

Safety Publication



Guidance on the Tendering, Management and Operations of Mobile Cranes



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Guidance on the Tendering, Management and Operations of Mobile Cranes

CPA Good Practice Guide



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Foreword

Welcome to the first edition of the Construction Plant-hire Association's (CPA) Guide for the tendering, management and operations of mobile cranes, produced by the CPA's Crane Interest Group (CIG). It is my belief that this guide will be invaluable to both crane operators and customers, which is intended to provide a clear summary of all Mobile Crane-related legislation and good practice guidance in one place.

Roadgoing mobile cranes are a common sight on roads and construction sites across the UK and like all heavy equipment, have the potential to cause great harm if not maintained and operated in a safe and efficient manner.

This guide provides good practice advice on the expected standard of duties and responsibilities for both operators and crane users. It is CIG's intention that this remains a living and flexible document and that any change to any aspect of legislation or industry good practice will be captured in future versions of this publication to give confidence that if working to the guidance detailed in this publication, then the latest industry-led good practice standards are being followed.

I commend this guidance to all mobile crane operators and users and am grateful to the working group participants from the Health and Safety Executive, Driver Vehicle Standards Agency, Construction Plant-hire Association, CIG Members and members of the Lead AP Group who supported and contributed to the development of this guide.

Whilst the guide has no formal legal status, it is the view of the CPA and all the working group bodies represented that these standards should be expected across all mobile crane operations. Finally, it is CIG's long-term aim to evolve this document from 'Good Practice' Guidance to 'Minimum Standards' Guidance in collaboration with Members and after a reasonable period to enable adoption of all standards.



Peter Gibbs
Chairman
Crane Interest Group
Construction Plant-hire Association

1.0 Introduction

This guide provides good practice guidance on minimum standards on the tendering, management and operations of mobile cranes. It covers legal requirements, what is good practice and directs readers to further relevant guidance material. This guide aims to raise standards and encourage sourcing from responsible mobile crane suppliers.

Crane suppliers are encouraged to use the guide to undertake an audit of their crane fleet and operational procedures to identify areas of strength and items where improvements can be made. By following the guidance, crane suppliers can demonstrate that they can provide cranes and personnel to undertake lifting operations safely in compliance with good practice guidelines and statutory requirements, including travel on the public highway.

Crane users are encouraged to use the guide when selecting potential crane suppliers to ensure that they have the necessary competence, procedures and cranes to both travel on the public highway and carry out the work safely.

The guidance for travel on public highways closely follows the requirements of the Fleet Operator Recognition Scheme (FORS). It is strongly recommended that crane suppliers can demonstrate a minimum achievement of FORS Bronze standard.

It is noteworthy that the Driver Vehicle Standards Agency (DVSA) have introduced an Earned Recognition Scheme as an industry best practice benchmark standard. For the purposes of this guide, 'Earned Recognition' will be deemed as equivalent to best practice FORS standards.

2.0 Legal Requirements

The law places duties on persons concerned with mobile cranes - including those who tender, manage, supply, set up and maintain mobile cranes for use; those who undertake thorough examinations and those involved with the use of mobile cranes for lifting operations. This section outlines those legal duties and points the reader towards further relevant guidance material.

Legislation relating to the use of mobile cranes falls into one of two categories. Legislation relating to the movement of the crane on the public highway and secondly the use of the crane to undertake lifting operations once at site.

2.1 Movement of the crane on the public highway

The Road Traffic Act 1984, 1988 and 1991

The Road Traffic Act covers requirements for the use of all vehicles on highways and any other road to which the public has access. The act covers the construction and use of vehicles, including requirements for testing.

The Road Vehicles (Construction and Use) Regulations 1986 (As amended) (C & U)

The Road Vehicles (Construction and Use) Regulations, made under the Road Traffic Act 1972, specifies detailed requirements for the construction and use of all road vehicles, including mobile cranes. Part of the requirements for use is a requirement (Regulation 100) that all vehicles, including mobile cranes, are maintained so that no danger is caused or is likely to be caused to any person in or on the vehicle or on a road.

The Road Vehicles Lighting Regulations 1989 as amended.

The Road Vehicles Lighting Regulations made under the Road Traffic Act 1988 sets out the requirements for the lighting of road vehicles.

The Road Vehicles (Authorisation of Special Types) (General) Order 2003 (STGO)

This Order - made under Section 44 of the Road Traffic Act 1988 - authorises the use on the road of certain types of vehicles, including mobile cranes, which do not fully comply with the Construction and Use Regulations. The Order also specifies the requirements that must be met by such vehicles.

