

CPCCCM2002A Matrix Map

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ELEMENTS AND PERFORMANCE CRITERIA

Element	Performance Criteria	Task / Question Map
1. Plan and prepare.	1.1. Work instructions and operational details are obtained, confirmed and applied from relevant information for planning and preparation.	<p>Hierarchy of control: Q1</p> <p>Duty of care: Q1 Q2</p> <p>Planning the site set out: Q1 Q2 Q3</p> <p>Shoring using sheet metal: Q1 Q2</p> <p>Excavated materials and loads near excavations: Q1 Q2 Q3</p> <p>Site set-out part 1 : Q1</p> <p>Site set-out part 2: Q1 Q2</p> <p>Site set-out part 3 : Q1</p> <p>Workplace Task: Safety requirements were identified and safety legislation complied with.</p>
	1.2. Safety (OHS) requirements are followed in accordance with safety plans and policies.	<p>Workplace health and safety act: Q1 Q2 Q3 Q4 Q5 Q6 Q7</p> <p>Workplace health and safety regulations : Q1 Q2</p> <p>Work method statements: Q1 Q2 Q3</p> <p>Hierarchy of control: Q2</p> <p>Emergency procedures: Q1 Q2 Q3</p> <p>First aid: Q4 Q7</p> <p>Personal Protective Equipment: Q1 Q2 Q3 Q4 Q5 Q6 Q7</p> <p>Water hazards: Q1 Q2 Q3</p> <p>Excavated materials and loads near excavations: Q1 Q2 Q3</p> <p>Workplace Task: Safety requirements were identified and safety legislation complied with.</p>
	1.3. Signage and barricade requirements are identified and implemented.	<p>Hierarchy of control: Q1 Q2</p> <p>Excavation hazards: Q1</p> <p>Signs and barriers: Q1 Q2 Q3 Q4</p> <p>Workplace Task: Safety requirements were identified and safety legislation complied with.</p>

	1.4. Tools and equipment selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement.	Hand tools: Q1 Q2 Q3 Q4 Workplace Task: Tools and equipment used were cleaned, checked, maintained and stored correctly after use. Faults reported to supervisor.
	1.5. Material quantity requirements are calculated in accordance with plans and specifications.	Calculating volume: Q1 Q2 Q3 Q4 Q5 SDS: Q1 Q2 Q3 Q4
	1.6. Materials appropriate to the work application and quality requirements are identified, obtained, prepared, safely handled and located ready for use.	SDS: Q1 Q2 Q3 Q4
	1.7. Environmental requirements are identified for the project in accordance with environmental plans and statutory and regulatory authority obligations, and are applied.	Environmental considerations: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Workplace Task: Work area cleaned and waste disposed of in accordance to company policy and environmental legislation.
2. Locate excavation site and erect safety equipment.	2.1. Excavation route is located, and line and depth are established from site plans and instructions.	Underground services: Q1 Q2 Q3 Q4 Right angles including Pythagoras: Q1 Q2 Q3 Excavated materials and loads near excavations: Q1 Q2 Q3 Site set-out part 1 : Q1 Site set-out part 2: Q3 Q4 Site set-out part 3 : Q1 Workplace Task: Assist machine operator to ensure correct excavation correct position and depth (where required)
	2.2. Site pegs/profiles are used to identify service markers and to set out service points and the excavation limits are marked.	Planning the site set out: Q1 Q2 Q3 Site set-out part 2: Q1 Q2 Site set-out part 3 : Q1 Workplace Task: Assist machine operator to ensure correct excavation correct position and depth (where required)

	2.3. Safety barricades and signs appropriate to the project are erected in positions as required by site safety plan.	Excavation hazards: Q1 Working at heights: Q1 Q2 Q3 Signs and barriers: Q1 Workplace Task: Safety requirements were identified and safety legislation complied with.
	2.4. Temporary drainage system is established to divert surface and sub-surface water from excavation.	Water hazards: Q1 Q2 Q3 Workplace Task: Safely use hand tools to hand dig excavation
	2.5. Service markers or taped areas are identified and damage or interference with underground services avoided.	Underground services: Q1 Q2 Q3 Q4 Workplace Task: Identify different underground service tapes and markers
3. Dig excavations.	3.1. Excavations are safely dug with hand tools to ensure correct route, line and depth, and that procedures are used to minimise risk to self and others.	What is excavation work: Q1 Work method statements: Q1 Q2 Q3 Hand tools: Q1 Q2 Q3 Q4 Excavated materials and loads near excavations: Q1 Q2 Q3 Workplace Task: Safely use hand tools to hand dig excavation
	3.2. Machine operator is assisted with excavation to ensure correct route, line and depth, and that correct procedures are used to minimise risk to self and others.	Licencing: Q1 Q2 Work method statements: Q1 Q2 Q3 Machinery blind spots: Q1 Q2 Q3 Q4 Excavated materials and loads near excavations: Q1 Q2 Q3 Site set-out part 1 : Q1 Site set-out part 3 : Q1 Workplace Task: Assist machine operator to ensure correct excavation correct position and depth (where required)
	3.3. Trench/excavation support is installed where specified by job specifications and regulations.	Shoring: Q1 Q2 Shoring using sheet metal: Q1 Q2 Workplace Task: Trench support installed where required
	3.4. Excavation is cleaned free from loose material with hand tools and according to job requirements and instructions.	Hand tools: Q1 Q2 Q3 Q4 Workplace Task: Safely use hand tools to hand dig excavation

