



Crane Interest Group

CPA Best Practice Guide for Risk Assessment and Method Statement for a Contract Lift

This Best Practice Guide is in four parts:

- **Guidance** for the Completion of the CPA Risk Assessment and Method Statement for a Contract Lift;
- **Form 1** – Risk Assessment and Method Statement for a Contract Lift;
- **Form 2** – Site Plan Showing Position of Crane and Loads;
- **Form 3** – Crane Access and Capacity Record for a Crane Hire.

The “*Guidance for the Completion of the Risk Assessment and Method Statement for a Contract Lift*” gives explanation on how to complete **Form 1** in the second part of this guidance.

Form 1 is intended to help the Appointed Person to record systematically everything necessary to complete a Risk Assessment and Method Statement. It is therefore in two parts:

- Risk Assessment;
- Method Statement.

Form 2 “*Site Plan Showing Position of Crane and Loads*” should be used for every contract lifting operation.

NOTE: *Guidance on the responsibilities of the employing organisation where a contract lift is being undertaken is given in Technical Information Note TIN 103 (free download from <https://www.cpa.uk.net>)*

Crane Hire rather than Contract Lift

When a crane hire contract has been agreed, the customer might assume that the representative of the crane hire company that visited site has provided the planning, risk assessment and method statement. The more helpful the representative has been, the greater the chance that the customer has misunderstood his own responsibilities to provide the Appointed Person.

In order to ensure that the customer understands fully his responsibilities for the lifting operations, it is suggested that **Form 3** *Crane Access and Capacity Record for a Crane Hire* in the fourth part of this Best Practice Guide, is completed and left with the customer.

Further detailed information is given in CIG 9801(5) *Best Practice Guide for Crane Hire and Contract Lifting* (free download from <https://www.cpa.uk.net>). This publication gives guidance for hire desk personnel handling a crane hire/contract lift enquiry.

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Guidance for the Completion of the CPA Risk Assessment and Method Statement for a Contract Lift

The Appointed Person will carry out a site visit and complete the form, including a site plan showing the position of the crane, for every Contract Lift. The form will be provided to the Appointed Person with the contract number, customer, site contact and telephone and fax numbers already inserted.

The Appointed Person will insert their name, together with the date and time of their assessment of the site in the space provided. The remaining spaces will be completed as described below:

Risk Assessment

1. Description of Lifts

- 1.1 In this space sufficient information will be provided to give a clear, but brief, description that will clearly identify the lift(s) to be undertaken. A separate risk assessment form will need to be completed for every time the crane is moved to a new position, unless the risk assessment has taken into account the hazards associated with all positions.

***NOTE:** This form is intended to cover the assessment and planning of Basic and Intermediate lifts as defined by BS 7121-3:2017. More complex lifts may well require more detailed assessment and planning. The Appointed Person should recognise their own limitations and the need for specific specialist assistance in such a case.*

2. Details of Loads

- 2.1 The customer is to provide the Appointed Person with full details of all loads to be lifted. Details of each load to be lifted are to be entered on the risk assessment form. The Appointed Person will carefully consider all the loads to be lifted and ensure that sufficient information is provided on the form to enable other persons to see how the lifts are to be performed in a safe manner. The Appointed Person will also carefully consider what will be the worst case for each load. The height of lift and maximum radius for that load will then be entered in the appropriate space. A site plan showing the position of the crane(s) and load(s) will also be provided.
- 2.2 Details of the load must include the weight and overall dimensions (length, width and depth). An indication of the position of the centre of gravity of the load in relation to the lifting points must be given. ***NOTE:** A sketch is often useful for this.*
- 2.3 Details of the load should also include the wind area/weight ratio. Where a load with a large wind area/weight ratio is to be lifted, the maximum in-service wind speed should be reduced. TIN 101 (free download from <https://www.cpa.uk.net>) and Annex D of BS 7121-1:2016 give further details.
- 2.4 The monetary value of each load should also be entered on the form, as additional insurance cover may be required for high value items.

3. Details of Cranes and Alternative Crane Details

- 3.1 The form has provision for the details for up to six cranes to be inserted. Additional forms should be used if required.
- 3.2 Details of the preferred crane(s) to be used will be entered under "Details of Cranes". Details of a suitable alternative crane(s) that may be used will be entered under "Alternative Cranes"
- 3.3 The details of all the cranes will include
- the make and model;
 - capacity;
 - jib length (plus fly jib with offset if required);
 - outrigger spread;
 - outrigger load;
 - maximum ground bearing capacity;

***NOTE:** This will be the permissible load bearing capability of the ground at every position where the crane is to be stood, as provided by the customer. The Appointed Person will need to determine the area of the outrigger supports/crawler tracks/wheels etc. required to ensure that the maximum given ground pressure is not exceeded. Details of the required supports will be recorded in the section headed **Operational Requirements**. Further advice on this subject can be found in the CIRIA Publication C703 "Crane Stability on Site".*

- counterweight;
- weight of the crane.