The Goods Vehicles (Plating and Testing) Regulations 1988 (as amended)

The Goods Vehicle (Plating and Testing) Regulations - made under the Road Traffic Act 1972 - sets out the requirements for the annual testing of most goods vehicles. Schedule 2 lists those vehicles which are exempt from the regulations. Schedule 2 has been amended by The Goods Vehicles (Plating and Testing) (Miscellaneous Amendments) Regulations 2017.

The Goods Vehicles (Plating and Testing) (Miscellaneous Amendments) Regulations 2017

The Goods Vehicles (Plating and Testing) (Miscellaneous Amendments) Regulations amend the list of exempted vehicles in Schedule 2 of the 1988 regulations. The amendments remove mobile cranes from the list of exemptions from plating and testing. However, those mobile cranes running under STGO (see 3.5) continue to be exempt by virtue of Regulation 44(e) of the Goods Vehicle (Plating and Testing) Regulations 1988.

2.2 Use of the crane at site

Health and Safety legislation requires that safe systems of work and equipment are in place for all lifting operations.

Health & Safety at Work etc Act 1974 (HSWA)

HSWA places a duty on employers, such as crane owners and users (hirers), to ensure the health and safety of their employees and others who may be affected by their work activities.

This includes crane operators working on a site, both under crane hire and contract lift conditions (Section 2). The HSWA also places a duty on mobile crane owners and users (hirers), where their work activity involves mobile cranes being used where they could affect the general public and the self-employed (Section 3).

The Construction (Design and Management) Regulations 2015 (CDM)

The Construction (Design and Management) Regulations place duties on organisations and individuals - including duty holders, 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 concerned in a project to co-operate with any other person involved with the project or an adjacent site to ensure that work is carried out safely (Regulation 8(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 (Regulation 3). This includes risks from lifting operations using mobile cranes. The risk assessment should identify the preventative and protective measures required to control risk. The duty holder (organisation in control) should then put in place the organisation and arrangements (planning) to ensure that those measures are properly implemented.

MHSWR also places a duty on employers to consult and co-operate where two or more employers share a workplace, even on a temporary basis such as a crane hire. MHSWR (Regulation 14) also places duties on employees to cooperate with their employer to enable the employer to comply with statutory duties. This includes a requirement for employees to inform their employer of shortcomings in the health and safety arrangements.

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

Regulation 8 of LOLER specifies requirements for the organisation of lifting operations and the Guidance to LOLER cites the BS 7121 series as giving best practice guidance on the safe use of cranes. The Guidance to LOLER and BS7121 both highlight the differences between a standard crane hire and a contract lift.

The Provision and Use of Work Equipment Regulations 1998 (PUWER)

PUWER deals with the risks arising from the use of all work equipment including mobile and lifting equipment.

Working Time Regulations (1998)

The Working Time Regulations are in place to improve workplace health & safety by implementing rules regarding working hours. These rules include daily and weekly rest periods, rest breaks, annual leave entitlements, maximum working weeks and night work restrictions. Under the Working Time Regulations, employers are required to monitor when and how many hours employees are working.

3.0 Crane Procurement

Before entering a contract, the organisation requiring the lift to be undertaken (employing organisation) should satisfy itself that the crane supplier has the necessary competence, procedures and suitable cranes to travel on the public highway in order to carry out the work safely.

Whether lifting operations are being undertaken under crane hire agreements or as contract lifts, the employing organisation should ensure that:

- a) A competent person has been appointed to plan the lifting operation;
- b) The crane selected and any accessories for lifting are properly maintained, inspected, and thoroughly examined;
- c) The crane selected is safe to travel on the road;
- d) A competent operator is provided;
- e) Adequate information about the load to be lifted has been provided;
- f) Adequate information regarding the location of the lifting operation, site conditions and hazards have been provided to the appointed person;
- g) The lift is properly planned and a safe system of work is followed;
- h) The lifting operation is appropriately supervised and carried out in a safe manner;
- i) Lifting operations are carried out in accordance with BS 7121-3.

NOTE: Further guidance on the maintenance, inspection and thorough examination of mobile cranes is provided in BS7121-2.3 and CPA CIG 1001 – Maintenance, Inspection and Thorough examination of Mobile Cranes

3.1 Contracts

When the employing organisation chooses to hire a crane from a crane supplier and manage (plan and supervise) the lifting operation(s) themselves, they are responsible for ensuring that there is a safe system of work in place and that all lifting operations are carried out safely. The crane supplier has a duty to provide, on request, certain technical information about the crane such as outrigger loadings and duty charts to assist the employing organisation with their planning. The crane owner also needs to be satisfied that a safe system of work, to which their crane operator will work, has been established by the employing organisation.