<p>4. Clean up.</p>	<p>4.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.</p>	<p>Environmental considerations: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Workplace Task: Work area cleaned and waste disposed of in accordance to company policy and environmental legislation.</p>
	<p>4.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.</p>	<p>Hand tools: Q5 Workplace Task: Tools and equipment used were cleaned, checked, maintained and stored correctly after use. Faults reported to supervisor.</p>

REQUIRED SKILLS

Required Skill	Task / Question Map
Required skills for this unit are:	
communication skills to:	
<i>assist machine operator</i>	<i>Licencing: Q1 Q2</i> <i>Right angles including Pythagoras: Q1 Q2 Q3</i> <i>Excavated materials and loads near excavations: Q1 Q2 Q3</i> <i>Site set-out part 1 : Q1</i> <i>Site set-out part 2: Q1 Q2</i> <i>Site set-out part 3 : Q1</i>
<i>determine requirements</i>	<i>Workplace health and safety regulations : Q1 Q2</i> <i>Licencing: Q1 Q2</i> <i>Site set-out part 3 : Q1</i>
<i>enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand</i>	<i>Site set-out part 1 : Q1</i> <i>Site set-out part 3 : Q1</i>
<i>follow instructions</i>	<i>Planning the site set out: Q1 Q2 Q3</i> <i>Site set-out part 3 : Q1</i>
read and interpret:	
<i>documentation from a variety of sources</i>	<i>Plans, specifications and drawings: Q1 Q2 Q3 Q4</i> <i>Planning the site set out: Q1 Q2 Q3</i>
<i>drawings and specifications</i>	<i>Plans, specifications and drawings: Q1 Q2 Q3 Q4</i> <i>Right angles including Pythagoras: Q1 Q2 Q3</i> <i>Planning the site set out: Q1 Q2 Q3</i> <i>Site set-out part 3 : Q1</i>
<i>report faults</i>	<i>Excavation hazards: Q1</i>
<i>use language and concepts appropriate to cultural differences</i>	<i>Use of communications equipment: Q1 Q2 Q3 Q4 Q5 Q6</i>

<i>use and interpret non-verbal communication, such as hand signals</i>	<i>Use of communications equipment: Q1 Q2 Q3 Q4 Q5 Q6 Hand signals: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i>
<i>identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials</i>	
<i>numeracy skills to apply measurements and make calculations</i>	<i>Calculating volume: Q1 Q2 Q3 Q4 Q5</i>
<i>organisational skills, including the ability to plan and set out work</i>	<i>Planning the site set out: Q1 Q2 Q3 Workplace Task: Complete excavation to expose underground service</i>
<i>teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities</i>	<i>Workplace Task: Tools and equipment used were cleaned, checked, maintained and stored correctly after use. Faults reported to supervisor.</i>
<i>technological skills to:</i>	
<i>use a range of mobile technology, such as two-way radio and mobile phones</i>	<i>Use of communications equipment: Q1 Q2 Q3 Q4 Q5 Q6</i>
<i>voice and hand signals to access and understand site-specific instructions.</i>	<i>Hand signals: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i>

