g. concrete placing booms, telehandlers, piling rigs)

crane supervisor

person who controls the lifting operation, and ensures that it is carried out in accordance with the Appointed Person's safe system of work

customer

See "employing organisation"

employing organisation

person or organisation who requires a lifting operation to be carried out and is responsible for safe use of the lorry loader

NOTE: *In the case of a hired lorry loader the degree of the employing organisation's responsibility for the safe use of the lorry loader will depend on whether the lorry loader is being supplied under a crane hire contract or a part of a contract lift See 3****.0***

intermediate inspection

inspection carried out at appropriate intervals between thorough examinations to identify potential faults and deterioration so that appropriate action may be taken to ensure that the lorry loader remains safe to use

lifting

any movement of loads or persons that includes a change of height

lifting accessory

equipment from which the load can be suspended

lifting attachment

a device, either mechanical or hydraulic in operation, attached to the boom tip of a loader crane to facilitate the lifting of loads

lift plan

see method statement

load

weight which is lifted by the lorry loader

NOTE: *If lorry loaders are used to lift loads from water, the load could also include forces due to water flow or suction.*

lorry loader

a combination of a loader crane fitted to a commercial vehicle or trailer which normally has a load carrying capability

lorry loader operator

the person preparing the lorry loader for operation, or operating the lorry loader for the purpose of positioning loads

NOTE: *The operator may also perform the task of driving the vehicle.*

method statement

document produced by the Appointed Person to describe how the lorry loader installation or lifting operation should be carried out

NOTE: *The Appointed Person may delegate the task of preparing the method statement to another person however they retain responsibility for the method statement. It is essential that the Appointed Person sign and date the document before it is issued for use to signify their approval of the method statement's content.*

pedestrian operation

operation of a lorry loader by an operator standing at a position not on the lorry loader structure using a hard wired or wireless (cableless) control station

pre-use checks

visual checks carried out by the lorry loader operator at the start of each shift to ensure that the crane has not suffered any damage or failure, and is safe to go to work

rated capacity

load that the lorry loader is designed to lift for a given operating condition (e.g. configuration, position of the load)

NOTE: *The rated capacity was formerly known as "safe working load".*

signaller

person responsible for directing the lorry loader operator to ensure safe movement of the lorry loader and load

slinger

person responsible for attaching and detaching the load to and from the lorry loader, for correct selection and use of lifting accessories in accordance with the specifications of the appointed person and for initiating the movement of the load

thorough examination

examination by a competent person in such depth and detail as the competent person considers necessary to enable them to determine whether the equipment being examined is safe to continue in use

NOTE: *The thorough examination is not part of the maintenance regime for the equipment but provides owners with information which could be used to determine the effectiveness of the regime.*

weight

the vertical force exerted by a mass as a result of gravity

Annex B – Legal Requirements

B.1 Introduction

The law places duties on persons concerned with lorry loaders, including those who supply, install and maintain lorry loaders for use, those who undertake thorough examinations and those involved with the use of lorry loaders for lifting operations. This annex outlines those legal duties and points the reader towards further relevant guidance material.

B.2 The Law Outlined

Legislation relating to the use of lorry loaders at work includes the:

- Health & Safety at Work etc Act 1974
- Management of Health & Safety at Work Regulations 1999/SI3242
- Workplace (Health, Safety & Welfare) Regulations 1992/SI3004
- Provision & Use of Work Equipment Regulations 1998/SI2306
- Lifting Operations & Lifting Equipment Regulations 1998/SI2307
- Personal Protective Equipment at Work Regulations 1992/SI2966
- Work at Height Regulations 2005/SI735 (As Amended)
- Supply of Machinery (Safety) Regulations 2008/SI1597
- The Construction (Design and Management) Regulations 2007/SI320

B.3 Health & Safety at Work etc Act 1974 (HSWA)

HSWA places a duty on employers to ensure the health and safety of employees and others who may be affected by their work activities. Similar duties are placed on the self-employed and persons in control of premises. Employees, managers and directors also have responsibilities. The HSWA also places a duty on lorry loader owners and users, where their work activity involves lorry loaders being used where they could affect the general public.

B.4 Management of Health & Safety at Work Regulations 1999 (MHSWR)

Under MHSWR, employers and self-employed people are required to assess risks to health and safety from their undertaking. This includes risks from the use, repair and examination of lorry loaders on their premises, including the operation of the lorry loader. The risk assessment should identify what measures are needed to comply with health and safety requirements and control risk. The duty holder should then put in place the organisation and arrangements to ensure that those measures are properly implemented.

B.5 The Workplace (Health, Safety & Welfare) Regulations 1992 (WPR)

WPR places duties on employers to ensure, as far as is reasonably practicable, that their work places are safe and without risks to health. The WPR cover matters such as ventilation, temperature, lighting, electromagnetic radiation and cleanliness of the workplace as well as certain basic welfare provisions.

B.6 The Provision & Use of Work Equipment Regulations 1998 (PUWER)

PUWER is concerned with such matters as safeguarding of dangerous parts of machinery, provision of appropriate controls, and maintenance of work equipment including lorry loaders.

PUWER places duties on any person who has control to any extent of:

- work equipment;
- a person at work who uses, supervises or manages the use of work equipment; or
- the way in which work equipment is used at work (including maintenance).

PUWER applies to employers in respect of work equipment provided for, or used by, their employees, self-employed persons in respect of work equipment they use and other persons, e.g. visitors.

B.7 The Lifting Operations & Lifting Equipment Regulations 1998 (LOLER)

LOLER deals with the specific risks arising from the use of work equipment (including lifting accessories) to lift loads. It builds upon PUWER and applies to the same groups of people. LOLER also introduces particular requirements for lifting equipment which is used to lift people, and a requirement for the thorough examination and reporting of thorough examination of lorry loaders.

B.8 Personal Protective Equipment at Work Regulations 1992 (PPE)

These Regulations impose health and safety requirements for the provision of, and use by, persons at work of personal protective equipment. The Regulations require employers to ensure suitable personal protective equipment is provided without charge, for their employees and also require self-employed persons to ensure suitable personal protective equipment is provided for them. Requirements are also imposed on employees and self-employed persons for the use, storage and maintenance of personal protective equipment. Employees are also required to report to their employer the loss of or any obvious defect in personal protective equipment.

B.9 Work at Height Regulations 2005 (WAH) (As Amended)

The Work at Height Regulations impose health and safety requirements for work at height. These include:-

- *organisation* and planning;
- hierarchy of control;
- competence and supervision;
- steps to be taken to avoid risk from work at height;
- selection of work equipment;
- inspection of work equipment.

The Regulations define work at height as:-

(a) work in any place, including a place at or below ground level;

(b) obtaining access to or egress from such place while at work, except by a staircase in a permanent workplace.

B.10 Supply of Machinery (Safety) Regulations 2008

The Supply of Machinery (Safety) Regulations are the UK's implementation of European Union Directive 2006/42/EC, the "Machinery Directive" which requires that all machinery (including lifting accessories) supplied into the European Union, meets the

Essential Health and Safety Requirements detailed in Schedule 3 of the Regulations. Each machine must be accompanied at time of supply by an “EC Declaration of Conformity” declaring that the machinery fulfils all the relevant provisions of the Regulations.

B.11 The Construction (Design and Management) Regulations 2007 (CDM)

The Construction (Design and Management) Regulations place duties on duty holders including clients, designers and contractors in respect of the planning, management and monitoring of health, safety and welfare in construction projects and of the co-ordination of the performance of these duties by duty holders. These include a duty on every person working under the control of another to report anything that he is aware is likely to endanger health or safety. The Regulations impose additional duties on clients, designers and contractors where the project is notifiable, defined as likely to involve more than 30 days or 500 person days of construction work. These include the duty of the client to appoint a CDM coordinator and a principal contractor.

B.12 British, European and ISO Standards

Standards do not generally have the force of law: the application of a standard is almost always voluntary, although standards are very often used in support of legislation, and compliance with a standard is sometimes quoted in legislation as offering a route to discharging legal obligations. Good examples of this are the references to the BS 7121 series in the Guidance to LOLER.

British standards are generally restricted to Codes of Practice for safe use of equipment e.g. BS7121-4 *Safe use of lorry loaders*, whilst European (EN) standards cover requirements for basic principles (Type A), common product requirements (Type B) and specific product requirements (Type C) e.g. *EN12999 Cranes – Loader cranes.*

Harmonised European product standards, which give presumption of conformity to the Essential Health and Safety Requirements of the Machinery Directive.

International Standards (ISO) cover both the safe use and specification of cranes and components. They do not have any legal status but are often taken as good practice and are cited as normative references in some EN product standards.

Annex C – Case Studies

The following case studies are examples of how changes to both the load and the environment in which it is being lifted can affect the complexity of the lift and consequently the extent of planning, composition of the lifting team and additional control measures required. These case studies **must not** be used as templates for the planning of similar lifting operations. It is essential that individual lifting operations are planned by an appointed (competent) person taking into account the particular circumstances of load and environment.

1. Example Activity – The Emptying of a Paper Bank Using a Lorry Loader fitted with a Specialist Attachment

<table>
<tr><td colspan="2">Situation 1</td><td colspan="2">Paper bank being emptied in the private car park of a company premises, with the operation taking place outside of office hours</td></tr>
<tr><td>Environment - 1</td><td>Load - 1</td><td>Example Hazards</td><td>Example Control Measures</td></tr>
<tr><td colspan="2">Lift Categorisation - Basic
 </td><td>Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory</td><td>Accurately assess the weight of the load
Accurately assess the maximum radius at which the load can be lifted
Correct selection of the lorry loader and attachment</td></tr>
<tr><td colspan="2"></td><td>Overturning of the lorry loader through ground bearing failure</td><td>Assessment of ground conditions and use of spreader pads</td></tr>
<tr><td colspan="2">Lifting Team
• Appointed person prepares generic RA & MS
• Operator takes the role of Crane Supervisor, Slinger/Signaller and Operator</td><td colspan="2">Planning Requirements
• Generic Risk Assessment and Method Statement
• On-site review of RA and MS by Crane Supervisor</td></tr>
</table>

1. Example Activity – The Emptying of a Paper Bank Using a Lorry Loader fitted with a Specialist Attachment (cont.)

Situation 2	Paper bank being emptied in a designated, public recycling facility		
Environment - 2	***Load -***1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Intermediate		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and attachment
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
		Other users of the facility and parked vehicles	Segregation of the working area from other users of the facility
Lifting Team • Appointed Person prepares task and/or site specific RA & MS • Operator takes the role of Crane Supervisor, Slinger/Signaller and Operator		***Planning Requirements*** • Task and/or site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor	

Situation 3	Paper bank being emptied in a residential area, adjacent to/accessible from the roadside and situated opposite a school		
Environment - 3	***Load*** - 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Complex		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess weight and max radius of load Selection of lorry loader and lifting accessories
		Overturning of lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader plates
		Members of the public	Segregation of the working area from members of the public
		Collision with passing traffic	Implement traffic management plan
Lifting Team • Appointed Person prepares site specific RA & MS • Separate crane supervisor oversees lifting operation • Operator takes the role of Slinger/Signaller and Operator		***Planning Requirements*** • Site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor • Traffic management scheme	