Should the employing organisation choose to opt for a contract lift, the planning, supervision, and execution of the lifting operation(s) will be carried out by the crane supplier. In this case, the employing organisation has a duty to provide information, such as ground bearing capacity and the weight of the load, to the crane supplier to assist them with their planning. As the employing organisation is in control of the site and has access to the expertise required to assess the ground on which the crane will stand, they are responsible for the assessment and preparation of the ground. The crane supplier is responsible for ensuring adequate stability of the crane.

Where the crane supplier does not have a suitable crane available from their own fleet and elects to source a crane from another crane supplier (cross hire), the employing organisation should be informed of the arrangement.

NOTE: Further guidance on crane hire and contract lifting is provided in CPA Publication CIG09801 - Best Practice Guide for Crane Hire and Contact Lifting.

3.2 Movement of mobile cranes on public highways and sites

Employing organisation should procure cranes from suppliers that can provide cranes and personnel to travel on the public highway, safely in compliance with good practice guidelines and statutory requirements.

Crane suppliers should be able to demonstrate that they can provide cranes and personnel that:

- Comply with UK legislation for travel on the public highway;
- Have been inspected, maintained in accordance with statutory requirements and good practice guidance;
- Are driven in accordance with the rules of the road, with a safe standard of driving and consideration for other road users;
- Travel to and from site by planned, compliant, safe and efficient routes;
- Have a policy and procedures in place to monitor and control driver hours;
- Have a policy and supporting procedures in place on fitness to drive and eyesight standards;
- Meet emission requirements as dictated by legislation, site location and good practice guidance;
- Are fitted with equipment and systems to detect, warn and protect vulnerable road users;
- Have achieved Fleet Operator Recognition Scheme (FORS) – Bronze accreditation.

NOTE: Information on FORS can be found at <https://www.fors-online.org.uk/cms/>

3.3 Supplier Assessment

The organisation requiring the lift to be undertaken has a duty to ensure that the crane supplier chosen can do the job safely and without risks to health. This should include enquiries about the competence of the supplier and suitability of the equipment to be provided for lifting operations, including travel to and from site.

Guidance on the selection of contractors is provided in the following HSE publications:

- INDG368 - Using Contactors – A brief guide;
- HSG159 - Managing contractors: A guide for employers (Second edition) HSE Books 2011;
- INDG411 - Want construction work done safely? A quick guide for clients on the Construction (Design and Management) Regulations 2007 Leaflet.

The checklist provided in Annex A can be used to assess potential crane suppliers. Copies of completed assessments should be retained as a record of the assessment process.

Crane suppliers are encouraged to use Annex A to undertake an audit of their crane fleet and operational procedures to identify areas of strength and items where improvements can be made.

4.0 Specification and Equipment Check of Crane at Site

On arrival at site, the employing organisation should undertake a check that the specification and equipment fitted to the crane aligns with the information provided by the supplier during procurement process and that it is recorded on the lift plan.

Note: A list of items is supplied in Appendix C.

5.0 Publications and Guidance

Abbreviation	Description	Link
LOLER	Safe use of lifting equipment - Lifting Equipment and Lifting operations Regulations 1998 – Approved Code of Practice and Guidance -L113	https://www.hse.gov.uk/pubns/priced/l113.pdf
PUWER	Safe use of work equipment - Provision and Use of Work Equipment Regulations 1998 – Approved Code of Practice and Guidance – L22	https://www.hse.gov.uk/pubns/priced/l22.pdf
HSG150	Health and Safety in Construction – HSG 150	https://www.hse.gov.uk/pubns/priced/hsg150.pdf
INDG401	The Work at height – a brief guide – INDG 401	https://www.hse.gov.uk/pubns/indg401.pdf
INDG368	Using Contactors – A brief guide – INDG 368	https://www.hse.gov.uk/pubns/indg368.pdf
HSG159	Managing contractors: A guide for employers (Second edition) HSE Books 2011 – HSG 159	https://www.hse.gov.uk/pubns/priced/hsg159.pdf
INDG411	Want construction work done safely? A quick guide for clients on the Construction (Design and Management) Regulations 2007 Leaflet – INDG 411	https://www.hse.gov.uk/pubns/indg411.pdf
BS7121-3	BS7121-3:2000 Code of practice for safe use of cranes – Part 3: Mobile cranes	https://landingpage.bsigroup.com/LandingPage/Series?UPI=BS%207121
BS7121-2-3	BS7121-3:2000 Code of practice for safe use of cranes – Part 2.3: Inspection, maintenance and thorough examination - Mobile cranes	https://landingpage.bsigroup.com/LandingPage/Series?UPI=BS%207121
CIG 0701	CPA CIG 0701- Working at Height on Mobile Cranes	https://www.cpa.uk.net/safety-and-technical-publications/mobile-and-crawler-crane-guidance
CIG 1001	CPA CIG 1001 Maintenance, Inspection and Thorough Examination of Mobile Cranes	https://www.cpa.uk.net/safety-and-technical-publications/mobile-and-crawler-crane-guidance
CIG 09801	CPA CIG09801 Best Practice Guide for Crane Hire and Contact Lifting.	https://www.cpa.uk.net/safety-and-technical-publications/mobile-and-crawler-crane-guidance
CIG 1901	CPA CIG 1901 Guide to Maintaining Roadworthiness of Mobile Cranes	https://www.cpa.uk.net/safety-and-technical-publications/mobile-and-crawler-crane-guidance