REQUIRED KNOWLEDGE

Required Knowledge	Task / Question Map
Required knowledge for this unit is:	
<i>commonly used in-ground services and identification by relevant markers</i>	<i>Underground services: Q1 Q2 Q3 Q4</i> <i>Workplace Task: Identify different underground service tapes and markers</i>
<i>construction terminology</i>	<i>What is excavation work: Q1 Q2</i> <i>Plans, specifications and drawings: Q1</i> <i>Excavation hazards: Q1 Q2</i> <i>Plant and equipment used for excavations: Q1 Q2 Q3 Q4 Q5 Q6</i> <i>Planning the site set out: Q1 Q2 Q3</i> <i>Excavated materials and loads near excavations: Q1 Q2 Q3</i> <i>Site set-out part 1 : Q1</i> <i>Site set-out part 2: Q1</i> <i>Site set-out part 3 : Q1</i>
<i>excavation materials</i>	<i>Site set-out part 3 : Q1</i>
<i>excavation techniques</i>	<i>Plant and equipment used for excavations: Q1 Q2 Q3 Q4 Q5 Q6</i> <i>Planning the site set out: Q1 Q2 Q3</i> <i>Excavated materials and loads near excavations: Q1 Q2 Q3</i> <i>Site set-out part 2: Q2</i>
<i>job safety analysis (JSA) and safe work method statements</i>	<i>Work method statements: Q1 Q2 Q3</i>
<i>material safety data sheets (MSDS)</i>	<i>SDS: Q1 Q2 Q3 Q4</i>
<i>materials storage and environmentally friendly waste management</i>	<i>SDS: Q1 Q2 Q3 Q4</i>
<i>plans, specifications and drawings</i>	<i>Plans, specifications and drawings: Q1 Q2 Q3 Q4</i> <i>Right angles including Pythagoras: Q1 Q2 Q3</i> <i>Planning the site set out: Q1 Q2 Q3</i> <i>Site set-out part 3 : Q1</i>

<i>processes for the calculation of material requirements</i>	<i>Calculating volume: Q1 Q2 Q3 Q4 Q5 Right angles including Pythagoras: Q1 Q2 Q3</i>
<i>quality requirements</i>	<i>Plans, specifications and drawings: Q1</i>
<i>regulatory requirements for excavation support for safe access</i>	<i>Excavation hazards: Q2 Excavated materials and loads near excavations: Q1 Q2 Q3</i>
<i>safe work with common plant used on construction industry sites</i>	<i>Duty of care: Q1 Q2 Shoring: Q1 Q2 Excavated materials and loads near excavations: Q1 Q2 Q3</i>
<i>types, characteristics, uses and limitations of tools and equipment</i>	<i>Personal Protective Equipment: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Excavated materials and loads near excavations: Q1 Q2 Q3</i>
<i>workplace and equipment safety requirements.</i>	<i>Licencing: Q1 Q2 Duty of care: Q1 Q2 Excavation hazards: Q1 Q2 Working at heights: Q1 Q2 Q3 Shoring: Q1 Q2 Excavated materials and loads near excavations: Q1 Q2 Q3</i>

CRITICAL ASPECTS

Critical Aspects	Task / Question Map
A person who demonstrates competency in this unit must be able to provide evidence of the ability to:	
<i>locate, interpret and apply relevant information, standards and specifications</i>	<i>Duty of care: Q1 Q2 Site set-out part 1 : Q1</i>
<i>comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations</i>	<i>What is excavation work: Q2 Workplace health and safety act: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Workplace health and safety regulations : Q1 Q2 Environmental considerations: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Excavation hazards: Q1 Working at heights: Q1 Q2 Q3 Shoring: Q1 Q2</i>
<i>comply with organisational policies and procedures, including quality requirements</i>	<i>Workplace health and safety regulations : Q1 Q2</i>
<i>safely and effectively use tools, plant and equipment</i>	<i>Hierarchy of control: Q1 Q2 Q3 Q4 Q5 Use of fire extinguishers: Q1 Q2 Q3 Q4 Q5 Q6 Excavated materials and loads near excavations: Q1 Q2 Q3 Site set-out part 3 : Q1</i>
<i>communicate and work effectively and safely with others</i>	<i>Workplace Task: Tools and equipment used were cleaned, checked, maintained and stored correctly after use. Faults reported to supervisor.</i>
<i>determine from an existing set out, a mark out and then excavate site as part of an overall project to job specifications without damaging services.</i>	<i>What is excavation work: Q2 Underground services: Q1 Q2 Q3 Q4 Right angles including Pythagoras: Q1 Q2 Q3 Site set-out part 3 : Q1</i>