Where the crane will be supported by its outriggers during the lifting operation the maximum outrigger load for the specific configuration, whilst lifting the specified load, will also need to be entered onto the form. This load will be obtained from the manufacturers outrigger load tables.

4. Ground Conditions

4.1 Under the terms of the commercial contract (*CPA Standard Terms and Conditions for a Contract for the Lifting and Movement of Goods Involving Crane Operation*), the responsibility for ensuring that the ground beneath the crane can withstand the loads imposed by the crane during travelling and lifting, rests with the customer. However the customer may well not have sufficient expertise to carry out an assessment of the ground and the Appointed Person should ensure that the customer has consulted an appropriate specialist to ensure that the ground will sustain any loads imposed by the crane. Should the Appointed Person have any concerns on this point these will be noted on the form and the lift must not take place until they have been satisfactorily resolved.

4.2 The Appointed Person must pay particular attention to the ground conditions where a load is to be lifted and carried by a crane "Free on Wheels" or travelled on crawler tracks.

The ground will be level to within the tolerances given in the manufacture's instruction manual for the crane. Adequate inquiries must be made to ensure that the surface can withstand the loads that will be imposed by the crane. Where any doubts exist, free on wheels duties should not be used. Where space permits, the outrigger beams on wheeled cranes will be extended and the jacks lowered until the feet are just clear of the ground. Particular care must be taken to ensure that, even in this condition, only "Free on Wheels, Pick and Carry" duties are used and that the rated capacity indicator/limiter is set to this condition in accordance with the manufacturer's operating instructions.

4.3 When lifting on outriggers the outrigger beams and jacks must be extended in accordance with the manufacturer's instructions for the crane. The Appointed Person must ensure that there is sufficient space at the crane standing for this to be achieved. The crane rated capacity indicator/limiter must be set in accordance with the manufacturer's operating instructions.

It is important to realise that ground that has been backfilled without compaction will present a danger and must not be used to support a crane.

4.4 Two entries for each crane are required to be made by the Appointed Person with regard to site surface conditions, the first relates to access and the second to where the crane will stand whilst lifting the loads.

4.5 The Appointed Person must ensure that there is adequate access for the crane and transport onto the site. It is important to discuss with the customer the route to be used, as it is the customer's responsibility to ensure that the ground can support the loads that will be applied. The Appointed Person must indicate in the space provided the access route to be used and the nature of the surface (e.g. blacktop, hard-core, concrete). For clarity, the route can be shown on the site plan showing the position of the crane.

4.6 Detailed guidance on ground conditions is given in *Ground Conditions for Construction Plant - Good Practice Guide*. Strategic Forum for Construction - Plant Safety Group (free download from <https://www.cpa.uk.net>)

5. Lifting Accessories

5.1 The quantity and size of all lifting accessories required for the job will be entered in the appropriate space by the Appointed Person.

6. Identification of Hazards

6.1 The Appointed Person will identify and record any proximity and load associated hazards on the form.

NOTE: Advice on sites of exceptional hazard such as such as railways, chemical plants and nuclear installations, is given in **Annex E** of BS 7121-1:2016

7. Assessment of Risk Posed by the Hazards Identified and Action to be Taken

- 7.1 The Appointed Person will assess which of the hazards identified pose a significant risk of death, injury or illness.
- 7.2 These hazards will be ranked in order of seriousness and entered on the form.
- 7.3 For each hazard the risk and the action to be taken to avoid or reduce risk, will be entered on the form.

Example

<i>Hazard Present</i>	<i>Risk</i>	<i>Action to Avoid or Reduce Risk</i>
<i>Overhead power lines</i>	<i>Contact by jib resulting in electrocution</i>	<i>Have power turned off before lifting starts</i>

8. Operational Requirements

- 8.1 Any items or provisions to be made by the crane owner e.g. outrigger supports, limiting arrangements to prevent the crane entering a prohibited area, will be entered in this field.

9. Customer Provisions

- 9.1 The Appointed Person will list any provisions that the customer has agreed to make or other similar matters. This will include any requirements such as, road closure, railway possession, turning off of gas/electricity etc.