	Fleet Operator Recognition Scheme (FORS) Vehicle Safety Equipment Guide (supporting FORS Standard version 6)	https://www.fors-online.org.uk/cms/wp-content/uploads/2022/06/FORS-Vehicle-Safety-Equipment-Guide-v6.pdf
UNECE Reg 46	UNECE Regulation 46 – UN Vehicle Regulations – Devices for indirect vision	Regulation No 46 of the Economic Commission for Europe of the United Nations (UNECE) — <u>Uniform provisions concerning the approval of devices for indirect vision and of motor vehicles with regard to the installation of these devices</u> - Publications Office of the EU (europa.eu)

Annex A - Information to be Provided by Crane Suppliers.

The organisation requiring the use of a mobile crane should ascertain the following information from prospective crane suppliers.

A1	Details of Crane(s) to be Provided	Comments
A1.01	Make and model of crane to be provided	
A1.02	Is the crane selected owned by the crane supplier or provided on a cross hire from another provider?	

A2	Crane Documentation/Records	Comments
A2.01	Crane has a CE or UKCA declaration of conformity. Crane displays an CE or UKCA mark	
A2.02	Operation instruction manual to be with crane (paper or digital format)	
A2.03	Confirmation of inspection, maintenance and thorough examination of crane: <ul style="list-style-type: none"> Record of operator daily checks (last 7 days) Date of last maintenance inspection Scheduled maintenance inspection Interval (period in weeks) Date of last thorough examination No immediate defects noted on thorough examination report Periodicity of thorough examination Thorough Examination Provider (in-house or independent third-party provider) Record of inspection of work at height equipment supplied with the crane <p>NOTE: Guidance on inspection, maintenance and thorough examination is provided in CPA1001 and BS7121-2.3</p>	
A2.04	Confirmation of roadworthiness inspection: <ul style="list-style-type: none"> Record of operator daily checks (Last 7 days) Date of last interim inspection (maximum 12 weeks) Interim Inspection: Periodicity (weeks) Date of last annual safety inspection (STGO cranes) Date of last statutory MOT Test (Cranes running on standard HGV chassis) <p>Note: Guidance on roadworthiness is provided in CPA1901</p>	
A2.05	Engine(s) specification European emission stage (As required by site location) Fuel type	

A3	Crane Safety Equipment (Lifting)	Comments
A3.01	Over-hoist limit switch	
A3.02	Aircraft Warning Lights: (as applicable) <ul style="list-style-type: none"> Position Rating (Candela) Back-up power supply 	

A3.03	<p>Anemometer:</p> <ul style="list-style-type: none"> • Located on boom, or • Hand-held 	
A3.04	<p>Lifting Area Restriction:</p> <ul style="list-style-type: none"> • Radius restriction • Slew arc restriction • Virtual wall 	
A3.05	“Jib out of rest” alarm	
A3.06	<p>Data Logger capable of recording:</p> <ul style="list-style-type: none"> • Load on hook • % Rated capacity • Radius • Boom extension • Rated capacity • Number rope falls selected on RCI/RCL • Outrigger deployment • Overload • Use of override function • Operation and inhibiting of safety devices • Time • Total operating hours • Total hoisting hours 	

A4	Ballast and Support Vehicles (if applicable)	Comments
A4.01	Ballast trucks	
A4.02	<p>Support vehicles:</p> <ul style="list-style-type: none"> • Vehicle for rigging team members • Vehicle for maintenance staff • Vehicle for crane operator (Longer term hire) • Welfare vehicle (If facilities not available at site) • Escort vehicle(s) 	

