



**Australian Government**

# **RIICWD601E Manage civil works design processes**

**Release: 1**

## RIICWD601E Manage civil works design processes

### Modification History

| Release   | Comments                                                                                                 |
|-----------|----------------------------------------------------------------------------------------------------------|
| Release 1 | This version first released with RII Resources and Infrastructure Industry Training Package Version 6.0. |

### Application

This unit describes the skills and knowledge required to manage civil works design processes, including interpreting and scoping design requirements, monitoring and supporting design processes and reviewing designs.

It applies to those working in management or technical specialist roles. They generally apply a broad range technical and managerial skills and are responsible for the delivery of complex outputs that meet site requirements.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Users must check requirements with relevant body before applying the unit.

### Unit Sector

Civil construction

### Elements and Performance Criteria

| ELEMENT                                                   | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>          | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1. Interpret and scope design requirements of civil works | 1.1 Obtain, interpret, clarify and confirm work requirements<br>1.2 Access, interpret and apply documentation required for civil works design and confirm work activity is compliant<br>1.3 Analyse client design criteria requirements for civil works to confirm required specifications are included<br>1.4 Advise client on potential environmental impact of proposed works and provide design options that meet environmental requirements<br>1.5 Confirm required development and implementation factors are addressed in civil works design criteria<br>1.6 Prepare functional specifications according to engineering standards |

| ELEMENT                                                                                  | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                          | and design specifications<br>1.7 Obtain and document and client agreement on civil works design criteria                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2. Identify project design options for civil works and determine preferred design option | 2.1 Identify innovative procedures for developing the design concept according to design requirements<br>2.2 Investigate and analyse potential design concepts that meet design requirements<br>2.3 Collaborate with client to improve outcomes and resolve issues associated with design concept<br>2.4 Advise client of potential impacts of proposed works on local communities                                                                                                                                                     |
| 3. Initiate, monitor and support design of civil works                                   | 3.1 Analyse and select resources, processes and systems required to develop the design<br>3.2 Coordinate design tasks to meet required outcomes and cost structure<br>3.3 Develop and check design solution against engineering specifications                                                                                                                                                                                                                                                                                         |
| 4. Prepare and maintain documentation                                                    | 4.1 Establish documentation management process according to workplace requirements<br>4.2 Check and confirm supporting documentation required to implement the design meets workplace requirements<br>4.3 Check and confirm design is identified by design documentation and records specified by client<br>4.4 Apply documentation control process specified by client when making changes to design<br>4.5 Check and confirm design documentation for currency and accuracy                                                          |
| 5. Review design of civil works                                                          | 5.1 Review design and confirm it meets client requirements<br>5.2 Incorporate amendments advised by client and confirm design meets legislative requirements<br>5.3 Review design with client and obtain documented approval                                                                                                                                                                                                                                                                                                           |
| 6. Support design implementation of civil works                                          | 6.1 Prepare and implement plans that verify completed physical work meets client requirements<br>6.2 Develop periodic test schedules for monitoring performance and permit involved personnel to implement corrective action as required<br>6.3 Seek feedback from commissioning process to facilitate corrective actions and design improvements<br>6.4 Evaluate design outcome performance according to workplace requirements<br>6.5 Evaluate community response to design outcome and document according to workplace requirements |

## Foundation Skills

*This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.*

| Skill              | Description                                                                                                                                                                                                   |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Oral communication | <ul style="list-style-type: none"><li>• Presents information and provides assistance using sector-specific vocabulary</li><li>• Uses listening and questioning to clarify and confirm understanding</li></ul> |
| Reading            | <ul style="list-style-type: none"><li>• Identifies and interprets information from workplace procedures, documentation, legislation and regulations</li></ul>                                                 |
| Writing            | <ul style="list-style-type: none"><li>• Prepares and completes workplace reports using sector-specific vocabulary, grammatical structures and conventions</li></ul>                                           |

## Unit Mapping Information

Supersedes and is equivalent to RIICWD601D Manage the civil works design process.

## Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>