10. Site Plan Showing Position of Cranes and Loads

- 10.1 With each Risk Assessment report the Appointed Person will provide a sketch on the form provided with the report pad. This sketch will show, at least, the location of the crane/s and load/s at the start and end of lifting, together with the corresponding radii. Any additional information necessary to ensure a safe lift, such as proximity hazards, access routes and rigging positions etc. will also be shown. The sketch will be identified with the customer's name and contract number, and signed and dated by the Appointed Person. A copy of the sketch will be given to the customer. Where the slinging arrangements are complex additional sketches may be required to show these arrangements.

Method Statement

The Method Statement has a standard format and the Appointed Person is only required to insert the relevant entries as follows :-

1. Personnel

Where the Appointed Person will not be supervising the lifting operations on the day(s) of the Contract Lift, a competent Crane Supervisor must be appointed. The Crane Supervisor has the duty to ensure that all lifting operations are carried out in accordance with the Appointed Person's Site Inspection and Risk Assessment, the site plan showing the position of the crane and Method Statement.

The Crane Supervisor will not be permitted to deviate from any of the given requirements and conditions without first obtaining the agreement (in writing) of the Appointed Person whose name appears on the Method Statement or, in their absence, another duly authorised Appointed Person who is fully familiar with the operation to be carried out.

The Appointed Person will need to instruct the Crane Supervisor on how the lift should be carried out. The Crane Supervisor will need to sign the appropriate space on the form to indicate that he has received such instruction.

Where the Appointed Person is also the Crane Supervisor, his name should be entered in the appropriate fields on the Method Statement.

2. Weather Conditions

The Appointed Person or, in his absence, the Crane Supervisor, will ensure that the lifting operation only takes place if the weather conditions are within the limits recommended by the crane manufacturer. This will involve an assessment of the weather conditions on site, in conjunction with the crane driver(s) and may be backed up by obtaining a weather forecast.

Where a load with a large wind area/weight ratio is to be lifted the maximum in-service wind speed should be reduced. TIN 101 (free download from <https://www.cpa.uk.net>) and **Annex D** of BS 7121-1:2016 give further details.

3. Sequence of Operation.

- 3.1 The sequence of operations, from the time the crane arrives on site, will be given.
- 3.2 For Basic lifts and Intermediate lifts the sequence of crane motions will need to be given, so that contact with any hazard is prevented.
- 3.3 Where, as part of the sequence of operation, the crane(s) move to a new position on site this will be recorded in this section. Additional sheets may be required to adequately describe the sequence of operations in this case.
- 3.4 Greater detail will need to be given for Complex lifts, particularly where two cranes are used. In this case the sequence of operation for each crane will need to be given.

NOTE: Basic, Intermediate and Complex lifts are defined in clauses 4.3.2.2, 4.3.2.3, and 4.3.2.4 of BS 7121 Part 3:2017.

4. Appointed Person's Acceptance of Responsibilities

The Appointed Person will sign and date the form to show that he has carried out the risk assessment and detailed all the necessary measures to be taken, produced a method statement, and that the lift will be carried out in accordance with these. A copy of the form will be passed to the customer.

5. Crane Supervisor's Acceptance of Duties

The Crane Supervisor will sign and date the form to show that he accepts the duty of ensuring that the lift(s) will be carried out in accordance with the Risk Assessment and Method Statement

Form 1

Risk Assessment/Method Statement for a Contract Lift

Risk Assessment

Contract No.		Date of Risk Assessment:	
Appointed Person carrying out the Assessment:		Time of Assessment:	
Customer:			
Office contact:		Phone:	Fax:
Site contact:		Phone:	Fax:
Site address:			
Description of lift:			

Details of Loads Load Position 1 Load Position 2 Load Position 3

Weight:			
Dimensions:			
Position of C of G:			
Height of lift (worst case) only):			
Max. radius (worst case) only):			
Wind area/weight ratio			
Date of lift:			
Time of lift:			
Monetary value of load:			

Details of Cranes 1st 2nd 3rd

Make & model:			
Capacity:			
Jib length:			
Outrigger spread:			
Outrigger load:			
Max. ground bearing capacity:			
Counterweight:			
Weight of crane:			

Alternative Crane Details 1st 2nd 3rd

Make & model:			
Capacity:			
Jib length:			
Outrigger spread:			
Outrigger load:			
Max. ground bearing capacity:			
Counterweight:			
Weight of crane:			

Ground Conditions (Visual assessment)

Access/egress for crane & transport:			
Lifting position:			

Lifting Accessories

Slings (wire rope):	Slings (webbing):
Slings (chains):	Shackles:
Other Accessories:	

Identification of Hazards

Contract No.

