Perform intermediate scaffolding operations

Code OHSCER220A

Workplace Health and Safety Queensland is moving to a new learning and assessment system for certificates to work in prescribed occupations. Learning and assessment will now be conducted in the Vocational Education and Training (VET) sector in which units of competency set out the knowledge and skills needed to demonstrate competent performance in a prescribed occupation.

Queensland Government

CODE: OHSCER220A

TITLE: Perform intermediate scaffolding operations

DESCRIPTOR: This unit of competency covers the functions required to erect intermediate scaffolding to meet the minimum training and assessment standards for the purposes of certification. This unit has been developed in accordance with the licensing and assessment requirements of NOHSC:1006 [2001].

This unit involves planning and preparing work, erect scaffolding/equipment, inspect, repair and alter scaffolding/equipment and dismantle scaffolding/equipment.

ELEMENT	PERFORMANCE CRITERIA
1.0 Plan and prepare work	
1.1 Plan job	1.1.1 The purpose for the scaffolding/*equipment* and the various work tasks are confirmed. 1.1.2 The expected loading on the *scaffold/equipment* and supporting structure is determined using load tables. 1.1.3 Site plans, scaffolding/*equipment* designs and drawings to industry practices are interpreted as necessary. 1.1.4 *Work specifications* are interpreted in conjunction with drawings as necessary. 1.1.5 Potential *hazards* are identified from the plans, drawings and specifications. 1.1.6 Basic line drawings of the scaffolding/*equipment* configuration are prepared as necessary. 1.1.7 The types and quantities of components are estimated for appropriate types of scaffolding/*equipment*. 1.1.8 *Site* information is obtained as necessary. 1.1.9 Potential hazards are identified. 1.1.10 Optimum prevention/control measures are selected. 1.1.11 Adequate site access and egress are identified. 1.1.12 Site sketches are drawn and dimensions taken as necessary. 1.1.13 *Check* for appropriate approvals for work and for persons.

ELEMENT	PERFORMANCE CRITERIA
1.1 Plan job	1.1.14 The job method is developed, to include hazard prevention, control measures and safety procedures. 1.1.15 The feasibility of the proposed method is checked with the client, and other trades as necessary. 1.1.16 The job is planned to Australian Standards and manufacturer's requirements.
1.2 Select, inspect and repair material and tools	1.2.1 Appropriate scaffolding/*equipment* components are selected and inspected and damaged components are labelled and rejected. 1.2.2 Rejected components are repaired or sent for repair and scrapped. 1.2.3 Tools are selected and inspected. Faulty tools are repaired or sent for repair or scrapped. 1.2.4 Scaffolding/*equipment* gear is prepared in accordance with codes of practice and guides.
1.3 Co-ordinate transport of equipment to site	1.3.1 Sequence loading of *equipment* and tooling on transport in order suitable for job method. 1.3.2 Arrange load to avoid injury or damage.
2.0 Erecting scaffolding/equipment	
2.1 Prepare site for erection of scaffolding/equipment	2.1.1 The *site* is isolated using barriers as necessary. 2.1.2 Safety procedures are implemented, including necessary signage. 2.1.3 Where appropriate, assemble and erect lifting device. 2.1.4 Adequate footings to Australian Standards are established for the scaffolding/*equipment*.
2.2 Erect scaffolding/equipment	2.2.1 Scaffolding/*equipment* is erected in accordance with planned hazard prevention and control measures and to acceptable safe work practices, Australian Standards and manufacturer's requirements. 2.2.2 Work is performed safely while platforms are incomplete. 2.2.3 Erection is carried out for appropriate types of scaffolding/*equipment*.