A5	Training and Competency	Comments
A5.01	<p>Training and Competency Assessment details for Crane Operator:</p> <ul style="list-style-type: none"> • CSCS-logoed training or competency certificate for class of mobile crane • Site Safety training and certification 	
A5.02	<p>Records of operator training:</p> <ul style="list-style-type: none"> • Manufacturer training on crane type • In-house familiarisation 	
A5.03	<u>Driver’s Licence:</u> Crane providers shall have a procedure to check and verify all driver licences, categories, expiry dates, endorsements and restrictions	

A5.03 (cont'd)	<ul style="list-style-type: none"> • Driving licence checks shall be conducted at least every six months. This frequency of checks shall be increased for higher risk drivers using an approved risk scale. A typical approved risk scale is: • <i>0–5 penalty points on the driving licence – six monthly checks</i> • <i>6–8 penalty points on the driving licence – quarterly checks</i> • <i>9 or more penalty points on the driving licence – monthly checks</i> 	
A5.04	<p><u>Driving Standards:</u> Crane providers should have a policy in place to ensure a safe standard of driving, consideration for other road users and to reduce the risk of death and injury</p>	
A5.05	<p>Drivers should have access to the Highway Code. The driving standards policy shall be supported by a risk assessment or method statement and include:</p> <ul style="list-style-type: none"> • Driver responsibilities and professionalism • Wearing seat belts • Adherence to speed limits, traffic signs and road markings • Distractions such as smoking, eating and drinking whilst driving • Sharing the roads safely, particularly with vulnerable road users • Fuel efficient driving techniques, air quality and emissions • Driving on different road types such as urban, rural and motorways • Driving in adverse weather conditions • Actions in the event of a breakdown and road traffic collision 	
A5.05	<p><u>Staff Induction:</u> To inform drivers and other staff involved in the fleet operation of the fleet operation policies and procedures, commencing from the start of their employment.</p> <ul style="list-style-type: none"> • Record of induction 	
A5.06	<p><u>In-vehicle communication:</u> Crane owners shall have a policy on the use of hand-held mobile phones and interactive communication devices while driving. The policy shall be supported by a risk assessment or method statement and include:</p> <ul style="list-style-type: none"> • Unlawful use of hand-held mobile phones and hand-held communication devices • The responsibilities of office staff making and receiving calls to and from drivers • The actions for office staff to end a call if they suspect the driver is driving • The fact there is no expectation for drivers to answer any call until it is safe to do so 	
<p>NOTE: For further guidance refer to https://www.fors-online.org.uk/cms/</p>		

A6	Health and Eyesight Surveillance	Comments
A6.1	<p>Crane owners shall have a policy and supporting procedures in place on fitness-to-drive and the eyesight standards for driving. The policy and supporting procedures shall include:</p> <ul style="list-style-type: none"> • Minimum medical standards for driving • Illness and prescribed and over-the counter medication • Health effects of driving such as posture and in-cab air quality • Impairment through drugs and alcohol • Fatigue-related illnesses such as sleep apnoea • Mental health problems such as stress, depression, and anxiety • Minimum vision standards for driving and the use of glasses and contact lenses • A driver health and fitness declaration • Driver eyesight checks and tests 	
A6.2	<p>A driver eyesight check procedure shall be in place that requires drivers (with glasses or contact lenses - if required) to read a vehicle number plate made after 1 September 2001 from 20 metres, or a suitable alternative check.</p> <p>Records of health and eyesight surveillance shall be retained.</p> <p>The frequency of eyesight checks should be dependent on the individual and operating conditions but shall be conducted:</p> <ul style="list-style-type: none"> • Pre-employment or the start of a specific contract • Every six months • After involvement in a blameworthy road traffic collision <p>Any driver failing an eyesight check shall be referred to an optician for an eyesight test.</p>	
A6.3	<p>A procedure shall be in place for drivers to inform management of any health or eyesight condition that affects driving ability and to inform the Driver and Vehicle Licensing Agency (DVLA) of reportable medical conditions that affect driving entitlement.</p>	
A6.4	<p>A drugs and alcohol procedure shall be in place that includes the actions to take on suspecting driver impairment through drugs or alcohol.</p> <p>This should include drug and alcohol testing that is conducted:</p> <ul style="list-style-type: none"> • Pre-employment or the start of a specific contract • Routinely, randomly, or unannounced • After involvement in a road traffic collision, incident, or near-miss 	
A6.5	<p>Fleet Operator Recognition Scheme (FORS) compliant – Bronze accreditation</p>	
<p>NOTE: For further guidance refer to https://www.fors-online.org.uk/cms/</p>		

A7	PPE to be Provided for Crane Operator	Comments
A7.1	High vis clothing	
A7.2	Head protection	
A7.3	Eye protection	
A7.4	Gloves	

