Training Standard

Title	Slinger/signaller: all types, all duties (novice)
Duration / Ratio	**Minimum** **14 hours including assessment time** 1 learner. 1 trainer. 1 machine **21 hours including assessment time** 2 learners.1 trainer. 1 machine **28 hours including assessment time** 3 learners.1 trainer. 1 machine **35 hours including assessment time** 4 learners. 1 trainer. 1 machine The maximum number of learners is four per group, with a maximum number of one machine per group, all learning outcomes **must** be covered by each learner. Trainers must ensure all learners get equal and sufficient practical engagement time. *The duration stated in the training standard equals the minimum length of time the course and assessments should take to be completed based on the ratios above. How this is organised is at the discretion of the training provider.*
Learners pre-requisites	The learner does not hold a current industry recognised card within the plant category and/or has limited or no demonstrable practical experience of operating the category of plant in a construction environment. Experience of working on site and a basic knowledge of construction terminology would be beneficial.
Purpose/ scope	The purpose and scope of this standard is to provide the learner with the knowledge and skills to support the following: • understanding the role and responsibilities of a slinger/signaller • understanding types of lifting equipment and accessories • understanding lifting equipment and accessory limitations and potential hazards of lifting operations • checking the weight and dimensions of loads against given information • maintaining and storing lifting accessories • selecting, attaching, and detaching appropriate lifting accessories • understanding methods of communication with the lifting team • directing the moving of loads of various weights and dimensions • controlling loads during movement • interpreting given information and relevant documentation • understanding procedures for placing non-serviceable items out-of-service

	• identifying hazards within the work area • carrying out end of work procedures
Occupational relevance	Training delivered against this standard would be relevant to the following occupational group(s): • operative and craft
Instruction/ supervision	As a minimum, course trainers must be able to demonstrate that, in relation to this standard, they have: Essential: • either a) a current card issued by one of the CSCS partner plant schemes at instructor/trainer/assessor level bearing the category of slinger signaller or b) a current card issued by one of the CSCS partner plant schemes at operator level bearing the category of slinger signaller • Level 3 Award in Education and Training or equivalent qualification listed in Appendix 3 of the Requirements for Approved Training Organisations • Health and safety qualification at or equivalent to construction site management level, examples of which can be found in Appendix 6 of the Requirements for Approved Training Organisations • in addition to the required qualifications, the trainer must be able to demonstrate occupational experience of operating the *slinger signaller* relating to the training they are delivering. This can be demonstrated with a valid and in date blue card from a 'Recognised Organisation' and a minimum of 1 year site experience Desirable: • S/NVQ Level 2 Plant Operations in the specific category being trained • Level 3 Certificate in Assessing Vocational Achievement

Training Standard

Delivery	Training and assessment may be delivered in an on or off-site environment. Where training and assessment takes place within a working construction site environment, training must be segregated from productive work within a prescribed training area, which has been risk assessed and has appropriate control measures in place as required by current legislation and regulations. All equipment required for the training must be set aside specifically for the training session and be available for the entire training duration. Equipment is not to be shared with the working construction site. Welfare facilities must be provided wherever training and assessment takes place, and this should meet relevant legislation. All materials and equipment must be of a suitable quality and quantity for learners to achieve learning outcomes delivery and assessment criteria, and must comply with relevant legislation, regulations and industry agreed requirements. The crane being used for training must be equipped with a drum hoist and rope, have 360-degree slew capability on a turntable, able to vary the operating radii from minimum to maximum, have the capability to carry out pick and carry duties and have a minimum operating radius of 20 metres, and having a minimum underhook height of 24 metres. The class size and learner/trainer ratio must allow training to be delivered in a safe manner and enable learners to achieve the learning outcomes. Practical engagement can include seat time, any associated practical checks of the machine e.g pre-start checks, and observation time. Irrespective of the number of learners, effective learning must be maintained for all learners. Equal and sufficient practical engagement needs to be considered. The following training delivery methods may be used in the delivery of this standard: • face to face learning environment (such as a classroom/workshop/site office) for theoretical learning & assessment • on or off the job site environment for practical learning and assessment • simulator for practical training *note – if a simulator is used, it can only comprise of a total of 20% of overall practical training and not used in any assessment.*
Assessment	For the successful completion of training, learners must complete an end of course practical assessment and knowledge test that has a clear pass or fail criteria as set out by the card scheme. The marking criteria must effectively measure every aspect of each learning outcome and additional guidance for training and assessment.