ELEMENT	PERFORMANCE CRITERIA
2.2 Erect scaffolding/equipment	2.2.4 The completed scaffolding/*equipment* is inspected for safety and compliance with design and statutory requirements. 2.2.5 Site is left clear of all surplus components, *equipment*, tools and debris. 2.2.6 Scaffolding/*equipment* gear is used in accordance with codes of practice and guides. 2.2.7 Safety nets and static lines are erected as necessary.
3.0 Inspect, repair and alter scaffolding/equipment	
3.1 Inspect complete scaffolding/equipment	3.1.1. The critical structural and safety areas of the scaffolding/*equipment* are inspected for damage, corrosion and wear. 3.1.2 The current use of the scaffolding/*equipment* is checked against the type of scaffolding/equipment. 3.1.3 Any inspection log is completed.
3.2 Alter and repair scaffolding/hoist	3.2.1 The proposed change is reviewed to determine if it was covered in original planning. If so: Review and use the data from the original plans to prepare for the *alteration/repair*. If not: Plan for the *alteration/repair* from first principles according to the relevant scaffolding standards/plans. 3.2.2 The scaffolding/*equipment* is inspected to confirm stability. 3.2.3 The *alteration* or *repair* is carried out ensuring compliance with design and statutory requirements. 3.2.4 *Alteration* or *repair* is performed with due regard for the critical safety and structural areas of the scaffolding/*equipment*.
4.0 Dismantle scaffolding/equipment	
4.1 Plan to dismantle scaffolding/equipment	4.1.1 The proposed *dismantling* is reviewed to determine if scaffolding/equipment remains as detailed in the original planning. 4.1.2 Review and use the data from the original plans to prepare for the dismantling. 4.1.3 Plan for the *dismantling* from first principles according to the relevant scaffolding standards/plans.

ELEMENT	PERFORMANCE CRITERIA
4.1 Plan to dismantle scaffolding/equipment	4.1.4. The scaffolding/*equipment* is inspected for damage, corrosion or wear. Any such damage, corrosion or wear is noted for consideration in planning for dismantling. 4.1.5 The critical structure and safety areas of the scaffolding/*equipment* are identified in planning for dismantling.
4.2 Dismantle scaffolding/equipment	4.2.1 The *dismantling* is carried out ensuring compliance with design and statutory requirements. 4.2.2 *Dismantling* is performed with due regard for critical structural and safety areas of the scaffolding/equipment.

Range Statement

The range of variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The assessment must determine that there is sufficient skill and knowledge for the operator to take the licence and operate in a new workplace. The assessment must be adjustable but prescriptive to ensure transferability.

What may be involved in routine pre-operational *checks*?

Pre-operational checks is to include but not be limited to:
- worksite inspection
- equipment defect identification
- assessment of conditions and hazards
- determination of work requirements.

What type of intermediate *scaffolds* may be erected?

Intermediate scaffolds may include but not be limited to:
- free standing pre-fabricated scaffolds
- pre-fabricated
- cantilever hoist with maximum load limit not exceeding 500 kilograms (materials only)
- ropes
- gin wheels
- safety nets
- static lines
- bracket scaffolds (tank and formwork)
- tube and cupler.

Scaffolds must be erected in accordance with manufacturer's specifications and current state/territory occupational health and safety legislation, Australian Standards 1576 (all parts) and Australian Standard 4576, codes of practice and advisory standards.

What *workplace requirements m*ay apply to this standard?

Workplace requirements may include but are not limited to:
- standard operating procedures
- industry standards
- production schedules
- material safety data sheets
- work notes and plans
- product labels
- manufacturers specifications
- enterprise policies and procedures (Including waste disposal, recycling guidelines)
- supervisors oral and written instructions
- current state/territory occupational health and safety legislation
- Australian standards
- codes of practice or advisory standards.

What *hazards* may be encountered in the workplace?

Hazards in the workplace may include but not be limited to:
- exposure to chemicals
- dangerous or hazardous substances
- explosive material
- electrical hazards
- movement of equipment
- goods
- materials and vehicular traffic

Operating environment may include but not be limited to:
- overhead power lines
- trees
- overhead service lines such as steam, gas, water, telephone
- underground services
- uneven and/or unstable ground
- other workers and persons
- surrounding buildings
- vessels/structures equipment
- hazardous materials
- corrosive substances
- barricades
- explosive materials
- electrical hazards
- inadequate lighting
- radio interference.

What *site/*occupational health and safety requirements may be relevant to this standard?