RANGE STATEMENTS

Range Statements	Task / Question Map	
<i>Information includes:</i>	<i>diagrams or sketches</i>	<i>Underground services: Q1 Q2 Q3 Q4 Site set-out part 1 : Q1 Site set-out part 2: Q3 Q4 Site set-out part 3 : Q1 Workplace Task: Work area cleaned and waste disposed of in accordance to company policy and environmental legislation.</i>
	<i>instructions issued by authorised organisational or external personnel</i>	<i>Underground services: Q1 Q2 Q3 Q4 Site set-out part 3 : Q1</i>
	<i>manufacturer specifications and instructions where specified</i>	<i>Shoring: Q1 Q2</i>
	<i>maps</i>	<i>Plans, specifications and drawings: Q2 Q3 Q4</i>
	<i>memos</i>	<i>Use of communications equipment: Q1 Q2 Q3 Q4 Q5 Q6</i>
	<i>MSDS</i>	<i>SDS: Q1 Q2 Q3 Q4</i>
	<i>organisation work specifications and requirements</i>	<i>Underground services: Q1 Q2 Q3 Q4</i>
	<i>plans and specifications</i>	<i>Plans, specifications and drawings: Q1 Q2 Q3 Q4 Underground services: Q1 Q2 Q3 Q4 Site set-out part 3 : Q1 Workplace Task: Safety requirements were identified and safety legislation complied with.</i>
	<i>regulatory and legislative requirements pertaining to carrying out excavations</i>	<i>Workplace health and safety regulations : Q1 Q2 Underground services: Q1 Q2 Q3 Q4</i>
	<i>relevant Australian standards</i>	<i>Underground services: Q1 Q2 Q3 Q4</i>

	<i>safe work procedures related to carrying out excavations</i>	<i>Work method statements: Q1 Q2 Q3 Underground services: Q1 Q2 Q3 Q4 Excavation hazards: Q1 Q2 Ground collapse: Q1 Q2 Emergency procedures: Q1 Q2 Q3 Shoring: Q1 Q2 Water hazards: Q1 Q2 Q3 Site set-out part 3 : Q1 Workplace Task: Tools and equipment used were cleaned, checked, maintained and stored correctly after use. Faults reported to supervisor.</i>
	<i>signage</i>	<i>Signs and barriers: Q2 Q3 Q4</i>
	<i>verbal or written and graphical instructions</i>	<i>Plans, specifications and drawings: Q2 Q3 Q4 Site set-out part 3 : Q1 Workplace Task: Identify different underground service tapes and markers</i>
	<i>work bulletins</i>	
	<i>work schedules.</i>	
<i>Planning and preparation include:</i>	<i>work site inspection</i>	<i>Hierarchy of control: Q1 Q2 Q3 Q4 Q5 Ground collapse: Q1 Q2 Site set-out part 1 : Q1 Site set-out part 3 : Q1</i>
	<i>equipment defect identification</i>	
	<i>assessment of conditions and hazards</i>	<i>Hierarchy of control: Q1 Q2 Q3 Q4 Q5 Ground collapse: Q1 Q2</i>
	<i>determination of work requirements.</i>	<i>Plans, specifications and drawings: Q1 Q2 Q3 Q4</i>
<i>Safety (OHS) is to be in accordance with legislation, regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include:</i>	<i>emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation</i>	<i>Emergency procedures: Q1 Q2 Q3 Use of fire extinguishers: Q1 Q2 Q3 Q4 Q5 Q6 First aid: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9</i>
	<i>handling of materials</i>	<i>SDS: Q1 Q2 Q3 Q4</i>

	<i>hazard control</i>	<i>Hierarchy of control: Q1 Q2 Q3 Q4 Q5</i> <i>Working at heights: Q1 Q2 Q3</i> <i>Shoring: Q1 Q2</i> <i>Excavated materials and loads near excavations: Q1 Q2 Q3</i>
	<i>hazardous materials and substances</i>	
<i>safe operating procedures, including the conduct of operational risk assessment and treatments associated with:</i>		
	<i>earth leakage boxes</i>	
	<i>lighting</i>	
	<i>power cables, including overhead service trays, cables and conduits</i>	
	<i>restricted access barriers</i>	<i>Signs and barriers: Q1</i>
	<i>surrounding structures</i>	<i>Excavated materials and loads near excavations: Q1 Q2 Q3</i>
	<i>traffic control</i>	
	<i>trip hazards</i>	<i>Excavation hazards: Q1</i> <i>Working at heights: Q1 Q2 Q3</i>
	<i>work site visitors and the public</i>	
	<i>working at heights</i>	<i>Excavation hazards: Q1</i> <i>Working at heights: Q1 Q2 Q3</i>
	<i>working in confined spaces</i>	<i>Confined space: Q1 Q2 Q3</i>
	<i>working in proximity to others</i>	<i>Duty of care: Q1 Q2</i> <i>Excavation hazards: Q1</i>
	<i>working with dangerous materials</i>	<i>SDS: Q1 Q2 Q3 Q4</i>
	<i>organisational first aid</i>	
	<i>personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices</i>	<i>Personal Protective Equipment: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i>
	<i>use of firefighting equipment</i>	<i>Use of fire extinguishers: Q1 Q2 Q3 Q4 Q5 Q6</i>
	<i>use of tools and equipment</i>	<i>Excavated materials and loads near excavations: Q1 Q2 Q3</i>