2. Example Activity – Delivery of Materials to a Construction Site with a Lorry Loader

Situation 1	Delivery of bricks to secure compound on building site with a brick clamp attachment, no pedestrian access or vehicular / cable hazards		
Environment - 1	***Load*** - 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Basic		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and lifting accessories
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
		Other plant, vehicles & personnel in the vicinity entering working area	Segregate working area and advise of activity being undertaken
		Overturning of bricks on site due to ground conditions	Assessments of ground conditions & restrict stack heights of delivered bricks if required
Lifting Team • Appointed person prepares generic RA & MS • Operator takes the role of Crane Supervisor, Slinger/Signaller and Operato.		***Planning Requirements*** • Generic Risk Assessment and Method Statement • On-site review of RA and MS by Crane Supervisor	

Situation 2	Delivery of single bulk bag to private address, on quiet public street with pedestrian, vehicle hazards & lifting over obstacle		
Environment - 2	***Load*** -1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Intermediate		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and attachment
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
		Pedestrians & moving vehicles in the vicinity	Segregate working area and advise of activity being undertaken (stabilizer beam(s) may be adequate as garden wall forms other side of barrier), ensure free movement of traffic & emergency vehicles in live carriageway. Ensure operation of crane is carried out without entering live traffic carriageway
Lifting Team • Appointed Person prepares task and/or site specific RA & MS • Operator takes the role of Crane Supervisor, Slinger/Signaller and Operator • Temporary traffic management operative (if required)		***Planning Requirements*** • Task and/or site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor • Traffic management scheme • Pedestrian segregation	

2. Example Activity – Delivery of Materials to a Construction Site with a Lorry Loader (cont.)

Situation 3	Delivery of chamber ring direct to final position in trench on site, workers in trench & excavations in working area		
Environment - 3	***Load*** - 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Complex		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess weight and max radius of load Selection of lorry loader and lifting accessories
		Overturning of lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader plates
		Insufficient reach/capacity	Ensure loader has sufficient Rated Capacity and reach to carryout positioning of ring.
		Risk of crushing or striking personnel in working area	Establish minimum safe working distances and lines of sight and communication between load, operator, Crane Supervisor and slinger/signaller in trench
		Other plant, vehicles & personnel in the vicinity	Segregate working area and advise of activity being undertaken
		Failure of load through incorrect slinging.	Ensure correct eye bolts & chains are used as specified in the Method Statement
		Load striking trench shoring causing collapse of trench	Use of tag lines and dedicated slinger/signaller
Lifting Team • Appointed Person prepares site specific RA & MS • Operator takes role of Crane Operator only • Separate Crane Supervisor • Separate Slinger/signaller		***Planning Requirements*** • Site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor	

3. Example Activity – Handling of Excavated Spoil with a Lorry Loader Using a Clamshell Bucket and Other Civils/Utilities Tasks

Situation 1	Vehicle being self-loaded in Operators own yard with aggregate for back-filling		
Environment - 1	***Load*** - 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Basic 		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and attachment
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
		Other plant, vehicles & personnel in the vicinity	Segregate working area and advise of activity being undertaken
Lifting Team • Appointed person prepares generic RA & MS • Operator takes the role of Crane Supervisor, Slinger/Signaller and Operator		***Planning Requirements*** • Generic Risk Assessment and Method Statement • On-site review of RA and MS by Crane Supervisor	

Situation 2	Delivery of pipes to street works gang. Excavated trench is in public highway with gang in immediate vicinity		
Environment - 2	***Load*** -1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Intermediate 		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and attachment
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
		General public & passing traffic in close proximity	Implement working zone and traffic measures
		Length of load may cause it to rotate whilst being lifted/placed	Use a tag line
		Risk of crushing or striking personnel in working area	Establish minimum safe working distances between load, operator & gang
Lifting Team • Appointed Person prepares task and/or site specific RA & MS • Operator takes the role of Crane Supervisor and Operator • Separate Slinger/signaller to be used in trenching gang if pipe laying being carried out		***Planning Requirements*** • Task and/or site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor • Implement traffic management/public protection measures in accordance with Chapter 8 of New Roads & Street Works Act 1991	

3. Example Activity – Handling of Excavated Spoil with a Lorry Loader Using a Clamshell Bucket and Other Civils/Utilities tasks.

Situation 3	Lifting of a Governor Valve into an excavated trench adjacent to a gas main. Operation being conducted in a narrow public highway with the load having an offset centre of gravity and restricted view

Environment - 3	***Load*** - 2	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Complex		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and attachment
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
		General public & passing traffic in close proximity	Implement working zone and traffic measures. Consider road closure/night operation
		Risk of damage to gas main	Isolate if/where possible and use slinger/signaller
		Centre of gravity of load offset	Assess load CoG and check with test lift. Re-sling if required
		Risk of crushing or striking personnel in working area	Establish minimum safe working distances between load, operator & gang

Lifting Team

- Appointed Person prepares site specific RA & MS.
- Separate crane supervisor oversees lifting operation.
- Operator takes Operator only
- Slinger/signaller required.
- Temporary traffic management operatives (if required)

Planning Requirements

- Site specific Risk Assessment and Method Statement
- Onsite review of RA and MS by the Crane Supervisor
- Implement traffic management/public protection measures in accordance with Chapter 8 of New Roads & Street Works Act 1991.

4. Example Activity – Lifting of a Generating Set and Fuel Tank with a Lorry Loader

Situation 1	Straightforward off load on to level ground beside lorry		
Environment - 1	***Load*** - 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Basic		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and lifting accessories
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
Lifting Team • Appointed person prepares generic RA & MS • Operator takes the role of Crane Supervisor, Slinger/Signaller and Operator		***Planning Requirements*** • Generic Risk Assessment and Method Statement • On-site review of RA and MS by Crane Supervisor	

Situation 2	Lifting a generating set and fuel tank in a pedestrian area with narrow access and restricted view of load		
Environment - 2	***Load*** -1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Intermediate		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and lifting accessories
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader pads
		Operator has restricted view of load	Use separate slinger/signaller (including use of 2-way radio if required)
		Ingress of personnel Lifting near or over persons	Cordon area off with physical barriers Utilise site personnel to police area Close area to public access Perform lift out of hours
Lifting Team • Appointed Person prepares task and/or site specific RA & MS • Operator takes the role of Crane Supervisor and Operator • Separate Slinger/Signaller		***Planning Requirements*** • Task and/or site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor • Cordoning off of lift area by site • Agreement between operator and site to fulfil duties of controlling cordoned off area	

4. Example Activity – Lifting of a Generating Set and Fuel Tank with a Lorry Loader (cont.)

Situation 3	Lifting a generating set and fuel tank in an electrical sub-station with overhead cables and unpaved ground		
Environment - 3	***Load*** - 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Complex		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load. Accurately assess the maximum radius at which the load can be lifted. Correct selection of the lorry loader and lifting accessories.
		Overturning of the lorry loader through ground bearing failure.	Assessment of ground conditions and use of spreader pads.
		Ingress of personnel Lifting near or over persons	Cordon area off with physical barriers Utilise site personnel to police area
		Electricity cables	Have power switched off
		Blind lift	Dedicated slinger/signaller
Lifting Team • Appointed Person prepares site specific RA & MS • Separate crane supervisor oversees lifting operation • Dedicated Slinger/Signaller required • Operator takes the role of operator only		***Planning Requirements*** • Site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor • Cordoning off of lift area by site • Agreement between operator and site to fulfil duties of controlling cordoned off area	

5. Example Activity – Lifting of Portable Cabins with a Lorry Loader

Situation 1	Portable Cabins (both ground based and double stacked) being lifted off delivery vehicle and placed on an adjacent set down area on a secure site with no pedestrian access or other environmental hazards		
Environment - 1	***Load -*** **1**	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Basic		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load. Accurately assess the maximum radius at which the load can be lifted. Correct selection of the lorry loader and lifting accessories
		Overturning of the lorry loader through ground bearing failure.	Assessment of ground conditions and use of spreader pads.
Lifting Team • Appointed person prepares generic RA & MS. • Operator takes the role of Crane Supervisor, Slinger/Signaller and Operator.		***Planning Requirements*** • Generic Risk Assessment and Method Statement. • On-site review of RA and MS by Crane Supervisor.	

Situation 2	Cabins being offloaded on site over the cab area of the vehicle. Ground yet to be fully prepared and load centre of gravity offset		
Environment - 2	***Load -1***	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Intermediate		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load. Accurately assess the maximum radius at which the load can be lifted. Correct selection of the lorry loader and lifting accessories.
		Overturning of the lorry loader through ground bearing failure.	Assessment of ground conditions and use of spreader pads.
		Crushing or striking of personnel	Slinger/signaller situated adjacent to landing area with agreed system of signalling (radio if line of sight obscured between signaller and operator)
		Load centre of gravity offset	Test lift to adjust slings/chains as required.
		Lifting near and/or over persons	Control path of the load using tag lines
Lifting Team • Appointed Person prepares task and/or site specific RA & MS. • Operator takes the role of Crane Supervisor and Operator. • Separate Slinger/Signaller required		***Planning Requirements*** • Task and/or site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor	

5. Example Activity – Lifting of Portable Cabins with a Lorry Loader (cont.)

Situation 3	Portable cabins and supplementary equipment lifted off the delivery vehicle from a busy suburban street and onto a busy site with limited space for manoeuvring the load and no clear line of sight

Environment - 3	***Load -*** 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Complex		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess weight and max radius of load Selection of lorry loader and lifting accessories
		Overturning of lorry loader through ground bearing failure	Assessment of ground conditions and use of spreader plates
		Crushing or striking of personnel	Slinger/signaller situated adjacent to landing area with agreed system of signalling (radio if line of sight obscured)
		Lifting near and over persons	Control path of the load using tag lines
		Injury of members of public in street.	Segregation of public from working area
		Collision with passing traffic	Implement traffic management scheme

Lifting Team

- Appointed Person prepares site specific RA & MS.
- Separate crane supervisor oversees lifting operation.
- Operator takes the role of Operator only.
- Separate Slinger/signaller required.