Site/occupational health and safety requirements are to include but not be limited to:
- be in accordance with legislation/regulation/codes of practice/advisory standards
- organisational safety policies and procedures and safety plan
- protective clothing and equipment
- use of tools and equipment
- workplace environment and safety
- handling of materials
- use of fire fighting equipment
- organisational first aid
- hazard control and hazardous materials
- weather conditions.

Personal protective equipment is to include that prescribed under legislation/regulation/codes of practice/advisory standards and workplace policies and practices.

Safe operating procedures are to include but not be limited to:
- conduct of operational risk assessment and treatments associated with power cables (including overhead service trays, cables and conduits)
- lighting
- earth leakage boxes
- trips hazards
- working with dangerous materials
- working in confined spaces
- surrounding structures
- restricted access barriers
- working at heights.

Emergency procedures related to equipment operation are to include but not be limited to:
- extinguishing fire equipment
- organisational first aid requirements
- evacuation.

What permits may be relevant to this standard?

Permit may include but not be limited to:
- footpath closures
- road closures
- traffic requirements
- confined spaces
- rail
- local government
- utility providers
- permits from service providers
- local authorities
- industry specific requirements.

What work area may be relevant to this standard?

Work areas may include but not be limited to:
- factories
- wharfs
- ships
- warehouses
- manufacturing plants
- building sites
- road construction
- demolition sites
- quarries
- mine sites.

The work area may also include erecting scaffolds in entertainment venues for erection of lights, props.

What personal protective *equipment* may be relevant to this standard?

This may include but not be limited to:
- boots
- hat/hard hat
- overalls
- gloves
- protective eyewear
- hearing protection
- respirator or face mask
- sun protection
- task specific personal protective equipment
- fall protection.

How might the erecting of a scaffold be demonstrated in a safe, controlled and correct manner?

The *scaffold* is to be erected in accordance with manufacturer's specifications and appropriate Australian standards, current state/territory occupational health and safety legislation, codes of practice and advisory standards.

What types of ancillary *equipment* may be associated with scaffolds?

Ancillary equipment may include but not be limited to:
- cranes
- elevating work platforms
- hoists
- load-shifting equipment.

What procedures may be included in the *dismantling* of the scaffold and securing of site?

The scaffold is dismantled in accordance with manufacturer's specifications and secured in accordance with current state/territory occupational health and safety legislation, Australian standards, codes of practice and advisory standards.

In what way may scaffolding and associated plans be *altered* or *repaired?*

Alterations and repairs to scaffolding and systems must be in accordance with manufacturers specifications and be inspected by a competent person prior to the scaffolding being used

What records may need to be kept or updated?

Records may include but not limited to:
- inspection and labelling records
- scaffold plans
- drawings or specifications
- legislative requirements
- completion and inspection certificates.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

The evidence guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the performance criteria, the range statement and the assessment guidelines.

Competence in this standard requires evidence of the ability to undertaking scaffolding operations without damage or injury to property or people. It requires the ability to plan job, select and inspect material and tools and move loads.

What **critical aspects** of evidence are required to demonstrate competency in this unit?

- Location, interpretation and application of relevant information, standards and specifications.
- Compliance with the site safety plan and occupational health and safety legislation/regulations/codes of practice/advisory standards applicable to workplace operations.
- Compliance with organisational policies and procedures including quality requirements.
- Safe and effective operational use of tools, plant and equipment.
- Communication and working effectively and safely with others.

What **specific knowledge** is needed to achieve the performance criteria?

- Operating principles and operating methods to the scaffolding being erected.
- Legislative requirements with regard to licensing.
- General construction terminology
- Loadshifting processes and procedures.
- Principles of the safe removal of obstacles and hazards from the workplace.
- The hierarchy of hazard control measures with elimination of substitution, isolation and engineering control measures being selected before safe work practices and personal protective equipment.
- Workplace communication procedures.
- Demonstrate safe and environmentally responsible workplace practices.
- Scaffolding techniques and scaffolding equipment
- Processes for the calculation of material requirements.
- Ability to read scaffold plans, drawings and specifications.
- Ability to calculate loads in respect of scaffolding
- Understanding limitations of equipment
- Specifications of scaffolding and how they relate to loads

What **specific skills** are needed to achieve the performance criteria?

