

### Day 1

Training Outcomes	Course Content E = explain D = demonstrate A = activity	References & other Material * (items in <i>italic</i> recommended – all others mandatory)
1. Explain the duties, responsibilities and limitations of; an appointed person, a crane supervisor, a crane co-ordinator, a crane operator, a slinger, a signaller, a crane erector and maintenance personnel.	Contents of relevant sections of BS 7121 parts 1 to 5, LOLER 98 & PUWER 98, and how they apply to each of the designated persons and their duties. <b>E</b>	BS 7121 parts 1 to 5. LOLER 98. PUWER 98.
2. State requirements of legislation, regulations, and codes of practice that relate to all types of lifting duties.	An overview of: - Health & Safety at Work Act 74. - The Management of H & S Regs 99 - ACOPs. – BS 7121 Parts 1 to 5. - LOLER 98. - PUWER 98 – BS 7212 – BS 8460 <b>E</b>	HASWA 74. LOLER 98. PUWER 98. PPE Regs. The Management of H & S Regs 92. ACOP Safe use of Cranes.
3. Explain maintenance, inspection, thorough examination and testing requirements for lifting equipment and accessories.	Relevant sections of LOLER 98 & BS 7121 Part 2. <b>E</b> Various Examination Reports & Test Certificates, both in date and out of date. <b>D</b> Areas of importance when checking certificates as a CLOS. <b>E</b>	LOLER 98. Selection of certificates for cranes. Lifting equipment & accessories. BS 7121 Part 2. <i>LEEA Inspection manual.</i>
4. List different types of lifting accessories and explain typical applications.	Differing types of lifting accessories and uses. <b>D</b> Limitations of use and de-rating due to application as applicable. <b>E</b> Other types of lifting frames as required. <b>D</b>	Selection of applicable lifting accessories (with the exceptions of lifting frames or other specialised equipment). <i>LEEA Inspection manual.</i>
5. Describe setting up, erection, levelling and dismantling requirements for different types of lifting equipment and lifts. (to be repeated on day 3 using a mobile crane)	Requirements of BS 7121 Parts 1 to 5, LOLER 98 & PUWER 98 for erecting or dismantling a crane and the importance of FLS (Firm Level Standing) for; mobile (inc. rough terrain, truck type, truck mounted, all purpose, all terrain etc) plus crawlers, fixed base, tower, yard, low headroom, lorry/loader/knuckle boom, forklifts, MEWPS, excavators (used as cranes) Hoists. <b>E</b> Overview of the Working at Height Regulations Aug 2005. <b>E</b>	BS 7121 Parts 1 to 5. LOLER 98. PUWER 98. <i>Videos of crane accidents</i> , Materials on why /how accidents happen.
6. Explain the function and use off, and use information provided by RCIs and anti-collision systems (to be repeated on day 3 using a mobile crane)	Check settings of an RCI unit in various codes extracted from a given load chart including e.g. FOWs, blocked, swing-away/stinger, main jib extensions, fly and luffing fly jibs etc. <b>E</b> Types of other warning devices and anti-collision systems i.e. SMIEs <b>E</b>	Crane load charts and applicable codes for different rigging applications.
7. State requirements that allow safe site access and egress for typical lifting equipment.	Examine typical crane widths, sizes, weights, transportation methods and turning circles, with known site plans, with particular reference to confined areas.	Crane manufacturer's specifications.
8. Describe and demonstrate different types of communication methods for lifting purposes.	Signals from BS 7121 (manual & radio). Radio use and protocol. Other options of relaying standard signals. <b>D</b> Advantages and limitations of different communication types. <b>E</b>	BS 7121 Part 1. CPA Best Practice guide.