Planning Requirements

- Site specific Risk Assessment and Method Statement
- Onsite review of RA and MS by the Crane Supervisor
- Traffic management scheme

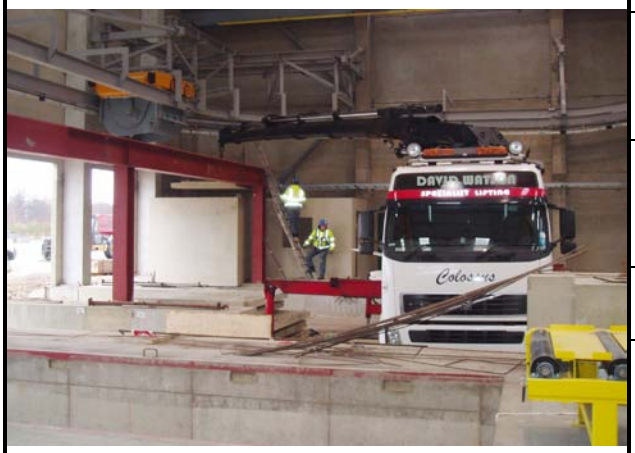
6. Example Activity – Lifting of Prefabricated Components with a Lorry Loader

Situation 1	Steel Mesh Reinforcement being lifted off delivery vehicle and placed on an adjacent set down area on a secure site with no pedestrian access or other environmental hazards		
Environment - 1	***Load*** - 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Basic		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess the weight of the load. Accurately assess the maximum radius at which the load can be lifted. Correct selection of the lorry loader and lifting accessories
		Overturning of the lorry loader through ground bearing failure	Assessment of ground conditions by a competent person and use of appropriately sized spreader pads
Lifting Team • Appointed person prepares generic RA & MS • Operator takes the role of Crane Supervisor, Slinger/Signaller and Operator		***Planning Requirements*** • Generic Risk Assessment and Method Statement • On-site review of RA and MS by Crane Supervisor	

Situation 2	Precast Concrete Floor Components being lifted off the delivery vehicle and placed directly on to the building structure with personnel working at height.		
Environment - 2	***Load*** -1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Intermediate		Overturning of lorry loader or failure through overloading of lorry loader attachment or lifting accessory	Accurately assess weight of the load Accurately assess the maximum radius at which the load can be lifted Correct selection of the lorry loader and lifting accessories
		Overturning through ground bearing failure.	Assessment of ground conditions by a competent person and use of appropriately sized spreader pads
		Crushing or striking of personnel on building structure	Slinger/signaller situated adjacent to landing area with agreed system of signalling (radio if line of sight obscured) between signaller and operator
		Lifting near and over persons	Control path of the load using tag lines
		Competency of installer	Precast installers must be adequately trained and qualified
Lifting Team • Appointed Person prepares site specific RA & MS • Operator takes the role of Crane Supervisor and Operator • Separate Slinger/Signaller required on building where components are being received		***Planning Requirements*** • Ground assessment by competent person • Site specific Risk Assessment and Method Statement (including size of spreader plates) following site visit • Onsite review of RA and MS by the Crane Supervisor	

6. Example Activity – Lifting of Steel Frame Components with a Lorry Loader (cont.)

Situation 3	Steel framework being installed inside a building. Placing of load requires working at height, with height restrictions for the lorry loader. Flooring of building yet to be fully instated. Cabling/ducting in close proximity.

Environment - 3	***Load -*** 1	***Example Hazards***	***Example Control Measures***
Lift Categorisation - Complex		Overturning of lorry loader or failure through overloading of the lorry loader attachment or lifting accessory	Accurately assess weight and max radius of load Selection of lorry loader and lifting accessories
		Overturning of lorry loader through ground bearing failure	Assessment of ground conditions by a competent person and use of appropriately sized spreader pads
		Crushing or striking of personnel on building structure	Slinger/signaller situated adjacent to landing area with agreed system of signalling (radio if line of sight obscured)
		Lifting near and over persons	Control path of the load using tag lines
		Cabling and ducting in close proximity.	Lorry loader remote control set to “slow” mode and signaller in full view of load and operator at all times
		Working at Height	Implement safety control measures

Lifting Team	***Planning Requirements***
• Appointed Person prepares site specific RA & MS • Separate crane supervisor oversees lifting operation • Operator takes the role of Operator only • Separate Slinger/signaller required on the building where components being received	• Site specific Risk Assessment and Method Statement • Onsite review of RA and MS by the Crane Supervisor • Working at Height Control Measures

Annex D – Example of a Lifting Schedule

Lifting Schedule							
Loader Crane Type	12 tm 4 extension	**Employing Organisation**	BB Building Supplies	**Appointed Person**	F Bloggs	**Contact Telephone No**	0161 953 8765

Item to be Lifted	**Item Weight**	**Max Radius for Item**	**Max Lift Height for Item**	**Lifting Accessories**			**Additional Control Measures**
				Type	**SWL**	**Weight**	
Crofters Brick Pack (500 pack)	1400 kg	6.3 m	11 m	Clamps	2000 kg	300 kg	Use net to prevent falling objects
Durox Superbloc 125 (100 pack)	1100 kg	7.8 m	13 m	Clamps	2000 kg	300 kg	Use net to prevent falling objects
Roof Truss K480 (5 pack)	500 kg	14 m	18 m	Violet web sling 2m long with choker hooks	800 kg (Choked)	4 kg	Use tag lines to prevent load swinging
Floor Beams 4m (10 pack)	200 kg	10.2 m	16 m	2 No Violet web sling 2m long	800 kg (Choked)	7.5 kg	Double wrap choke hitch
Finishing Plaster (10 bag pack)	300 kg	14.3m	18 m	Forks	2000 kg	180 kg	Use net to prevent falling objects

Lorry Loader Details	**Notes**

Make	Palfinger
Model	PK 12000
Maximum Height	18.0 m
Maximum Radius	14.3 m
SWL at Maximum Radius	530 kg
Maximum SWL	6790 kg
Radius at Maximum SWL	1.8 m

1. Additional items may be added but must be countersigned by the Appointed Person
2. A separate Lifting Schedule should be completed for each lorry loader
3. The following hazards should be taken into account when completing the Lifting Schedule :-
    - Slinging difficulties
    - Top heavy
    - Sharp edges
    - Other hazards identified

Annex E – Example of a Method Statement (Lift Plan)

1. Task to be Undertaken

Lifting of an Alimak Scando 20/30 hoist cage and base unit from delivery vehicle to pre installed concrete slab base on a construction site, using loader crane mounted on delivery vehicle. Lift to be undertaken by GB Access.

2. Basic Information

Customer Details	Customer	Westfield Shoppingtowns Ltd
	Site	Building M6, Stratford, SE6 5PQ
	Contact	Andy Builder
	Contact Number	07234 56789
	Date of Lifting Operation	02.04.09
Load Information	Load	Alimak Scando 20/30 hoist cage and base unit
	Weight of load	2530 kg
	Load dimensions	2.4 wide x 3.6 long x 3.2 high
	Lifting point	On roof of cage, C of G below suspension point (See **Figs 1 & 2**)
	Maximum radius of lift	8.5 m
	Maximum height of lift	6.4 m
Lorry Loader Information	Lorry Loader make	PM Autogrue
	Lorry Loader model	PM37025
	Rated Capacity @ Max radius	3350 kg
	Stabilizer configuration	Full front and rear (2.15m extension front & 1.230m extension rear)
	Maximum stabilizer load	12 tonne
Site Conditions	Access to lift area	Metalled site road
	Ground conditions	Firm clay – Can moulded by strong finger pressure
	Voids underground	None - Based on information from Principal Contractor
	Underground services	None - Based on information from Principal Contractor
	Public interface	None – Secured construction site
	Overhead lines	None observed during site visit

3. Identification of Hazards

a. People in area struck by:

- Lorry loader boom
- Lorry loader chassis
- Moving load

b. Lorry loader stability:

- Ground unable to support lorry loader
- Lorry loader overloaded
- Lorry loader failure

c. Movement of load:

- Load collides with structure
- Load collides with other cranes, excavators etc
- Load/lorry loader boom comes within arcing distance of overhead lines
- Persons hand crushed/trapped by load

d. Suspended load :

- Load may fall on person
- Loose parts on load may fall

e. Working at Height:

- Person falling from height when attaching or removing slings from load

f. Environmental conditions:

- High wind causes load to collide with fixed object
- Lorry loader becomes unstable

4. *Risk Assessment*

Operation/Issue	***Hazard***	***Risk***	***Control Measures to Avoid or Minimise Risk***	***Residual Risk***
People in area	Struck by: • Lorry loader boom • Lorry loader chassis • Moving load	High	• Public excluded from secure site • Establish effective exclusion zone in conjunction with Principal Contractor • All personnel to wear high visibility clothing • Ensure lifting team are fully briefed on need to keep clear of load during lifting	Low
Lorry loader stability	Ground unable to support lorry loader	Med	• Establish presence of voids/underground services with Principal Contractor • Assess ground and establish required size of stabilizer mats • Crane Supervisor to check that mats supplied match those specified in Method Statement • Crane Supervisor to check that lorry loader is of the same type and model specified in the method statement	Low
	Lorry loader overloaded	High	• Ensure weight of load is known and accurate • Lorry Loader operator to have valid CPCS/ALLMI card	Low
	Lorry loader failure	Med	• Ensure lorry loader has been adequately maintained and has current report of thorough examination.	Low
Movement of load	Load collides with structure	Med	• Tag line to be attached to load to control rotation	Low
	Load collides with other cranes, excavators etc	HIgh	• Establish effective exclusion zone in conjunction with Principal Contractor	Low
	Load/lorry loader boom comes within arcing distance of overhead lines	High	• Establish presence or otherwise of overhead lines. • If present arrange for isolation or position lorry loader boom/load outside minimum safe approach distance	Low

Operation/Issue	*Hazard*	*Risk*	*Control Measures to Avoid or Minimise Risk*	*Residual Risk*
	Persons hand crushed/trapped by load	Med	• Tag line to be used • Gloves to be worn • All slinging to be completed by Slinger/Signaller with valid CPCS/ALLMI card	Low
Suspended load	Load may fall on person	High	• Ensure lorry loader has been adequately maintained, has current report of thorough examination and that pre-use checks are carried out. • Ensure lifting accessories with adequate capacity have been selected, that they are adequately maintained, have current report of thorough examination and that pre-use checks are carried out.	Low
	Loose parts on load may fall	High	• Inspect load for lose objects prior to lift and secure/remove loose items. • All personnel to wear hard hats.	Low
Working at Height	Person falling from height when attaching or removing slings from load	High	• Delivery vehicle to be provided with ladder for access/egress. • Sling to be pre attached to lifting points on cage roof. • Access to cage roof to attach sling master link to lorry loader hook via hoist cage internal access ladder and trap door. Slinger signaller to stand on ladder with upper half of body through trap door to attach/remove master link.	Low
Environmental conditions	High wind causes load to collide with fixed object	High	Wind speed to be checked with hand held anemometer by Crane Supervisor before lift starts. Lift to be aborted if wind speed exceeds 20mph.	Low
	Lorry loader becomes unstable	High		Low

5. Category of Lift

Load Complexity	1
Environmental Complexity	2
Lift Category	Intermediate

6. Lifting Team

Role	*Name*	*ALLMI/CPCS Card No.*	*Mobile Phone*
Appointed Person	Keith Carter	123 456	07234 56789
Crane Supervisor	Dwayne Joseph	123 457	07234 56788
Lorry Loader Operator	Graham Dillaway	123 458	07234 56787
Slinger/signaller	Dwayne Joseph	123 457	N/A

7. Equipment

Equipment	***Specification***	***Maintenance Records***	***TE Report***
Lorry Loader	PM 37025 Rated Capacity 3350kg @ 8.5m radius and 2m height	Current and with vehicle	Current and with vehicle
Lifting Accessories	4 leg 20mm dia wire rope sling 1.5m leg length. WLL 6.5 tonne >45° - 60°	Current and with vehicle	Current and with vehicle
	4No small bow shackles. WLL 3 tonne	Current and with vehicle	Current and with vehicle
Stabilizer Spreaders	Min mat area for 120kN load from CIRIA C703 page 50, firm clay, FOS 2 = 0.53 m² Mats 0.8m x 0.8m x 75mm	N/A	N/A
Tagline	10mm diameter Polypropylene Rope	Pre use check	N/A
Short Access Ladder	Youngman Lorry Ladder	Current and with vehicle	N/A