A7.5	Hearing protection	
A7.6	Safety harness	
A7.7	Nuisance dust mask	

A8	Access/Work at Height	Comments
A8.1	Stepladder/ladder for access to hook block and rigging	
A8.2	Secure point on boom for location of ladder	
A8.3	Access steps to machine deck	
A8.4	Access to crane cab	
A8.5	Anchor points on boom for work at height	
A8.6	Non-slip coatings on machine deck, access platforms and steps	
NOTE: Refer to CPA CIG 0701- Working at Height on Mobile Cranes for further details		

A9	Equipment Provided with Crane	Comments
A9.1	Radios: <ul style="list-style-type: none"> • Fixed cab radio for operator • 2 x portable radios for slingers • Charging point for portable radios • Spare batteries for portable radios 	
A9.2	Camera system: <ul style="list-style-type: none"> • Hook/Jib camera • Monitor in cab 	
A9.3	Lighting: <ul style="list-style-type: none"> • Task lighting for rigging and night-time working • Lighting for access to machine deck and crane cab 	
A9.4	Lifting equipment and accessories <ul style="list-style-type: none"> • Lifting chains (Legs, Size, Length) • Shackles • CE/UKCA Marked • Marked with SWL • Marked with unique identifier • Current reports of thorough examination with crane 	
A9.5	Lift-specific lifting equipment <ul style="list-style-type: none"> • Lifting frames (beam, spreader) • Load cell(s) • Reports of thorough examination with crane 	

A10	Cab Equipment (Lifting)	Comments
A10.1	Window sun blinds	
A10.2	Air conditioner	
A10.3	Operator seat tiltable	

A10.4	Heater	
A10.5	Fire extinguishers in road and lifting cabs	
A10.6	Falling object protection	
A10.7	Elevating/Tilttable cab	
A10.8	Falling Object Protective Structure (FOPS) where identified by Risk Assessment completed as part of lift planning.	
A10.9	Door locked by key	

A11	Routing	Comments
A11.1	<p>Crane suppliers shall have in place to plan and adhere to compliant, safe and efficient routes.</p> <p>The procedure shall specifically include adherence to any route scheduled by the crane supplier, or any route authorised by a competent authority, including:</p> <ul style="list-style-type: none"> • Designated routes to and from construction sites, crane depots, and other premises • Permit-controlled routes, such as the London Lorry Control Scheme • Notified routes for abnormal indivisible load (AIL) movements (ESDAL) • Routing Information to and from site to be provided (ESDAL) <p>NOTE: Further information provided in Section C2 STGO Routing Information</p>	

A12	Travel on Public Highway and at Site	Comments
A12.2	Hazard warning lights on crane for travelling on highway	
A12.3	Escort vehicle to be provided	
A12.4	STGO mobile cranes - Fitted with a speed restriction system to limit maximum speed:	
A12.5	Secure storage location for lifting equipment and accessories	
A12.6	Oil spill kit on crane	
A12.7	<p>Outriggers:</p> <ul style="list-style-type: none"> • Warning lights • Hazard markings 	
A12.8	Hazard warning marking at rear of vehicle	
A12.9	Handbrake audible alarm	
A12.10	Wheel chocks	
A12.11	Visual indication of wheel nut torque	
A12.12	Visual Indication of tyre pressure	
A12.13	Slew Ring lock for travel on highway	
A12.14	Counterweight travel lock	
A12.15	Travel height of crane displayed in cab	