	<i>workplace environment and safety.</i>	<i>Environmental considerations: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Excavation hazards: Q1 Shoring: Q1 Q2 Excavated materials and loads near excavations: Q1 Q2 Q3</i>
<i>Tools and equipment include:</i>	<i>automatic levels</i>	<i>Site set-out part 1 : Q1 Site set-out part 3 : Q1</i>
	<i>brooms</i>	
	<i>buckets</i>	
	<i>crow bars</i>	
	<i>hammers</i>	
	<i>hoses</i>	
	<i>laser levels</i>	<i>Site set-out part 1 : Q1 Site set-out part 3 : Q1</i>
	<i>levels</i>	<i>Site set-out part 1 : Q1 Site set-out part 3 : Q1</i>
	<i>measuring tapes and rules</i>	<i>Site set-out part 2: Q3 Q4 Site set-out part 3 : Q1</i>
	<i>picks</i>	
	<i>profiles</i>	<i>Site set-out part 1 : Q1 Site set-out part 2: Q1 Q2 Site set-out part 3 : Q1</i>
	<i>saws</i>	
	<i>set out pegs</i>	<i>Site set-out part 1 : Q1 Site set-out part 2: Q3 Q4</i>
	<i>shovels</i>	<i>Hand tools: Q2</i>
	<i>staff</i>	
	<i>straight edges</i>	<i>Site set-out part 1 : Q1 Site set-out part 3 : Q1</i>
	<i>string lines</i>	<i>Site set-out part 1 : Q1 Site set-out part 2: Q1 Q2 Site set-out part 3 : Q1</i>

	wheelbarrows.	Hand tools: Q3 Q4
Materials include:	nails	Site set-out part 3 : Q1
	pegs	Site set-out part 1 : Q1 Site set-out part 3 : Q1
	sheet material shoring (timber and metal)	
	timber.	Site set-out part 1 : Q1 Site set-out part 3 : Q1
Quality requirements include relevant regulations, including:	Australian standards	Underground services: Q2
	internal company quality policy and standards	
	manufacturer specifications, where specified	Shoring: Q1 Q2
	workplace operations and procedures.	Duty of care: Q1 Q2 Excavated materials and loads near excavations: Q1 Q2 Q3
Environmental requirements include:	clean-up management	Environmental considerations: Q1 Q6 Q7
	noise and dust	Environmental considerations: Q1 Q2
	vibration	Environmental considerations: Q1
	waste management.	Environmental considerations: Q4 Q5 Q6 Q7
Statutory and regulatory authorities include:	federal, state and local authorities administering applicable Acts, regulations and codes of practice.	Environmental considerations: Q1 Q2 Underground services: Q1
Set out includes:	identification of services that can be damaged or impede excavation	Underground services: Q1 Q2 Q3 Q4
	marking out of the project.	Site set-out part 1 : Q1 Site set-out part 3 : Q1 Workplace Task: Safety requirements were identified and safety legislation complied with.
Excavations include:	extension of existing structures, to provide provisions for new services and to modify or repair existing services	

	<i>provisions for footings/slabs to new structures</i>	<p>Ground collapse: Q1 Q2</p> <p>Site set-out part 1 : Q1</p> <p>Site set-out part 2: Q1 Q2</p> <p>Site set-out part 3 : Q1</p> <p>Workplace Task: Work area cleaned and waste disposed of in accordance to company policy and environmental legislation.</p>
	<i>shoring (timber, metal or piling)</i>	<p>Shoring: Q1 Q2</p> <p>Shoring using sheet metal: Q1 Q2</p>
	<i>those being undertaken on sloping ground, flat ground, wet ground, dry ground, loose ground or any type of foundation material, with mechanical assistance possibly required for rock</i>	<p>Ground collapse: Q1 Q2</p> <p>Water hazards: Q1 Q2 Q3</p>
	<i>trench/excavation support using sheet material.</i>	<p>Shoring: Q1 Q2</p> <p>Shoring using sheet metal: Q1 Q2</p>