8. Procedure

a. Appointed person must ensure that Principal Contractor and Crane Supervisor are in possession of latest revision of Method Statement. If Appointed Person is not attending site for the lifting operation he must brief the Crane Supervisor;

b. Arrive on site and liaise with Principal Contractor;

c. Inspect lifting area to ensure that nothing has changed since last site visit;

d. Crane Supervisor to brief Lifting Team if Appointed Person is not on site, on contents of Method Statement. Crane Supervisor, Operator and Slinger/Signaller to sign Method Statement to acknowledge receipt and understanding of briefing;

e. Establish exclusion zone in conjunction with Principal Contractor to exclude both personnel and other cranes and overhead plant;

f. Position lorry loader as shown on attached Drawing No. SC-GBA-M6-00-TE-W-00001;

g. Set up lorry loader using specified mats under stabilizers;

h. Unstow lorry loader;

i. Carry out “dry run” to ensure that lorry loader hook can reach required height and radius;

j. Attach pre installed wire rope sling (Figures **1** & **2**) to lorry loader hook using lorry ladder to gain access to vehicle bed and ladder in hoist cage to gain access to roof through trapdoor;

k. Attach tag line to load;

l. Ensure all personnel are clear of load;

m. Lift load from vehicle bed, slew to prepared base and lower under direction of Slinger/Signaller, controlling load swing with tag line;

n. Once load has been located in correct position on base, remove sling from lorry loader hook using access ladder inside hoist cage;

o. Stow lorry loader and stabilizers;

p. Remove exclusion zone in conjunction with Principal Contractor.

9. Revision Status and Distribution of Method Statement

Issue Date	01.02.10	
Revision	Rev 2	
Distribution	*Appointed Person*	Keith Carter
	Crane Supervisor	Dwayne Joseph
	Site Representative	Andy Builder

10. Signatures

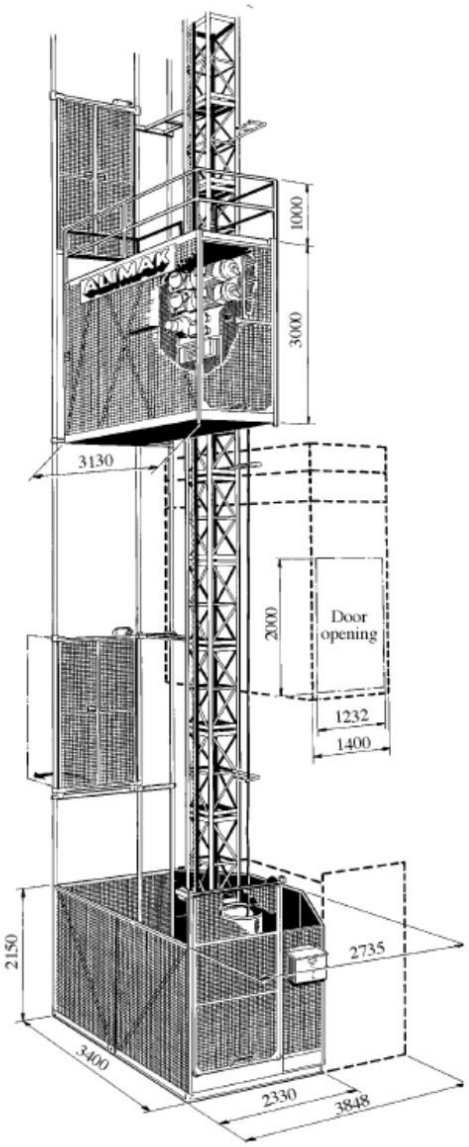
Appointed Person	I have prepared this method statement and authorise the Lifting Team to proceed with the lifting operation in compliance with this document. Any changes to the specified procedure must be approved by me before the lifting operation begins	K Carter
Crane Supervisor	I have been briefed on this Method Statement by the Appointed Person. I have checked that the lifting plan reflects the situation on site and the details are correct. I have briefed the contents of the Method Statement to the other members of the Lifting Team	D Joseph
Slinger/Signaller	I have been briefed on and understand the Method Statement for this lifting operation.	D Joseph
Lorry Loader Operator	I have been briefed on and understand the Method Statement for this lifting operation.	G Dillaway
Site Representative	I confirm that I have been briefed on and understand the Method Statement for this lifting operation. I also confirm that the ground on which the Lorry Loader will stand can accept the stabilizer loads provided to me by GB Access.	A Builder

ALIMAK

SCANDO® 12/30, 20/30

Technical Data

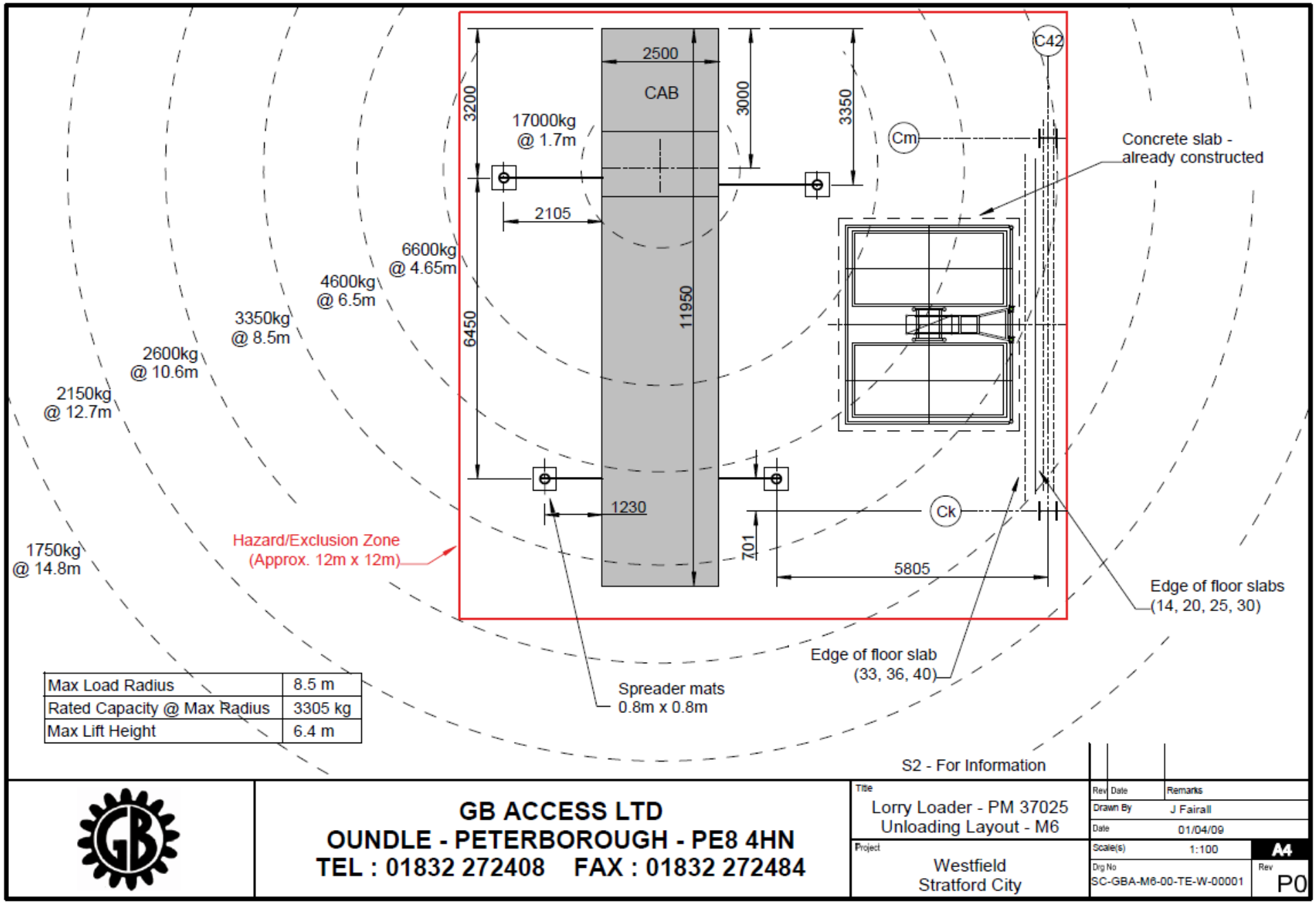
CAPACITY		SCANDO 12/30	SCANDO 20/30
Pay-load capacity	kg	1200	2000
Erection load	kg	1200	2000
Speed 50 Hz/60 Hz	m/min	40/40	40/40
Max. lifting height	meter	150	150
Increased lifting height on request			
Erection crane capacity	kg	175	175
Safety device	type	GF	GFD
CAGE DIMENSIONS			
Internal width x length	meter	1.3 x 3.0	1.3 x 3.0
Internal min. height	meter	2.55	2.55
Door opening w x h	meter	1.23 x 2.0	1.23 x 2.0
ELECTRICAL DATA			
Power supply range		380 – 690 V, 50 or 60 Hz, 3 Phase	
At 400 V/50 Hz:			
Power supply fuses	A	63	80
Rated power cont. duty	kW	2 x 7.5	3 x 7.5
Rated power 25% int. duty	kW	2 x 9.5	3 x 9.5
Starting current	A	200	300
Power consumption	kVA	26	39
Data at other voltages on request			
WEIGHTS			
Base unit weight less counterweight	kg	2300	2530
Counterweight	kg	–	–
Mast section with one rack	kg	130	130
Mast section with two racks	kg	154	154
Mast section length	mm	1508	1508



Scando 20/30 Base Unit Dimensions and Weights

Figure 1 - Installation of Slings to Cage Lifting Points

Figure 2 - Sling Master Links Attached to Lorry Loader Hook


2500
CAB
3200
3000
3350
C42
Cm
17000kg
@ 1.7m
Concrete slab -
already constructed
2105
6600kg
@ 4.65m
4600kg
@ 6.5m
3350kg
@ 8.5m
2600kg
@ 10.6m
2150kg
@ 12.7m
1750kg
@ 14.8m
6450
11950
1230
Ck
701
5805
Hazard/Exclusion Zone
(Approx. 12m x 12m)
Edge of floor slabs
(14, 20, 25, 30)
Edge of floor slab
(33, 36, 40)
Spreader mats
0.8m x 0.8m
Max Load Radius 8.5 m
Rated Capacity @ Max Radius 3305 kg
Max Lift Height 6.4 m
S2 - For Information
GB ACCESS LTD
OUNDLE - PETERBOROUGH - PE8 4HN
TEL : 01832 272408 FAX : 01832 272484
Title
Lorry Loader - PM 37025
Unloading Layout - M6
Project
Westfield
Stratford City
Rev Date Remarks
Drawn By J Fairall
Date 01/04/09
Scale(s) 1:100
A4
Drg No SC-GBA-M6-00-TE-W-00001
Rev P0