A13	Vulnerable Road User - Detection, Warning and Protection	Comments
A13.1	<p>Blind Spot Warning Signage - Warning signage and markings displayed prominently at the rear of the crane to warn other road users of the near side close-proximity blind spot hazard.</p> <p>Warning signage should be A4 or equivalent if not practical.</p> <p>NOTE: <i>The signs should not cause offence to other road users.</i></p> <p>NOTE: <i>Illuminated panels or LED warning signs may also be fitted at the rear of the vehicle to alert cyclists to the blind spot on a heavy goods vehicle. Panels can flash in conjunction with the directional indicators and only operate when the vehicle is stationary (not parked) or manoeuvring below 15 mph.</i></p>	
A13.2	<p>Audible warning systems – Vehicle manoeuvring warning for vulnerable road users.</p> <p>Audible and visual warning that warns other road users of a left turn and reversing vehicle manoeuvre. The system should:</p> <ul style="list-style-type: none"> • Activate when the left turn indicator is engaged and reverse gear is selected • Be fitted with a manual switch to mute the sound when required, such as operating between 23:30 and 07:00 in urban areas • Be supplemented with a visual warning to vulnerable road users 	
A13.3	<p>Class V and V1 Close Proximity Mirrors</p> <p>Mirrors should be fitted in such a way that they can be adjusted and fully visible from the driving position.</p> <p>NOTE: <i>The mirror position should take account of driver position with RHD or LHD cranes</i></p>	
A13.4	<p>Camera system and In-cab audible warning system, including:</p> <ul style="list-style-type: none"> • A camera system that monitors the near-side blind spot • An in-cab display screen to provide the driver with a view of the near-side blind spot • A close proximity sensor and driver audible alert system to alert the driver of other road users in the near-side blind spot <p>NOTE: <i>On LHD cranes, a camera system and close proximity driver warning system may not be required</i></p> <p>NOTE: <i>Devices for indirect vision such as blind spot camera and monitor systems can be used instead of Class V and Class VI mirrors, but the image shall cover the same field of view. Camera and monitor systems used to replace Class V and Class VI mirrors shall be R46 (UNECE Regulation 46) approved products and comply with pre-defined installation guidelines. Camera displays should be positioned</i></p>	
A13.5	<p>Reversing camera to monitor the rear blind spot at the rear of the crane</p>	
A13.6	<p>Vision survey assessment record (direct and indirect)</p> <p>NOTE: <i>Surveys should be completed before and after fitment of any supplementary mirrors or cameras. The assessment should consider parts of the crane that may obscure and indirect direct vision and such as crane jibs and hook blocks. The assessment should include a list, or photographs, of any additional devices that have been fitted.</i></p>	
A13.7	<p>Side under-run protection (on both sides of crane)</p> <p>NOTE: <i>Areas that are closed off by equipment fitted to the crane such as access ladders, equipment lockers and fuel tanks may satisfy this requirement.</i></p>	
<p>NOTE: <i>For further guidance refer to https://www.fors-online.org.uk/cms/</i></p>		

A14	Hazardous Area Equipment (where applicable)	Comments
A14.1	Engine fitted with fire suppression system	
A14.2	Exhaust system spark arrestor	

A15	Operation Near Aerodromes (where applicable)	Comments
A15.1	Aircraft warning lights NOTE: For further guidance refer to CAP1096 https://www.caa.co.uk/Commercial-industry/Airspace/Event-and-obstacle-notification/Crane-notification/	

A15	Lifting of Persons (where applicable)	Comments
A15.1	Ability to restrict the working speed of all crane functions to 0.5 m/s (or equivalent working %)	
A15.2	Load bearing hydraulic cylinders fitted with check valves	
A15.3	Hoisting and lowering ropes minimum diameter of 8 mm	
A15.4	Control levers return to neutral automatically when released	
A15.5	Power lowering capacity fitted to the crane. If not, free fall capability must be locked out	
A15.6	SWL of crane configuration in use is at least twice the rated capacity of the carrier	
A15.7	Recovery system available should the crane break down	
NOTE: Guidance on lifting of persons is provided in BS7121-3		

A16	Risk Assessments and Method Statements Provided by Crane Supplier (Contract lift and crane hire)	Comments
A16.1	Movement of crane on site to the berthing position	
A16.2	Rigging and de-rigging of crane	
A16.3	Work at height (rigging and daily checks)	
A16.5	Manual handling	
A16.6	Re-fuelling of the crane	
NOTE: Risk assessments and method statements for the lifting operations and movement of the crane at site should be prepared by the Appointed Person planning the lift. Guidance is provided in BS7121-3 and CPA CIG 09801 Best Practice Guide for Crane Hire and Contact Lifting.		

A17	Participation in Development of Industry Good Practice Standards	Comments
A17.1	Members of the Construction Plant-hire Association (CPA)	
A17.2	Member of the CPA Crane Interest Group (CIG)	
A17.3	Actively contribute to CPA Good Practice publications	
A17.4	Participate in drafting BS7121 series of standards	

Annex B - Contract Lift – Additional Information to be Provided by Crane Providers

If the crane is supplied on a Contract Lift arrangement, the following information should be ascertained from the crane supplier before the lifting operation commences. This information is in addition to that provided in Annex A.