	Assessment must adhere to all points on the CITB Requirements for Approved Training Organisations including Appendix 6 which provides further guidance for assessment.
Quality assurance	**Recognised standard** CITB will gain assurance through the Recognised Organisation's quality arrangements. Approved Training Organisation's will be required to supply confirmation of approval (centre approval and scheme approval) with the related Recognised Organisation's awarding organisation or body. In most cases this will be an approval certificate provided by the Recognised Organisation's awarding organisation or body, listing the routes, qualifications and categories they are approved to deliver. In addition, a copy of the most recent external quality assurance monitoring report will be required, relating to the standard that you wish to be approved for. This information will be reviewed by CITB's quality assurance team. Approval will be subject to the required Recognised Organisation's documentation being supplied by you. As part of the quality assurance checks, CITB may confirm the accuracy of documentation with the issuing organisation. Please refer to the Requirements for Approved Training Organisations Appendix 6 for further guidance on quality assurance.

Renewal	**Classification**
☒ There are no mandatory renewal or recommended refresher requirements for this standard.	☒ Lifetime *(Please note standards using this classification will only be grant aided once per learner)*
Keywords	Slinger signaller, slinger all types all duties, SS, SS all types all duties
Approval date	October 2024
Review cycle	On request or 5 years from approval date.

Learning outcomes Including additional guidance to support training delivery and final assessment *The learner will be able to:*
explain the hazards of working in the construction industry, and their responsibilities as a slinger/signaller *Delivery to include*: • why the industry has many hazards and why safe working practices must be adopted and maintained

- why personal health and safety is not just physical injury and can include the effects of noise and vibration. All of which can lead to lost time, lost income, expense for the employer, fines, custodial sentences etc.
- Health & Safety at Work Act 1974, Provision and Use of Work Equipment Regulations (PUWER), Management of Health and Safety of Work (MHSW) Regulations, Construction (Design & Management) Regulations (CDM), Vibration at Work Regulations, Road Traffic Act, HSG144, LOLER, HSG47 etc. in accordance with risk assessments, method statements, codes of practice and other relevant legislation, regulations, and industry good practice
- operators' moral, legal, and environmental obligations and environmental obligations
- reporting structures, the importance of good communication on site (colleagues, management, and other workers on site)
- past incidences involving relevant plant and pedestrians
- working with other related roles occupations

Assessment criteria:

- identify common hazards on a construction site
- explain safe working practices relevant to the role of the slinger/signaller
- explain personal health and safety relevant to the role of slinger/signaller
- identify aspects of legislation, regulations, and industry good practice relevant to the role of slinger/signaller
- describe reporting structures and the importance of good communication on site
- explain the responsibilities of a slinger/signaller

identify the roles and responsibilities of the lift team

Delivery to include:

- appointed person
- crane/lift supervisor
- other signallers
- crane and equipment operators
- crane/lift co-ordinator
- ancillary workers
- other associated occupations

Assessment criteria:

- explain reporting and organisational structures
- identify and describe the roles and responsibilities of each individual in the lift team as listed above

identify information relating to the preparation for the slinging and signalling of loads

Delivery to include:

- interpreting and extracting appropriate information from: drawings, specifications, schedules, risk assessments, method statements, lift plans, verbal briefings, manufacturers' information

Assessment criteria:

- interpret and extract information relevant to the preparation for the slinging and signalling of loads from the given information

identify and explain the different types of lifting equipment and lifting accessories

Delivery to include:

- the lifting accessories in accordance with a lift plan to include chain sling, webbing sling, wire rope, D shackle, bow shackle, integral lift points
- types of lifting equipment to be included: cranes, lorry loaders, excavators, lift trucks, overhead cranes
- the methods of rating for multi-legged slings, working load limit, safe working load, interpretation of markings, and down-rating of lifting accessories for lifting for any particularly adverse conditions of use
- definition and application of uniform load method multi-legged slings
- the uses, applications, and functions of various types of lifting equipment
- hazards associated with slinging methods

Assessment criteria:

- explain typical uses and applications of a chain sling, webbing sling, wire rope, D shackle, bow shackle, integral lift points
- identify types of lifting equipment
- explain the methods of rating for multi-legged slings, working load limit, safe working load, interpretation of markings, and down-rating of lifting accessories for lifting for any particularly adverse conditions of use
- describe and apply uniform load method multi-legged slings
- explain the uses, applications, and functions of various types of lifting equipment
- describe the hazards associated with slinging methods

undertake all pre-use checks on lifting accessories

Delivery to include:

- identifying and interpreting valid certification for maintenance, inspection, and thorough examination
- regulatory requirements for the acceptance and non-acceptance of a declaration of conformity in lieu of thorough examination certification
- pre-use checks on a range of lifting accessories to ensure serviceability for intended operations including chain sling, webbing sling, wire rope, D shackle, bow shackles
- identify non-serviceable items of lifting accessories
- the pre-use check requirements of specialist lifting accessories i.e. lifting beams, clamps, vacuum lifters, lifting magnets, c-hooks and lifting forks

Assessment criteria:

- carry out pre-use checks on a range of lifting accessories to ensure serviceability for intended operations including chain sling, webbing sling, wire rope, D shackle, bow shackles - *this should be observed during practical assessment*

- explain the pre-use check requirements of specialist lifting accessories i.e. lifting beams, clamps, vacuum lifters, lifting magnets, c-hooks and lifting forks.
- explain possible causes of failure in lifting accessories that would lead to declaring the item as unserviceable
- identify at least one serviceable and two unserviceable lifting accessories from each of the following types: webbing sling, wire rope, lifting chains, shackles
- from a given selection of lifting accessory thorough examination reports, identify at least two examples that do not meet current legislation
- from a given selection of lifting equipment thorough examination reports identify at least one that does meet the current legislation

identify and maintain personal protective equipment (PPE) and appropriate safety control equipment for slinger/signaller use

Delivery to include:

- what safety control equipment/PPE should be worn/used for slinger/signaller and include the following: suitable safety footwear, ear defenders, face/eye protection, dust mask, suitable gloves, overalls, hard hat, respiratory protective equipment (RPE), protective clothing etc.
- why weather conditions, including heat and cold, can determine what PPE is worn when carrying out the role of slinger/signaller and the personal effects of incorrect equipment

Assessment criteria:

- describe what forms of PPE and RPE must be worn for site operations
- explain why PPE and RPE must be worn for site operations
- state how severe weather can affect safety and health with insufficient equipment

explain procedures for placing non-serviceable items out-of-service

Delivery to include:

- procedure for identifying and rejecting damaged and defected lifting accessories
- the importance of checking all lifting accessories
- types of damage and the implications of using damaged or unsuitable lifting equipment
- the sequence of pre-use checks and procedures for in–service and out-of-service markings
- rejection criteria for removing lifting accessories from service
- purpose of quarantining defective items

Assessment criteria:

- explain the procedure for defect reporting and why it’s important
- explain the need for secure storage of defective items
- explain the removal of defective items according to organisational requirements
- explain the importance of checking all lifting accessories
- describe the types of damage and the implications of using damaged or unsuitable lifting equipment
- describe the sequence of pre-use checks and procedures for in–service and out-of-service markings

identify and explain centres of gravity and establish weights of loads

Delivery to include:

- methods of establishing centres of gravity including:
  test lifts, balanced loads, un-balanced loads, loose loads, bundled loads, containerised loads
- identification of load types, volumes, characteristics, areas, density, moisture content, load markings, manufacturer's information, lift plans
- how to establish weights of loads from a range of given information

Assessment criteria:

- describe methods of establishing centres of gravity including:
  test lifts, balanced loads, un-balanced loads, loose loads, bundled loads, containerised loads
- identify load types, volumes, characteristics, areas, density, moisture content, load markings, manufacturer's information, lift plans - *this should be observed during practical assessment*
- establish the weight of each load from a range of given information for a range of different load types – *this should be observed during practical assessment*

Assessment requirements:

- for the purposes of assessment activities, the weight of all loads must be known and clearly marked

ensure the work area is clear of hazards and ensure that all safety checks at the work area have been carried out

Delivery to include:

- preparing an exclusion zone and identifying any hazards or situations that are likely to be encountered in a lifting operation including:
  - keeping clear of moving equipment and loads
  - underneath slung loads and oversailing
  - crush zones
  - edges
  - working at height
  - poor/limited lighting
  - environmental conditions
  - poor ground conditions
  - places of limited movement and restricted spaces
  - suitable and authorised landing areas
  - movement and storage of materials by manual handling or mechanical lifting
  - basic effects of wind on loads
  - unauthorised personnel in the area
  - reporting safety issues to supervisory/managerial personnel
- actions required for emergency situations
- ensure the designated area is suitable and safe for the lifting operation

Assessment criteria:

- carry out checks of the working area to ensure suitability of a lifting operation against given information - *this should be observed during practical assessment*
- explain why it is important to report any hazards identified
- prepare and maintain control of the exclusion zone - *this should be observed during practical assessment*
- explain the actions required for emergency situations

attach various types of loads to lifting equipment using the relevant lifting accessories and procedures ensuring load balance, security, and integrity

Delivery to include:

- selecting, handling, assessing, protecting, and using (assemble, set up and adjust) lifting accessories and aids
- different attachment points for types of lifting equipment
- manual handling requirements for various types of lifting accessories
- conforming with lifting equipment rated capacities and corresponding working radius
- undertaking test lifts
- attach loads to lifting equipment, to include the following: balanced, un-balanced, loose, and bundled loads
- ensuring the alignment of the accessory attachment point and load, taking into account boom/jib deflection
- methods of ensuring integrity and security of loads including methods for netting, sheeting, and strapping

Assessment criteria:

- select the appropriate lifting accessory for a load from given information - *this should be observed during practical assessment*
- attach the lifting accessory to the lifting equipment and to a range of different load types and weights - *this should be observed during practical assessment*
- ensure the selected load is suitable for movement - *this should be observed during practical assessment*
- undertake test lifts - *this should be observed during practical assessment*
- identify the different attachment points for types of lifting equipment - *this should be observed during practical assessment*
- explain the manual handling requirements for various types of lifting accessories
- conform with lifting equipment rated capacities and corresponding working radius - *this should be observed during practical assessment*
- attach loads to lifting equipment, to include the following: balanced, un-balanced, loose, and bundled loads - *this should be observed during practical assessment*
- ensure the alignment of the accessory attachment point and load, taking into account boom/jib deflection - *this should be observed during practical assessment*
- explain the methods of ensuring integrity and security of loads including methods for netting, sheeting, and strapping

Assessment requirements:

- for the purposes of assessment activities, the weight of all loads must be known and clearly marked and have suitable lifting points

direct and guide the movement of loads to different types of location using different methods of communication with crane or lifting equipment operator

Delivery to include:

- the purpose of a trial run
- communicating using hand signals, hand signalling equipment in line with published guidance material
- electronic communication, voice commands, procedures, and limitations
- guiding, controlling, and placing suspended loads by recognised methods of communication and agreed operational procedures
- determining and checking the route of the load before and during the lift including distances, clearances, landing position and other activities (including lifting) in the area
- load movement where loads are blind to the equipment operator
- load movement where pick and carry activity is required to complete the task
- risks for slinger signaller and others affected by the pick and carry operation
- accurately control placing of loads
- controlling loads using equipment i.e. tag lines, push/pull poles
- landing the load to allow lifting accessories to be retrieved

Assessment criteria:

- explain the purpose of a trial run
- describe the importance of communicating using hand signals, hand signalling equipment in line with published guidance material
- give examples of electronic communication, voice commands, procedures, and limitations
- determine and check the route of the load before and during the lift including distances, clearances, landing position and other activities (including lifting) in the area - *this should be observed during practical assessment*
- identify the risks for slinger signaller and others affected by the pick and carry operation
- direct and guide the operator to lift a balanced load from ground level and land it in a designated place - *this should be observed during practical assessment*
- direct and guide the operator to lift an unbalanced load from ground level - *this should be observed during practical assessment*
- direct and guide the operator to lift a load of tubes (or similar bundled items) no less than 4m in length using a double choke hitch from ground level - *this should be observed during practical assessment*
- direct and guide the movement of a load where the initial lifting or the landing of a load is out of sight of the operator - *this should be observed during practical assessment*
- control the movement of all loads using relevant equipment - *this should be observed during practical assessment*
- provide clear and accurate signals and instructions to lifting equipment operators - *this should be observed during practical assessment*

- control the movement of a load under pick-and-carry duties - *this should be observed during practical assessment*
- land all loads accurately at given places - *this should be observed during practical assessment*