Annex F – Example of a Lifting Accessory Register

Lifting Accessory/Attachment Register							
Vehicle	OY06 OYS	**Employing Organisation**	BB Building Supplies	**Appointed Person**	F Bloggs	**Contact Telephone No**	0161 953 8765

	Description	**SWL**	**Weight**	**Ident. No.**	**Location**	**Date of Last Thorough Examination**	**Date of Next Thorough Examination**
1.	Kinshofer KM 332-1000 Brick Clamp	2000 kg	250 kg	S32869	Boom	13.11.09	13.05.10
3.	Violet web sling 2m long with choker hooks	800 kg	4 kg	W22228	Storage Locker	23.01.09	23.07.10
4.	2 leg 8mm chain sling 2 m leg length	2000 kg	7.5 kg	K26977	Storage Locker	19.12.09	19.06.10
5.	4 leg 10mm chain sling 2.5m leg length	4750 kg	31 kg	K17396	Storage Locker	19.12.09	19.06.10

Annex G – Example of Pre-use Check Sheets

Loader Crane Pre-use Check Sheet

OPERATOR'S NAME:	**VEHICLE REG:**
LOADER TYPE:	**DATE:**

Items to be checked by Operator before and during Operation – MARK ✓**or X**

In Cab	
PTO Cab Switch Operation	
Handbrake Interlock (if fitted)	
Height Warning Signs	
Lorry Loader Test Certificate	
Report of Thorough Examination	
Training Certificate/Card	
Operator's Manual	

Hydraulic Fluid	
Hydraulic Oil Level	
Condition of Oil (visual/colour)	
Hydraulic Oil Leaks	

Attachments	
Operation of Attachment (if fitted)	
Condition of Attachment (e.g. Brick Grab Rubbers)	
Stowing of Attachment to Vehicle	
Hydraulic Oil Leaks	

Stabilizers	
Stabilizer Beam Cam-Locks	
Stabilizer Beam Secondary Locks	
Swing Up Stabilizer Locks	
Stabilizer Hoses & Pipework	

Loader	
Loader Operation	
Operation of Control Levers /Remotes	
Operation of Rated Capacity Indicator	
Operation of Emergency Stop Switches	
Operation of Height Warning Device	
Additional Safety Systems	
Condition of Hoses & Pipework	
Condition of Hook & Safety Catch	
Loader Stowing Device (Transport Position)	
Attachment of Loader to Vehicle	
Lifting Gear	
Correct Lifting Accessories	
Condition of Lifting Accessories	
Lifting Accessories Report of Thorough Examination	
Lifting Accessories Test Certificate	

Is the loader crane safe to use? Y/N

Remarks:

Operator's Signature …… Manager's Signature ……...

Loader Crane Pre-use Check Sheet (Alternative)							
OPERATOR'S NAME:					**VEHICLE REG:**		
LOADER TYPE:					**DATE:**		
Items to be checked by Operator before and during Operation – MARK ✓**or X**							
	Mon	**Tue**	**Wed**	**Thur**	**Fri**	**Sat**	**Sun**
In Cab							
PTO Cab Switch Operation							
Handbrake Interlock (if fitted)							
Height Warning Signs							
Lorry Loader Test Certificate							
Report of Thorough Examination							
Training Certificate/Card							
Operator's Manual							
Hydraulic Fluid							
Hydraulic Oil Level							
Condition of Oil (visual/colour)							
Hydraulic Oil Leaks							
Stabilizers							
Stabilizer Beam Cam-Locks							
Stabilizer Beam Secondary Locks							
Swing Up Stabilizer Locks							
Stabilizer Hoses & Pipework							
Loader							
Loader Operation							
Operation of Control Levers /Remotes							
Operation of Rated Capacity Indicator							
Operation of Emergency Stop Switches							
Operation of Height Warning Device							
Additional Safety Systems							
Condition of Hoses & Pipework							
Condition of Hook & Safety Catch							
Loader Stowing Device (Transport Position)							
Attachment of Loader to Vehicle							

	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Attachments							
Operation of Attachment (if fitted)							
Condition of Attachment (e.g. Brick Grab Rubbers)							
Stowing of Attachment to Vehicle							
Hydraulic Oil Leaks							
Lifting Gear							
Correct Lifting Accessories							
Condition of Lifting Accessories							
Lifting Accessories Report of Thorough Examination							
Lifting Accessories Test Certificate							

Is the loader crane safe to use? Y/N

Remarks:

Operator's Signature …… Manager's Signature ……...

Annex H – Example of an Operator Familiarization Template

Loader Crane Handover Sheet

Record of Product Familiarisation

Vehicle Reg/Fleet No:		**Date:**	
Crane Type:		**Crane Serial Number:**	
Attachment Type:		**Attachment Serial No:**	

Item	**Y/N**	**Item**	**Y/N**
Explanation of capacity & load charts		Other safety features	
Use of PTO/Interlock/Revs		Operation of basic crane functions	
Basic layout of control levers		Basic attachment functions	
Deployment of stabilizers		Safe stowing of stabilizers	
Unfolding/Un-stowing of Crane		Safe stowing of crane	
Crane Safety system functions		Disengage PTO	
Boom height warning system		Operator Checks	

List Below Any/All Other Items Covered/Questions Asked/Advice Given

Declaration to be signed by person(s) receiving instruction:

- I declare I have received Product Familiarisation for this machine on the above topics.
- I confirm I am in receipt of either the Operators Handbooks or an Abbreviated Guide for this machine.
- I confirm I am aware that the Familiarisation I have received does not constitute or replace the need for Operator Training for this category of machine.
- I confirm that I will not permit any person other than those named below to operate this machine.

Name..... Signed.....

Name..... Signed.....

Name..... Signed.....

Name of Individual Providing Familiarisation.....

Company..... Signed.....

Guidance for Persons Carrying Out Familiarisation Training

Pre-requisites

- You must be able to demonstrate sufficient theoretical and practical knowledge of the product on which you are providing familiarisation.
- As a minimum, ALLM recommends that you hold a suitable category ALLMI Operators Card; plus have documented evidence that you have received Product Familiarisation training from the relevant manufacturer(s).

Accompanying Notes Guidance to the Product Familiarisation Form

Golden Rule

- For the avoidance of doubt, you must ensure every box has the required information entered into it. If the particular information is Not Applicable to the machine in question then write "N/A" in the box. **An empty/blank box = doubt!**

Vehicle/Crane Details

- Please ensure you record all the appropriate vehicle/crane details in these boxes. If the crane only has an hook and does not have an attachment fitted i.e. brick grab/clamshell, then you should write "hook" and write N/A (Not Applicable) in the serial number column.

Items to be covered during product familiarisation

- **Please re-iterate throughout that this is Product Familiarisation Only and does not replace the need for the appropriate Operator Training.**

Explanation of Capacity and Load Charts

- This should involve showing where the rated capacity charts are fitted on the machine and making sure that the stated capacities at their corresponding radii are clear to read and understood by those attending.

Use of PTO/Interlock/Revs

- Explanation/Demonstration should include where the PTO switch is and how it should be operated appropriate to the vehicle/gearbox configuration i.e. on a manual gearbox, at tick-over, to dip the clutch for 4 seconds prior to engaging.
- If a handbrake interlock is fitted, you should demonstrate how this works and explain that it is a failsafe device and not another way of disengaging the PTO (referring back to the reason/benefit of dipping the clutch prior to engaging).
- Explain/demonstrate how the revs are set. If this is not programmed automatically via the Engine Management System, then explain the correct rev setting for the vehicle/machine in question and why it should not be set any higher i.e. heat/pressure damage to the system etc.

Basic Layout of Control Levers

- The layout of the control levers should be explained in sequence for each control station fitted to the crane and comparisons made/checked against what the Operator may be previously used to.
- It should be stressed that while the operator is becoming familiar with the controls, they should look at the control lever decal then operate it gently to verify its function before using at full travel.

Deployment of Stabilizers

- This should be an explanation only of how the stabilizers are unlocked, operated, then re-locked to deploy them successfully. The Operator should already be familiar with the importance of site/ground selection prior to the deployment of stabilizers.

Unfolding/Un-stowing of Crane

- If the crane is on hook duty i.e. folded, demonstrate the procedure for unfolding the crane correctly, including the importance of re-pressurising the jib (inner boom) ram **inwards** before the main boom is raised to avoid dropping.
- For cranes which commonly travel on the vehicle bed i.e. brick grab/clamshell bucket applications, explain the importance again of re-pressuring the jib ram **outwards** before raising the main boom.

Crane Safety System Functions

- Provide an overview of how the safety system works and why it is fitted.
- Point out the location of the emergency stops and demonstrate their function.
- Show how the increasing load warning works and simulate a full overload situation by end-stroking the main boom cylinder to demonstrate how it works and what warnings are given when the overload cuts in.
- Explain the options for recovering from an overload situation relevant to the safety system in question.

Boom Height Warning System

- Explain and demonstrate how the Boom Height Warning System (or Crane Not Stowed Warning) works.
- Explain that it is the responsibility of the operator to be aware of his travelling height at all times and refer to the Travelling Height sticker or device in the cab.

Other Safety Features.

Explain & demonstrate how any other safety systems fitted work. These may include:-

- Stabilizer Legs not stowed warning device.
- Stabilizer legs not deployed interlocks.
- Platform safety envelope i.e. crush protection over stand-up controls.
- Slew limitation system
- Crane stability system.

These can be listed separately in the blank box below for additional information if required.

Operation of Basic Crane Functions

- Demonstrate each crane/lever function one by one and allow the Operator to repeat for them to get a feel for the controls and ask any questions.

Basic Attachment Functions

- Highlight the key characteristics of the attachment (if fitted i.e. brick grab). Demonstrate how the attachment works.

Safe Stowing of Stabilizers

- This should only include a demonstration of how the stabilizer legs are unlocked, raised/retracted, and then re-locked for travel. The Operator should already be familiar with the importance of stowing the stabilizer legs safely for travel.

Safe Stowing of Crane

- Demonstrate the procedure for stowing the crane depending on application.
- On a crane fitted with a hook, show how the boom latches/auto-locks work and explain the importance of relaxing the hydraulics once the latches are engaged.
- On a crane fitted with a brick grab/clamshell bucket, explain the importance of boom position relative to the travelling height i.e. the setting of the Boom Height Warning System. Cover also the importance of leaving approximately 50mm of travel in the Jib Ram and the importance of travelling with the extensions retracted where at all times.

Disengage PTO

- Demonstrate how to disengage the PTO, reversing the procedure used at the beginning when engaging.
- Re-emphasise the importance of not relying on the Handbrake Interlock to do this.

Operator Checks

Cover any checks you may wish the Operator to make on a periodic basis. These should also be incorporated in the written information you have provided and may include: -

- Daily pre-use check sheet
- Checking of oil level and temperature.
- Greasing regime.
- Cleaning instructions.

End of Document. Further guidance on this and other topics are available from ALLMI on request.

Disclaimer:

The information contained within is a) generic and for guidance purposes only and b) non-exhaustive. It is the responsibility of the person/organisation providing the Product Familiarisation to ensure that all relevant points are covered in relation to the specification of the machine in question.