B1	Personnel	Comments
B1.1	Appointed Person <ul style="list-style-type: none"> Name Qualifications/CSCS-logoed certification Contact details for appointed person 	
B1.2	Date site survey undertaken by Appointed Person	
B1.3	Crane Supervisor <ul style="list-style-type: none"> Name Qualifications/CSCS-logoed certification Contact details for crane supervisor 	
B1.4	Slinger Signaller <ul style="list-style-type: none"> Name(s) Qualifications/CSCS-logoed certification 	
B1.5	Crane rigging team <ul style="list-style-type: none"> Name(s) Qualifications/CSCS-logoed certification 	

B2	Lift Plan	Comments
B2.1	Boom length: maximum extended length planned deployed length	
B2.2	Fly jib (Length, Angle) Luffing jib (Length, Angle)	
B2.3	Hook block: <ul style="list-style-type: none"> Type (maximum rope falls, hook type) Size/Weight Safety Catch 	
B2.4	Number of rope falls	
B2.5	Lifting capacity at planned lift radius	
B2.6	Load chart for crane configuration selected	
B2.7	Counterweight (for the duty selected) (tonne) On board counterweight (travelling with crane) (tonne) Supplementary counterweight (travelling with ballast truck) (tonne)	
B2.8	Weight of crane (gross weight including counterweight) (tonne)	
B2.9	Maximum axle weight (axle weight with on-board counterweight) (tonne)	

B2.10	<p>Dimensions of crane:</p> <ul style="list-style-type: none"> • Length, width, height • Outrigger: width, spacing <p>Symmetric or asymmetric (cranes with variable outrigger position)</p>	
B2.11	<p>Outrigger maximum point loads:</p> <ul style="list-style-type: none"> • 360 degree slew and during whilst rigging <p>Source of outrigger loads</p>	
B2.12	<p>Outrigger mats to be provided with crane:</p> <ul style="list-style-type: none"> • Material • Dimensions • Capacity • Weight of each outrigger • Deployment method (Manual or by crane) • Storage location on crane for standard mats • Manual handling aid for placing in storage area. <p>Details of any supplementary mats, handling arrangements and transport method to site</p>	
B2.13	<p>Limiting windspeeds:</p> <ul style="list-style-type: none"> • Maximum wind speed for operation of the crane – no load on hook • Maximum wind speed with no account taken of load characteristics • Maximum wind speed allowable for rigging and derigging of the crane <p>Wind speed by which the crane boom must be lowered onto boom rest</p>	

Annex C: Information to be Confirmed When the Crane Arrives at Site

The organisation requiring the use of a mobile crane to undertake a lifting operation should confirm the following information when the crane arrives at site.

C1	Crane Documentation	Comments
C1.1	Crane make and model matches that declared on lift plan	
C1.2	Copy of the CE or UKCA Declaration of Conformity for crane	
C1.3	Valid report of Thorough Examination <ul style="list-style-type: none"> • 12 months goods • 6 months if lifting persons 	
C1.4	Load chart provided with crane	
C1.5	Crane operation manual provided with crane	

C2	STGO and Routing Information (where applicable)	Comments
C2.1	Copy of notified route plan with vehicle	
C2.2	Escort vehicle Present	

C3	Crane Roadworthiness Inspections	Comments
C3.1	Record of driver daily checks (last 7 days)	
C3.2	Roadworthiness inspections: <ul style="list-style-type: none"> • Date of last inspection • Periodicity of safety inspections (weeks) 	
C3.3	Date of last annual safety inspection	
C3.4	Date of last statutory MOT Test (where applicable)	

C4	Crane Inspection and Maintenance	Comments
C4.1	Record of daily pre-use checks (last 7 days)	
C4.2	Record of weekly inspections	
C4.3	Record of in-Service maintenance inspections	
C4.4	Periodicity of in-service inspections	
C4.5	Record of intermediate inspections	

C5	Crane Operator	Comments
C5.1	Mobile Crane Qualifications/CSCS-logoed certification: Certification type(s) Number	
C5.2	Record of familiarisation training on crane type	
C5.3	Record of Work at Height training	
C5.4	Health surveillance medical <12months	

C6	Crane Supervisor	Comments
C6.1	Crane Supervisor Qualifications/CSCS-logged certification: Certification type(s) Number	

C7	Slinger/Signaller	Comments
C7.1	Slinger/Signaller Qualifications/CSCS-logged certification: Certification type(s) Number	

Annex D: Working Group Membership

Name	Employer
Peter Gibbs (CIG Chair)	Ainscough Crane Hire
Tom Pawson	Costain
Mark James	Ainscough Crane Hire
Graham Weights	Ainscough Crane Hire
Tristan King	King Lifting
Liam Clancy	Emerson Crane Hire
Matt Melvin	Balfour Beatty
Kevin Bennison	Independent
Brent Bolton	HSE
Steve Murphy	Lendlease
S Carter	Sir Robert McAlpine
Richard Hedges	Sir Robert McAlpine
Ian Simpson (Writer)	CPA
Peter Brown (Editor)	CPA

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