Assessment requirements:

- once each load has been landed, the load must be detached, and the lifting equipment hook moved away from the load for at least 90° before any reattachment occurs
- one load must be placed at maximum radius of the lifting equipment
- one load movement which involves at least 240° of slew
- one load to be landed at the lifting equipment's minimum operating radius
- one long load to be slewed for at least 180° with the load at the relevant minimum radius
- one load to be moved under pick-and-carry duties for a minimum distance of 10 metres
- the slinger signaller must keep control of all loads via a guide/tag line that is secured by a shackle or a device that cannot inadvertently become disconnected
- loads must be landed within 100mm of designated landing point
- at least one lift must use electronic communication (radio), and at least one lift must use hand signals
- loads must be made safe and secure after landing

detach various types of loads from the lifting equipment using relevant procedures

Delivery to include:

- ensuring stability of loads once landed
- detaching procedures for accessories from loads and lifting equipment
- ensuring load integrity following disconnection
- how to reconfigure lifting accessories after detachment following placing of a load so that any component part does not foul structures or objects

Assessment criteria:

- ensure stability of loads once landed - *this should be observed during practical assessment*
- detach a range of lifting accessories from the lifting equipment using relevant procedures - *this should be observed during practical assessment*
- ensure load integrity following disconnection - *this should be observed during practical assessment*
- guide accessories away from a landed load whilst ensuring that structures or objects are cleared - *this should be observed during practical assessment*

Assessment requirements:

- once each load has been landed, the load must be detached, and the lifting equipment hook moved away from the load by at least 90° or ensure any structures or objects are cleared (whichever is greater) before any reattachment occurs

explain environmental considerations

Delivery to include:

- health and social reasons to reduce machine emissions
- government industry zero emission initiatives
- air quality and the component gases of air
- how engine emissions affect air quality and the effects on human and environmental wellbeing
- measures to reduce emissions during operations including alternative/low emission fuels, fuel treatments and particulate filtration systems etc.
- minimising engine usage
- appropriate disposal of waste
- spillage procedures

Assessment criteria:

- explain the health and social reasons for reducing machine emissions
- discuss government industry zero emission initiatives
- list two or more effects on human and environmental wellbeing as a result of engine emissions
- identify measures to reduce emissions on site
- explain appropriate disposal of waste
- explain spillage procedures

carry out all post lifting checks and securing procedures

Delivery to include:

- function and requirements of end of service procedures
- requirements for cleaning and protecting accessories when out of use
- typical types of lifting operation damage on accessories
- security and storage procedures
- post lifting documentation requirements

Assessment criteria:

- undertake end-of-service checks in accordance with procedures - *this should be observed during practical assessment*
- store lifting accessories in accordance with procedures - *this should be observed during practical assessment*
- describe the requirements for cleaning and protecting accessories when out of use
- describe the typical types of lifting operation damage on accessories
- explain the post lifting documentation requirements

Additional information about this standard

The Management of Health and Safety at Work Regulations 1999
https://www.legislation.gov.uk/uksi/1999/3242/contents/made

Health and Safety at Work Act 1974
https://www.hse.gov.uk/legislation/hswa.htm

The Construction (Design and Management) Regulations 2015
https://www.hse.gov.uk/construction/cdm/2015/index.htm

Road Traffic Act 1988
https://www.legislation.gov.uk/ukpga/1988/52/contents

Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
https://www.hse.gov.uk/work-equipment-machinery/loler.htm

Provision and Use of Work Equipment Regulations 1998 (PUWER)
https://www.hse.gov.uk/pubns/books/puwer.htm

A guide to workplace transport safety HSG 136 - HSE
https://www.hse.gov.uk/pubns/books/hsg136.htm

Safety signs and signals. The Health and Safety Regulations 1996
https://www.hse.gov.uk/pubns/books/l64.htm

The Work at Height Regulations 2005
https://www.hse.gov.uk/work-at-height/index.htm

The Confined Spaces Regulations 1997
https://www.hse.gov.uk/confinedspace/legislation.htm

BS 7121 Part 1 2016 Code of practice for safe use of cranes – general

Avoiding danger from overhead power lines (GS6)
https://www.hse.gov.uk/pubns/gs6.htm

Energy Networks Association – Look out, Look Up!
https://www.energynetworks.org/campaigns/look-out-look-up

Related standards