Annex I - Beaufort Scale

Beaufort number	Description of wind	Specifications for use on land	Wind speed mph	Wind speed m/s
0	Calm	Calm; smoke rises vertically	0 to 1	0 to 0.2
1	Light air	Direction of wind shown by smoke	1 to 3	0.3 to 1.5
2	Light breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind	4 to 7	1.6 to 3.3
3	Gentle breeze	Leaves and small twigs in constant motion; wind extends light flag	8 to 12	3.4 to 5.4
4	Moderate breeze	Raises dust and loose paper; small branches are moved	13 to 18	5.5 to 7.9
5	Fresh breeze	Small trees in leaf begin to sway; crested wavelets form on inland waterways	19 to 24	8.0 to 10.7
6	Strong breeze	Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty	25 to 31	10.8 to 13.8
7	Near gale	Whole trees in motion; inconvenience felt when walking against wind	32 to 38	13.9 to 17.1
8	Gale	Breaks twigs off trees; generally impedes progress	39 to 46	17.2 to 20.7
9	Strong gale	Slight structural damage occurs (chimney pots and slates removed)	47 to 54	20.8 to 24.4

Annex J – Radio Communications for Lifting Operations –TIN 017

Introduction

Lorry loaders often work on congested construction sites where the signaller is out of sight of the lorry loader operator and the standard hand signals specified in BS 7121 cannot be used. As an alternative, hand held VHF/UHF radios are often used. This however, can lead to a number of problems which may interfere with the clear communication vital for safe lifting operations:-

- Loss of signal and thus communication, leading to loss of control of the lifting operation;
- Interference from radios on adjacent sites, which can lead to loss of communication or directions being given to the wrong crane operator;
- Misunderstanding between the lorry loader operator and the signaller, leading to problems such as a load being lifted before the slinger has his hands clear, loads colliding with the building structure and the load being lowered before people are clear of the landing area.

Radio Specification

The first two issues should be addressed by specification of the correct radio equipment for the application taking into account:-

- Signal strength – if it is too low there is a risk of signal loss - too high and it will cause interference with adjacent sites. When working blind the structure may well cause signal loss and a booster aerial could be required. Signal strength should be checked at the beginning of each shift before lifting operations are started;
- Frequency – choosing a different frequency from other radios on the site or in the area will avoid interference from or to other radios;
- Durability – radio hand sets should be sufficiently durable to withstand use on site;
- Charging – adequate charging arrangements to ensure that batteries are charged at the end of a shift and that spare charged batteries are available at all times;
- Battery capacity – sufficient capacity to last for a full shift.

Calls Signs and Standard Commands

The third issue, misunderstandings between the lorry loader operator and signaller, should be addressed as follows:-

- Both parties must have a sufficient command of a common language (normally English) to ensure that clear, unambiguous communication can take place;
- A clear, unique call sign should be allocated to each signaller and crane operator;
- Each message should preceded by the call sign (e.g. LL1….);
- The crane operator should not respond to any command (other than **Stop**) that is not preceded by the call sign;
- Voice commands must only be given by one person, normally the signaller, at any one time;
- Voice commands should be given using the signals in the following table.

Standard Voice Commands For Lifting Operations	
	Command
1.	**"Take the Weight"**
	"Hoist"
	"Hoist Slowly" *(See Note 1 below)*
2.	**"Lower"** *(See Note 1 below)*
	"Lower Slowly"
3.	**"Slew Left"** (*See Note 2 below)*
	"Slew Right" *(See Note 2 below)*
4.	**"Boom In"**
	"Boom Out"
5.	**"Stop"**
	"Stop Now" *(Emergency Stop)*

NOTE 1: When fine positioning control is required, the person giving the signal should repeat the command continuously for as long as motion is required **"Lower slowly, Lower, Lower, Lower, Lower, Lower, Lower, Stop"**. As long as the lorry loader operator can hear the command he will know that the radio is working. If the commands cease before the final **Stop** he will know that communication has broken down and stop the operation.

NOTE 2: Left and Right are defined from the viewpoint of an operator sitting at a control station looking down at the load. This also applies when a lorry loader is being operated using remote controls.

Radio System Familiarization

It is essential that all radio users are familiar with the controls and operation of the model of radio that they are required to use.

Radio Licensing Requirements

Radios used for two way communication on construction sites, and for industrial use, are referred to as Private Mobile Radio (PMR). Some low powered PMR radios use a European system called PMR446 and do not require a licence. This system is however limited to 8 UHF frequencies, each with 38 channels, which may lead to interference from other users. PMR446 radios are also limited to a maximum of 500 mW Effective Radiated Power, which gives a range of 0.5 to 1 mile in built up areas and 2 miles in open country.

More powerful radios work on VHF and UHF radio frequencies which are assigned to a user by OFCOM who also regulate the frequency bands. To obtain a licence on one of

these frequencies an application needs to be made to OFCOM. The benefits of a licensed frequency are generally greater range, less interference from other users and more features available on the radio sets.

These frequencies are allocated to businesses only, on a case-by-case basis. Once the licence has been issued, radios can be purchased. The supplier will need to see a copy of the licence to program the radios to the correct frequency before shipping.

Additional guidance is given in:-

- Information Sheet RA 195*. Business radio communications for tower cranes* published by OFCOM at www.ofcom.org.uk/static/archive/ra/publication/ra-info.htm

Annex K – Guidance on the Lifting of Persons

K.1 General

Raising and lowering of personnel by a lorry loader that is not specifically designed for this purpose should only be carried out in exceptional circumstances, when it is not practicable to do so by other less hazardous means (e.g scaffolding, mobile elevating work platform, mast climbing work platform).

Careful planning of the event should be carried out prior to each raising and lowering operation.

NOTE 1: *Attention is drawn to LOLER [1] regarding the planning of lifting operations.*

NOTE 2: *Further details on raising and lowering personnel are given in ISO 12480-1 & BS EN 14502-1.*

K.2 Carrier

The type of carrier selected when raising/lowering personnel should depend on a risk assessment and varies according to the application, for example construction, forestry, rescue. New carriers should comply with BS EN 14502-1

K.3 Compatibility of carrier and lorry loader

K.3.1 *Capacity*

The lorry loader selected to lift the carrier should have a rated capacity at the appropriate working radius (or radii) of at least twice the weight of the carrier together with its load of people, tools, materials etc.

K.3.2 *Motion control system*

The lorry loader should be equipped with a motion control system that brings motion to rest automatically when the controls are released.

The lorry loader should be equipped with power lowering. Cranes with free-fall capability should not be used to lower and raise persons unless the free-fall facility is locked out.

Load bearing hydraulic cylinders should be fitted with a device to stop movement in case of hose rupture or pipe fracture.

The lorry loader control system should be able to provide a smooth transition of the carrier. The working speed of the carrier should be limited to a maximum of 0.5 m/s on all motions.

Means should be provided so that if the power supply or control system fails, the carrier can be positioned to enable access/egress without risk.

K.3.3 *Ropes*

Ropes used for hoisting and lowering the carrier should have a minimum diameter of 8 mm.

K.3.4 *Hook*

The lorry loader hook should be provided with a safety catch.

K.3.5 *Lifting Accessories*

Lifting accessories used to connect the carrier to the lorry loader hook should :-

- require a tool to make or break any connection to the carrier and masterlink;
- only to have been used previously for the lifting of persons;
- have a masterlink sized to fit the lorry loader hook.

K.4 Thorough examination and pre-use checks

Additional recommendations for the thorough examination and pre-use checks of cranes and carriers for lifting persons are given in BS 7121-2:2003, Clause **11**.

K.5 Other devices/facilities

K.5.1 *Anemometer*

The lorry loader should be fitted with an anemometer or other device to monitor in-service wind speeds.

K.5.2 *Storage*

Storage accommodation for equipment, including any emergency egress equipment, should be provided in the carrier.

K.5.3 *Rated capacity limiter/rated capacity indicator*

The rated capacity limiter/rated capacity indicator on the lorry loader should be maintained in good working order.

Limit switches should be provided to prevent over-hoisting, over-lowering or over-derricking.

The operator should check limit switches for correct operation each day before personnel carrying operations are carried out. Limit switches are not necessarily fail safe and therefore care should be taken if motion limits are approached.

A fail safe procedure should be provided to ensure that sufficient hoist rope remains on the winch drum at all times to prevent the end of the rope running off the drum while lowering the carrier.

To ensure that sufficient rope remains on the drum at all times, the empty carrier should be lowered as a trial to the bottom of the shaft, cofferdam or caisson as follows:

- The first time it is lowered;
- After each time the shaft, cofferdam or caisson depth increases;
- If the lorry loader hoist rope is replaced.

Care should be taken when the lorry loader is moved to different locations to ensure that sufficient rope is fitted for each operation.

Operation of limit switches, check valves and similar devices could prevent some motions of the lorry loader with the carrier still suspended. Precautions should be taken to ensure that persons in the carrier are not left suspended for an excessive period, and/or a procedure for raising or lowering the carrier to a safe position should be provided.

K.6 Operation

K.6.1 *Organizational requirements*

Lifting, lowering and supporting the carrier should be carried out by the operator in controlled conditions from the normal control position, directed by an appointed signaller. The operator must not operate the lorry loader from the carrier.

It is essential that the lorry loader operator is present at the normal lorry loader control station when the carrier is occupied. Visible and audible communication should be possible between the persons in the carrier and the lorry loader operator at all times during the lifting operation. If a wireless control station is used it is essential that it is being worn by the operator whenever the carrier is occupied. The controls must be switched on and the carrier in full view of the operator at all times.

During the operation:

- An adequately trained and briefed person should be present to perform any emergency recovery procedure;
- The lorry loader operator and signaller should not perform any other work at the same time. The lorry loader operator and signaller should only be responsible for operating one lorry loader or directing one carrier;
- Machines should not operate simultaneously in the same place if there could be a risk of collision;
- All movements should proceed gently and not exceed 0.5 m/s.

Carriers should not be used in the following conditions:

- Winds exceeding 7 m/s (25 km/h). Windspeed measurements should be taken using a calibrated handheld anemometer at a similar level to that to which the carrier will be lifted;
- Electrical storms;
- Snow or ice;
- Fog;
- Sleet;
- Other weather conditions that could affect the safety of personnel.

Unintentional rotation of the carrier should be prevented, for example by using guide ropes or anchoring. The means of preventing unintentional rotation should not inhibit any emergency procedures and otherwise interfere with the safe operation of the carrier.

Lifts should not be made on any other hoist lines of the lorry loader while any person occupies a carrier attached to the lorry loader.

The lorry loader, load lifting attachments and carrier should be inspected prior to use every working day.

NOTE: *For further information on inspections see BS 7121-2. An example of a personnel carrier pre-use check form is given in BS 7121-2:2003, Annex E.*

K.6.2 *Precautions for persons in the carrier*

The payload of the carrier should not be exceeded.

The stability of the carrier should not be affected by the operation.

Additional care should be taken if the carrier is of a length that could lead to excessive tilting through movement of persons or tools within the carrier.

It is strongly recommended that all users of carriers wear suitable full body harnesses with work restraint systems attached to a suitable anchorage point in the carrier. The most suitable type of work restraint system is an adjustable lanyard, adjusted to be as short as possible to ensure that a person is restrained within the carrier. Further information on the use of personal fall protection equipment is given in BS 8437.