## Day 2

Training Outcomes	Course Content E = explain    D = demonstrate    A = activity	References & other Material
9. Identify & explain relevant information relating to different types of lifting accessories i.e. markings, certificates and thorough examination reports, etc.	Inspecting lifting accessories. <b>A</b> Extraction of relevant information from the equipment information tags. <b>A</b> Differences between SWL/WLL./rated capacity <b>E</b> Extract relevant information using test certificates and thorough examination reports. <b>A</b>	Relevant sections of LOLER 98, PUWER 98 & BS 7121 part 2. <i>LEEA Inspection manual.</i> Selection of applicable lifting accessories and certificates (with the exceptions of lifting frames or other specialised equipment).
10. Confirm weights and centre of gravity for different types of load with a given method statement.	Calculate weights and centres of gravity using known formulas. <b>A</b> Extract & confirm net weight, gross weight and centre of gravity from typical method statements. <b>A</b>	<i>LEEA Lifting manual.</i> Selection of method statements.
11. Verify appropriate lifting accessories for given types of loads, in accordance with a given method statement.	Select lifting accessories for a given range of loads. Extract & confirm lifting accessories in accordance with typical method statements. <b>A</b>	Selection of applicable lifting accessories (with the exceptions of lifting frames or other specialised equipment). Selection of method statements. Lifting accessories catalogues.
12. Verify sling angles and sizes	Identification of sling sizes, with angles & various computations of slings as required for load size i.e. long loads etc. <b>A</b>	<i>LEEA Slings/Lifting manual.</i>
13. Identify potential hazards and unsafe lifting practices, using given lift operations scenarios.	Identify the proximity hazards from examples of lifts using existing drawings/plans. Highlight hazards with possible solutions (if any) to the lift. <b>A</b>	Assorted drawings/plans from actual or simulated lifts.
14. Evaluate and explain how environmental factors and the surrounding area external to the lift zone, can affect the planned lifting operation.	Explain restrictions imposed on the actual lift plan by being near (a) a railway (b) an airport (c) a hospital (d) city centre location (e) dockside location. <b>A</b>	BS 7121 Parts 1 to 5.
15. Explain additional requirements for loads to be lifted from height.	Extracts from BS 7121 requirements for lifting from height - with appropriate dangers and implications to crane safety. <b>E</b>	BS 7121 Parts 1 to 5. LOLER 98 & PUWER 98. Working @ Height Directive - Aug 2005.
16. Explain slinging techniques for given loads including balanced, unbalanced and loose.	Attaching and detaching different lifting accessories to loads, correct and incorrect slinging techniques and the use of brothers & shortening clutches for loads with varying centres of gravity. <b>A</b>	<i>LEEA Slings/Lifting manual,</i> Lifting equipment. Selection of applicable lifting accessories. Selection of loads including balanced, unbalanced and bundled/loose.

### Day 3

Training Outcomes	Course Content E = explain    D = demonstrate    A = activity	References & other Material
17. Prepare an area, with exclusions zones, from given lifting plans, ensuring safe access/egress routes for before, during and after the lift	Identifying and deal with exclusion zones, access/egress points etc from given lifting plans. <b>A</b>	Example lift plans with various associated risk assessment & Method Statement.
18. Mark the position of lifting equipment according to a given plan.	Extract and use information from a given lift plan and ascertain a) if the lift is possible? b) is there adequate FOS/down-rating? c) is there sufficient height? d) how the crane will be set up for the lift. <b>A</b> Procedures if lift plan needs to be amended by contacting AP (CS prohibited from amending plan). <b>E</b>	Crane manufacturers load charts. Pre-described method statement.
19. Verify potential proximity and underground hazards from given plans and drawings.	Identify the proximity hazards from examples of lifts using existing drawings/plans. Highlight hazards with possible solutions (if any) to the lift. <b>A</b>	Assorted Drawings/Plans from actual or simulated lifts.
20. Confirm personnel requirements to meet the lift plan.	Extract and use information from given lift plans. Identify number and type of personnel, PPE, certification, permits of work etc.	Management of H & S at Work Regs 1999.
21. Communicate the lift plan information to others involved in a lifting operation.	Role play in explaining the lift plan to others involved in the lift i.e. any proximity hazards, boom length, Radii, boom deflection, how the crane is rigged, lift and lay down area, why the specific code was selected and crane set up according to manufacturers instructions, environmental conditions etc. <b>A</b>	Example lift plan and risk assessment/method statement.
22. Mark the position of lifting accessories and prepare load spreading systems as required.	Apply information from a given lift plan and ascertain correct lifting accessories for load.	Lift plan and lift accessories certification.
23. Confirm lifting equipment configurations from given plans.	Apply information from a given lift plan and ascertain correct configuration for load from given plan.	Example lift plan.
24. Control a lifting operation using a given lifting plan.	Apply information from a given lift scenario.	Example lift plan.
25. Report and explain positive and negative aspects of a typical lift following the operation to the Appointed Person	Compile a report on lift undertaken highlighting positive & negative aspects of the lift (role play). Ways to improve the lift procedures i.e. revised risk assessment/method statement etc. Procedures to amend lift plan. <b>A</b>	Example lift plan and risk assessment/method statement.

**Additional items to be covered within the syllabus:**

1. CIRIA recommendations as detailed in C703 – Crane Stability on Site Version 2 and C654 – Tower Crane stability.

**Note: For item 16 (day 2), each candidate must attach and detach all listed types of loads using a variety of lifting accessories. A lifting device must be used which has a hook that can be raised and lowered, allowing each load to freely suspend.**

**Reference and Other Material** – Items listed in this column is not exhaustive and should be considered the minimum. Instructors must provide all relevant resources and material to ensure effective dissemination of information.

**Crane Requirement:** A mobile crane, or access to a mobile crane must be made available during the course, so that candidates can observe and evaluate certification requirements, maintenance and setting up procedures etc.

**Day 1 Item 5:** Instructors must ensure that all crane/lifting equipment types listed in item 5 (and those that candidates may deal with) are thoroughly covered.