Proximity Hazards	Present?		Proximity Hazards (cont.)	Present?
Sites of exceptional hazard	Yes / No		Other vehicles	Yes / No
Overhead power lines	Yes / No		Other hazards identified	Yes / No
Other overhead obstacles	Yes / No			
Underground services	Yes / No		Load Hazards	Present?
Excavations	Yes / No		Slinging difficulties	Yes / No
Unstable/ Soft ground	Yes / No		Top heavy	Yes / No
Hazardous chemicals/materials	Yes / No		Sharp edges	Yes / No
Confined working area	Yes / No		High wind area/weight ratio	Yes / No
Restricted access - width	Yes / No		Other hazards identified	Yes / No
Restricted access - height	Yes / No			

Assessment of Risk

Hazard Present	Risk	Action to Avoid or Reduce Risk

Operational Requirements:

Customer Provisions:

Method Statement**Contract No.****Responsibilities**

The Crane Hire Company (Crane Owner) will undertake the responsibilities for the management of this lifting operation as defined in CPA Standard Terms and Conditions for a Contract for the Lifting and Movement of Goods Involving Crane Operation. The Customer is responsible for providing relevant information relating to the load and its lifting attachments, the site and ground conditions.

Personnel

The Crane Hire Company will provide the following personnel, complete with relevant personal protective equipment. The duties of these people will be as defined in British Standard 7121-1:2016.

Title	Name	Title	Name
Appointed Person		Slinger(s)	
Crane Supervisor		Signaller(s)	
Crane Driver(s)		Crane Erectors	

*NOTE: The appointed person may decide that one person, can carry out more than one duty. This does **not** however, include the crane driver who must concentrate on operating the crane.*

Lifting Accessories

The lifting accessories, as detailed previously, will be provided by the Crane Hire Company, complete with all statutory documentation.

Weather Conditions

The Appointed Person or, in his absence, the Crane Supervisor, will ensure that the lifting operation only takes place if the weather conditions are within the limits recommended by the crane manufacturer.

Ground Conditions

Have assurances been obtained that the ground can withstand the load?

Yes/No

Sequence of Operations

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

Appointed Person's Acceptance of Responsibilities

I confirm that the lifts have been planned and will be carried out in accordance with current legislation and British Standard 7121 and that I accept responsibility for the preparation of this Risk Assessment and Method Statement.

Signed:

Date:

Crane Supervisor's Acceptance of Duties

I confirm that I have been fully briefed on the contents of this Risk Assessment and Method Statement and that I accept the duty of ensuring that the lift(s) will be carried out in accordance with the method and procedures set out in this document.

Signed:

Date:

Form 3

Crane Access and Capacity Record for a Crane Hire

This guidance is given on the basis of information provided and should not be interpreted as forming part of any risk assessment, planning or method statement for the lifting operation. Your own Appointed Person must carry out the planning and risk assessment for this operation.

I have been advised that: -

Weight of Load	tonne
Maximum Radius	metre

The crane selected, using the manufacture's published data, is technically capable of lifting this load:

Crane Make and Model	
Counterweight	
Jib Configuration	

On the basis of this information I confirm that on the day of my inspection there was sufficient space available for the above crane to access your site. You, the hirer, are responsible for ensuring that the condition of the ground is adequate to sustain the loads imposed by the crane and any associated vehicles both during transit across the site and whilst setting up or working. Further advice on this subject can be found in the CIRIA Publication C703 "*Crane Stability on Site*" and *Ground Conditions for Construction Plant - Good Practice Guide*. Strategic Forum for Construction - Plant Safety Group (free download from <https://www.cpa.uk.net>)

We would draw your attention to the following extract from British Standard 7121-1:2016, *Code of Practice for the Safe Use of Cranes*:-

"Notwithstanding any advice the crane owner provides about crane selection or any other relevant matter, such as clearances and ground conditions, the responsibility for ensuring that the crane is of a suitable type, size and capacity for the task to be undertaken and for planning the operation remains with the user organization."

NOTE: BS7121 is cited in the HSE Guidance to Regulation 8 – Organization of Lifting Operations, of the "Lifting Operations and Lifting Equipment Regulations 1998" (LOLER)

Should you consider that you do not have the appropriate expertise to carry out the necessary risk assessment, writing of method statement or supervision of the lift then we would be pleased to re-quote on the basis of a contract lift rather than a crane hire.

Signed on behalf of the Crane Owner:	Date:
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