Consideration should be given to the rescue of persons from carriers if the carrier is unable to be lowered for any reason, such as machine malfunction or carrier entanglement. Any rescue procedure should be properly planned, taking into account the reasons why the carrier is stranded at height and any need for urgent action. In many circumstances the rescue plan simply involves lowering of the carrier by the supporting lorry loader.

In the event that fall arrest equipment is selected, a rescue plan is required to avoid the consequences of suspension trauma when a person is suspended from a fall arrest harness.

Any tools/materials in the carrier should be secured to prevent displacement, tipping and/or falling out.

Personnel should remain entirely inside the carrier during raising, lowering and positioning to avoid pinch points. Personnel should only stand on or work from the floor of the carrier.

Carriers should be secured so that access and egress can be accomplished without danger.

NOTE: *Lorry loader suspended manriding cages should not generally be provided in lieu of fixed access/egress methods*

K.7 Work from a carrier

NOTE: *Exposed electrical conductors in the vicinity of the lifting operation can present electrical hazards. Exposed high voltage conductors can cause electric shocks or burns even if not touched by personnel. If there are electrical conductors adjacent to the work area, seek advice from the owner of the conductor. Overhead lines usually belong to the local electricity supplier or the National Grid company. These suppliers can provide advice on safe working distances from electrical conductors.*

If electric arc welding is carried out from a carrier, precautions should be taken to prevent stray welding return currents from flowing through the load lifting attachments, lorry loader hoist rope, or other part of the lorry loader. Electric arc welding should be carried out in accordance with HS G 118 [23]. The return welding current lead should be secured to the welded part, as close as practicable to the point of the weld.

NOTE: *Complete insulation of the lorry loader hoist rope or use of clean dry webbing lifting attachments can also prevent stray currents.*

Electric powered hand tools, if used, should be battery powered.

Power cables provided to the carrier should not interfere with safe operation of the carrier.

Power cables should not be used as steady lines.

Annex L – Guidance for persons involved in receiving telephone enquiries and quotation requests for lifting operations with a lorry loader.

It should be explained to the Customer that all lifting operations carried out with a lorry loader should be in accordance with BS7121: Safe Use of Cranes Part 4:2010 Lorry Loaders. This Standard provides clear guidance on the main roles and legal duties of the parties involved and the type of hire contract under which the lift is to be carried out - either "hired and managed" or a "contract lift".

NOTE: *Additional information on types of hire contract is given in Section 3.0 of this Best Practice Guide.*

The criteria for a hired and managed lift are as follows:-

Hired and Managed Lift
The Company requiring the lift to be carried out (the Customer) will request a lorry loader and operator to be supplied to the site in question.
The Customer will then be responsible for: ■ carrying out all work in accordance with BS 7121; ■ supplying the Appointed Person; ■ planning the lift and operating a safe system of work; ■ ensuring that the lorry loader hired is of a suitable type and capacity; ■ checking the credentials of the lorry loader company and certification supplied; ■ conducting a briefing of the lifting team before the lifting operation commences and recording this in the method statement/lifting plan.
The lorry loader owner has a duty to: ■ provide a lorry loader that is properly maintained, tested and certified; ■ provide a competent operator

The second main type of hire contract is known as a Contract Lift. The roles and legal duties of the parties concerned are shown below. Many owners who operate lorry loaders believe they are not involved in Contract Lifts. **This is not the case!** By default, unless the lifting operation takes place in accordance with the criteria outlined above, the lifting operation becomes a de-facto Contract Lift.

Formally Contracted *or* Included with the delivery of goods to a non-domestic customer (de-facto Contract Lift)
The Customer should specify: ■ that all work is to be undertaken in accordance with BS 7121; ■ that the contractor is to supply an Appointed Person; ■ what information and/or services will be provided to the Contractor by the Customer.
The Lifting Contractor (lorry loader owner) is responsible for: ■ supplying the Appointed Person; ■ planning the lift, and operation of a safe system of work; ■ organisation and control of the lifting operation; ■ providing a lorry loader that is properly maintained, tested and certified; providing a competent operator.

NOTE: *In this case the Lifting Contractor is the company carrying out the lifting operation; usually the owner of the lorry loader. Even if the lorry loader is not owned by them, for example if it is sub-contracted or a lorry loader hired from a vehicle hire company, this does not negate their responsibility.*

If the lifting operation is being carried out as part of the supply of goods to a domestic customer, it is unreasonable to expect the domestic customer to have the level of knowledge or experience to fulfil the Customer duties as defined above. The following table provides a clear example of the Lifting Contractors responsibilities in such cases.

Contract Lift - Included with the delivery of goods to a domestic customer
The Lifting Contractor is responsible for: ■ ensuring that all work is to be undertaken in accordance with BS 7121; ■ supplying the Appointed Person; ■ ensuring that adequate information regarding site conditions is obtained; ■ planning the lift, and operation of a safe system of work; ■ organisation and control of the lifting operation; ■ providing a lorry loader that is properly maintained, tested and certified; ■ providing a competent operator.

From a commercial viewpoint, it can be seen that there are not only additional legal obligations but also additional cost implications in carrying out a Contract Lift.

It is therefore considered to be extremely important to establish at the enquiry stage which type of lift is being requested and to ensure adequate terms and conditions and insurances are in place.

The following example flowchart in **Figure L1** provides assistance with this.

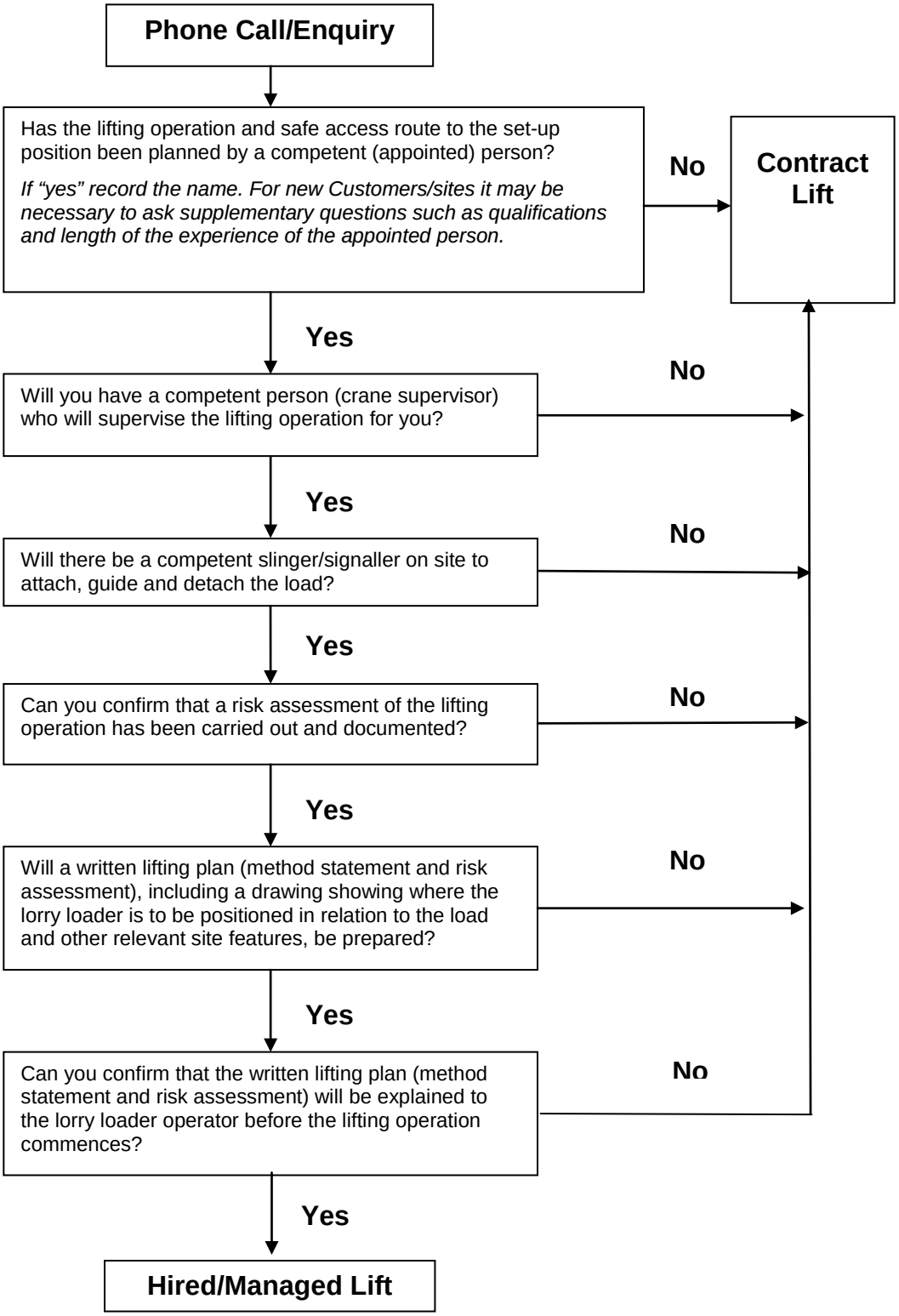


Figure L1 - Flowchart Illustrating the Process of Determining if a Lorry Loader Hire or a Contract Lift is Required

If the customer chooses to hire the lorry loader and manage the lift themselves, the questions on the "*Record of Questions and Answers when taking a request for a the Hire of a Lorry Loader"* must be asked and the answers recorded and retained.

If the customer answers “no” to any of the following questions and, after discussion, is still unable to provide the information, then the hire staff should decline to offer lorry loader hire and discuss the provision of a contract lift**.**

The customer should be made aware that when the lorry loader arrives at the lift location, the lorry loader operator will not start the lifting operation until he/she has been briefed on the lift plan by the person supervising the lifting operation. The customer’s competent (appointed) person has the responsibility for ensuring the lift plan is suitable and sufficient. Having received the briefing on the lift plan, the lorry loader operator will need to confirm that the lorry loader has the required capacity and capability to undertake the proposed lifting operation. This should not be interpreted as the lorry loader operator taking responsibility for the planning of the lifting operation.

In a similar manner, if a representative from the lorry loader hire company visits the site to assist the customer in the selection of the lorry loader, then this should not be interpreted as either the lorry loader owner or their operator taking responsibility for any part of planning the overall lifting operation.