- Readily familiarise self with local conditions.
- Demonstrate emergency operating procedures.
- Read and interpret site planning, manufacturers' specifications, work and maintenance plans and material safety data sheets.
- Comprehend and apply task instructions.
- Working with other plant operators.
- Ability to work at heights
- Emergency situations
- Able to listen and understand job requirement.
- Understand written documents for job processes.
- Understand tables and figures for job procedures.

- Understand interrelationship among workplace processes and procedures in the English language.
- Understand and interpret signals and instructions in the English language.
- Hand/eye co-ordination.

What **methods of** assessment should apply?

- Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge.

- Assessment must include as a minimum the achievement of competence to the standard established in the NOHSC assessment instrument. Additional requirements may need to be achieved to comply with the AQTF including key competencies.

- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge.

- Assessment must be applied in a real work environment or replicated industrial workplace.

In what **context** should the assessment occur?

- The application of competency is to be assessed in the workplace or replicated industrial workplace.

- Assessment is to occur using standard and authorised work practices including safety equipment and environmental constraints.

- Assessment of essential underpinning knowledge, other than the confirmatory questions, will usually be conducted in an off-site context.

- Assessment is to comply with relevant regulatory requirements including specific Australian Standards.

What are the **specific resource requirements** for this unit?

- Workplace location or replicated work facility in accordance with the OHS instrument relating to the OHS jurisidiction.
- Tools and equipment appropriate to loadshifting/scaffolding
- Specifications and work instructions
- Appropriate scaffolding equipment
- Communication equipment (radios) (where applicable)
- Occupational Health and Safety Certification Training and Assessment Delivery Guide
- Occupational health and safety assessment instruments
- Occupational health and safety authority learner guide
- Occupational health and safety authority trainer guide.

What key competencies should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these covered by the **key competencies**, although other may be added. The questions below highlight how these processes are applied in this competency standard. Following each question is the number in brackets indicates the level to which the key competency needs to be demonstrated where:

0 = not required 1 = perform the process
2 = perform and administer the process 3 = performance, administer and design the process

1. How can **communication of ideas and information** be applied)	Communication ideas and information orally and in writing in simple English to enable confirmation of work requirements, passage of information and requests to other workers during operations and the reporting and recording of work outcomes. Level 1
2. How can **information be collected, analysed and organised**?	Collect, organise, interpret and understand the information required for erection and dismantling of scaffolds, including work instructions, plans/sketches/diagrams, safety instructions, signage, labels, quality procedures, manufacturers instructions, material safety data sheets and equipment instructions Level 1
3. How can **activities be planned and organised?**	Conduct activities associated with erection and dismantling of intermediate scaffolds, including the coordination and use of equipment, materials and tools to avoid backtracking and rework. Level 1
4. How can **team work** be applied?	Work with others and in a team by recognizing dependencies and using cooperate approaches to optimize satisfaction and productivity. Level 1
5. How can the use of **mathematical ideas and techniques** be applied?	Use mathematical ideas and techniques to correctly calculate time to complete tasks, estimate measurements, distances and levels, calculate material requirements and establish quality checks. Level 1
6. How can **problem solving skills** be applied?	Establish safe and effective work processes which anticipate likely problems and blockages and systematically work around these to avoid or minimize reworking and avoid wastage. Level 1
7. How can the use of **technology** be applied?	Use workplace technology related to erection and dismantling of intermediate scaffolds, including the use of calculators, the use of communication devices and the reporting/recording of results. Level 1

Are there any other competency standards that could be assessed with this one?
This competency standard could be assessed on its own or in combination with the other units of competency relevant to the job function.

It is strongly recommended people wishing to undertake this unit, possess dogging competencies and relevant current industry experience. This may be demonstrated through a log book or record of training.

There is essential information about assessing this competency standard for the consistent performance and where and how it may be assessed in the Assessment Guideline developed by the National Occupational Health and Safety Commission. All users of this competency standard must have access to this guideline.