NOTE: *It is essential when providing advice to a customer who has opted for a crane hire that this is limited to technical matters such as access/egress for the lorry loader on site, outrigger loads, duty charts and choice of lorry loader (based on the weight of the load and other information, both provided by the customer). Advice must not be given on any management issues, such as the provision of Risk Assessments and Method Statements. If the lorry loader supplier does provide such information, there is a possibility that the lorry loader supplier will be deemed to have carried out a de facto contract lift and to have taken responsibility for the lifting operation.*

	Record of Questions and Answers when taking a request for a the Hire of a Lorry Loader **(a copy should be sent to the Customer with the Hire Contract)**		
Customer		***Contact Number***	
Company		***Date***	

A.	Has the lifting operation and safe access route to the set-up position been planned by a competent (appointed) person? ***Note:*** *See BS7121Safe Use of Cranes - Part 4:2010 – Lorry Loaders, for detailed information concerning the selection and duties of appointed persons.*	**Yes/No**
	If "yes" record the name:	
	Name	
	For new customers/sites, it may be necessary to ask supplementary questions such as length of experience of the competent (appointed) person.	
	Answers to supplementary questions	
B.	Will you have a competent person (crane supervisor) who will supervise the lifting operation for you?	**Yes/No**
	Record the name, if known at this stage.	
	Name	
C.	Will there be a competent slinger/signaller on site to attach, guide and detach the load?	**Yes/No**
D.	Can you confirm that a risk assessment of the lifting operation has been carried out and documented?	**Yes/No**
E.	Will a written lifting plan including a drawing showing where the lorry loader is to be positioned in relation to the load and other relevant site features be prepared? ***Note:*** *For an example of a suitable lifting plan incorporating risk assessment and method statement, refer to the CPA/ALLMI Best Practice Guide for Safe Use of Lorry Loaders - 2010.*	**Yes/No**
F.	Can you confirm that the written lifting plan incorporating risk assessment and method statement will be briefed to the lorry loader operator before the lifting operation commences?	**Yes/No**

Note: *It is important that all documentation associated with a Hired/Managed or Contract Lift, including the above Record of Questions and Answers are retained for a suitable length of time in case of queries, claims or HSE investigations.*

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If it is established that a Contract Lift is required:

If a Contract Lift is required, then it is strongly advised that the Appointed Person has systems/questions in place for staff to use at the initial enquiry stage. This process should enable the staff to obtain relevant site information to a satisfactory degree. Section **3.1** of this Best Practice Guide states:

"Where the customer (apart from domestic customers) opts for a contract lift they have a duty to provide information, such as ground bearing capacity and the weight of the load to be lifted, to the lorry loader owner to assist them with their planning. As the customer is in control of the site and has access to the expertise required to assess the ground on which the lorry loader will stand, they are responsible for assessment and preparation of the ground."

If there is any concern that the information is incorrect or inadequate, then a site visit should be made by the Appointed Person or their nominated representative. Once the relevant information has been obtained, the Lift Complexity can be established which will assist in determining what levels of planning are required.

Commercially, it is also extremely important to ensure that Terms and Conditions are in place to accommodate the possibility of arriving on site to find that information provided by the customer is incorrect; or that the situation has changed from any previous site survey. Should situations such as these arise then there will be obvious financial/cost implications and all parties should be clear from the outset as to what their own levels of liability and responsibility are in this regard.

In the case of a Contract Lift to a Domestic Customer, section **3.2.3** of this Best Practice Guide states that it is not reasonable to expect them to have sufficient knowledge of either site conditions or legislation. In such cases, procedures should be put in place to accommodate this.

The following pages contain examples of a flowchart (See **Figure L2**) and a "*Record of Questions and Answers when taking a request for a Contract Lift using a Lorry Loader"* template sheet to guide companies on this issue.

NOTE: *All templates and flowcharts provided in this Annex are for example purposes only. It should be clear that it is the responsibility of the Appointed Person in all cases to ensure that any documentation used by them for this purpose is designed to accommodate the requirements and possible outcomes within their respective companies and levels of operation.*

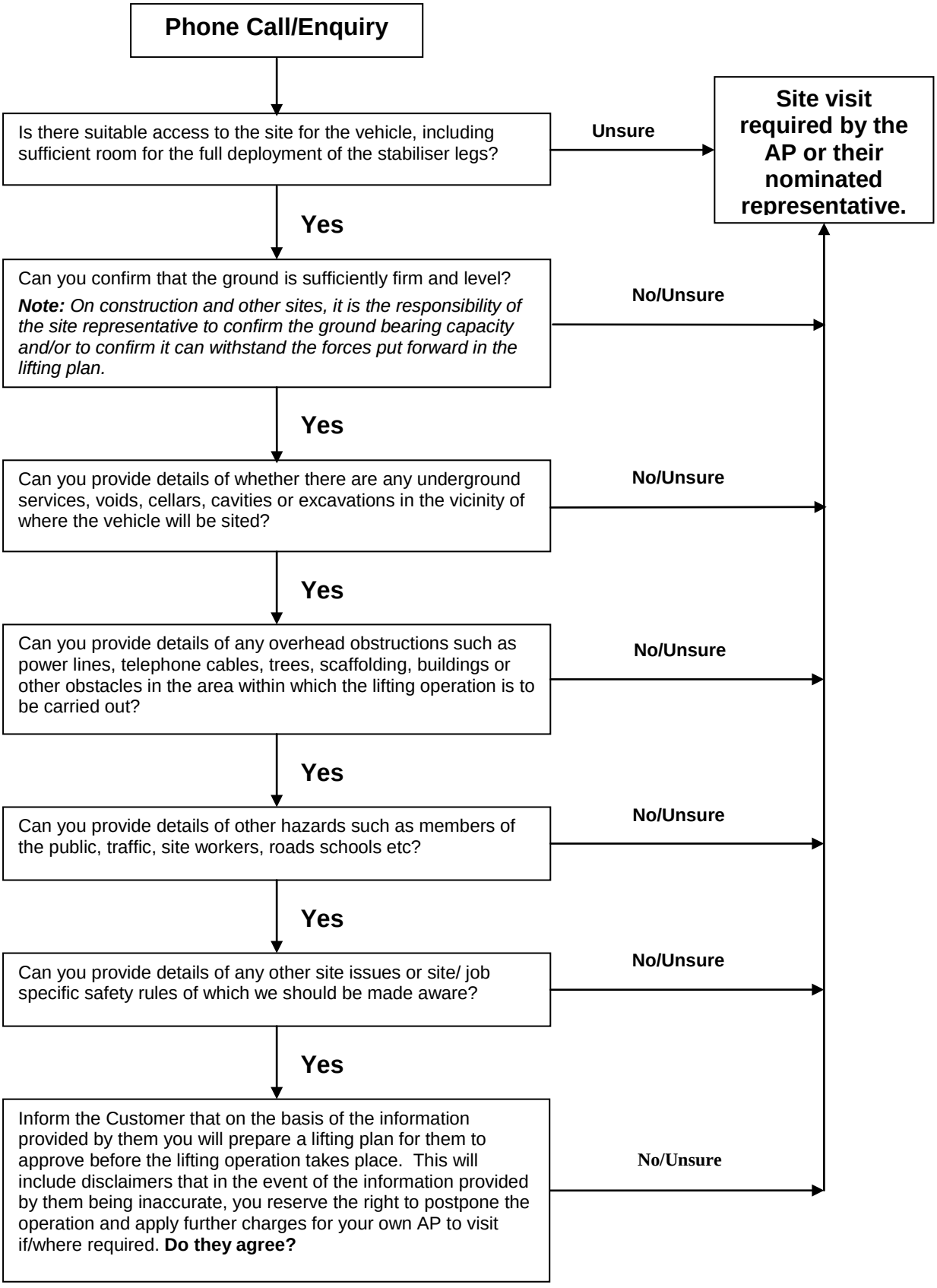

Figure L2 - Flowchart Illustrating the Process of Taking a Request for a Contract Lift

	Record of Questions and Answers when taking a request for a Contract Lift using a Lorry Loader **(a copy should be sent to the Customer with the Hire Contract)**	

Customer		***Contact Number***	
Company		***Date***	

A.	Is there suitable access to the site and appropriate space for the setting up of the lorry loader to allow full deployment of all stabiliser legs?	**Yes/No**
	Are you able to confirm the load bearing capacity of the ground?	**Yes/ No**
	Write load bearing capacity here and state value i.e. kN/m² or t/m²	
	For new customers/sites, it may be necessary to ask supplementary questions such as whether a site drawing is available or geological reports.	
	Answers to supplementary questions	
B.	Are you able to provide the details of any underground services, voids, cellars, cavities or excavations in the vicinity of where the vehicle will be sited?	**Yes/No/NA**
	Summarise any details here and request more detailed written information as required:	
C.	Can you provide details of any overhead obstructions such as power lines, telephone cables, trees, scaffolding, buildings or other obstacles in the area within which the lifting operation is to be carried out?	**Yes/No/NA**
	Summarise any details here and request more detailed written information as required:	
D.	Can you provide details of other hazards such as members of the public, traffic, site workers, road, schools etc?	**Yes/No/NA**
	Summarise any details here and request more detailed written information as required:	
E.	Can you provide details of any other site issues or site/ job specific safety rules of which we should be made aware?	**Yes/No/NA**
	Summarise any details here and request more detailed written information as required:	
F.	***Only proceed to this next question If affirmative answers and supplementary information is provided where required to all the above questions, otherwise a site visit <u>must</u> be stipulated:*** Are you aware of our terms and conditions which state that on the basis of the information provided by you, we will prepare a lifting plan for you to see and approve before the lifting operation takes place. This will include disclaimers that in the event of the information provided by you being inaccurate, we reserve the right to postpone the operation and apply further charges for our own AP to visit if/where required. **Do you agree to that?**	**Yes/No**

NOTE: *It is important that all documentation associated with a Hired/Managed or Contract Lift, including the above Record of Questions and Answers are retained for a suitable length of time in case of queries, claims or HSE investigations.*

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Annex M - Further Information and Guidance

Guidance Notes

The Association of Lorry Loader Manufacturers and Importers publish a series of Guidance Notes dealing with various aspects of lorry loader operation. These can be downloaded from the ALLMI website at http://www.allmi.com/guidancenotes/guidancenotes.html At the time of publication the following Guidance Notes are available. New Guidance Notes are being added and readers should check the website for new additions and revisions.

No.	Subject
001	Guidance for Life Expectancy of a Lorry Loader
002	Second-hand Lorry Loaders
003	Guidance for the Purchase of Second Hand Lifting Attachments
004	Regulations and Standards
005	Guidance for Lorry Loader Installers and Operators
006	Guidance Note for Hiring a Lorry Loader
007	Guidance to Lorry Loader Purchase
008	Bridge Bashing Regulation
009	Trailer Mounted Loader Cranes
010	Thorough Examination & Testing of Loader Cranes
011	In-service Structural Inspections
012	Non-destructive Testing
013	Stabilizer Forces
014	Guide for the Purchase of a Chassis Suitable for a Loader Crane
015	Calibrating Reduced Capacity Areas
016	The Supply and Use of Remote Controls
017	Guidance for Employee Induction
018	Implications of BS 7121 Safe Use of Cranes - Part 4:Lorry Loaders

Standards

BS 6166-3:1998, *Lifting slings — Part 3: Guide to the selection and safe use of lifting slings for multi-purposes*

BS 6210:1983, *Code of practice for the safe use of wire rope slings for general lifting purposes*

BS 6968:1988, *Guide for use and maintenance of non-calibrated round steel lifting chain and chain slings*

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Useful Websites

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Association of Lorry Loader Manufacturers and Importers	www.allmi.com
Health and Safety Executive	www.hse.gov.uk
Construction Skills	www.cskills.org
Lifting Equipment Engineers Association	www.leea.co.uk
Safety Assessment Federation	www.safed.co.uk

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