

# CPCCBC4010

## APPLY STRUCTURAL PRINCIPLES TO RESIDENTIAL AND COMMERCIAL CONSTRUCTIONS

### PRACTICAL ASSESSMENT

|                  |             |
|------------------|-------------|
| Participant name | Lucy Muston |
|------------------|-------------|

| FOR THE PARTICIPANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Instructions</b> <ul style="list-style-type: none"> <li>The tasks outlined on the following pages will require performance of normal workplace activities, as a result of a structured activity set by an Observer in the workplace or a simulated activity set by your Assessor/Observer.</li> <li>The timeframe for these tasks will be established by your Assessor/Observer, in consideration of location conditions and industry requirements.</li> <li>You must complete all tasks unassisted by the Assessor or other personnel, unless the steps note this assistance.</li> <li>You must attempt all tasks (and itemised steps) for a 'Satisfactory' assessment outcome to be awarded. <ul style="list-style-type: none"> <li>For any observation conducted that is incomplete, or without satisfactory performance, the observation will need to be completed again after further training support.</li> </ul> </li> </ul> |

| FOR THE ASSESSOR/OBSERVER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Instructions</b> <ul style="list-style-type: none"> <li>The following observation record should be used to judge and record your observations of the Participant as they complete the task(s) set. You must record your observations of the Participant's performance. <ul style="list-style-type: none"> <li>For each occasion, indicate the task performed and whether it was a simulation or workplace-based task. <ul style="list-style-type: none"> <li>Any simulated assessment must ensure the Participant still performs under workplace conditions which reflect industry standards.</li> </ul> </li> <li>In the comments, provide clear detail regarding the task that the Participant was required to do (e.g. PPE used, materials handled, attachments connected, plant types).</li> </ul> </li> <li>All steps must be satisfactorily demonstrated by the Participant for a 'Satisfactory' determination (indicated by an Assessor tick to the right of each itemised step, or an Observer tick to the right of each itemised step, and confirmation by an Assessor in the Assessor Comments). <ul style="list-style-type: none"> <li>Where you have determined that one or more task steps have not been satisfactorily demonstrated, provide the Participant with additional support and outline details of such assistance in the Assessor/Observer Comments. Allow the Participant two (2) further opportunities to demonstrate the task again to allow an opportunity for a 'Satisfactory' assessment outcome to be achieved.</li> <li>If after three (3) attempts the Assessor determines that the Participant cannot demonstrate the required steps, a 'Not Satisfactory' outcome is to be determined.</li> </ul> </li> </ul> |

| TASK OUTCOME |              |                                                                           |          |                          |                          |
|--------------|--------------|---------------------------------------------------------------------------|----------|--------------------------|--------------------------|
| Task         | Date         | Task Type (Tick)                                                          | Location | Task outcome (Tick)      |                          |
|              |              |                                                                           |          | Satisfactory             | Not Satisfactory         |
| Task 1       | Select Date. | <input type="checkbox"/> Workplace<br><input type="checkbox"/> Simulation |          | <input type="checkbox"/> | <input type="checkbox"/> |

**ASSESSOR COMMENTS: GENERAL**
**As necessary, outline:**

- Details on reattempts, alternative arrangements or reasonable adjustments made.
- Where a Participant is deemed 'Not Satisfactory', provide recommendations for future training.

**ASSESSOR COMMENTS: PRACTICAL TASK 1**
☐ Individual student (as named on cover page)

☐ Multiple students [☐ All from Attendance Report, ☐ Specific students involved – identify students]

| Task                                                                                                           | Provide detail                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1A. 1.1B.<br>1.1C. 1.1C.<br>1.1D. 1.1E.<br>1.2C. 1.2D.<br>1.3C. 1.3D.<br>1.5A. 1.5B.<br>1.5C. 1.6A.<br>1.6B. | Specify (✓) where building classifications, criteria requirements and performance solutions were documented:<br><input type="checkbox"/> Workplace Quality document <input type="checkbox"/> Quality Assurance Template <input type="checkbox"/> Other (please specify):<br><br><input type="checkbox"/> Document attached as evidence |
| 1.1F.                                                                                                          | Specify (✓) who was consulted regarding structural integrity:<br><input type="checkbox"/> Project management <input type="checkbox"/> Relevant tradesperson <input type="checkbox"/> Builder <input type="checkbox"/> Supplier<br><input type="checkbox"/> Other (please specify):                                                     |
| 1.1H.                                                                                                          | Specify new and emerging building technologies assessed for compliance.                                                                                                                                                                                                                                                                |
| 1.2B.                                                                                                          | Specify how cut and fill, excavation and compaction were confirmed as compliant with geotechnical report:                                                                                                                                                                                                                              |
| 1.3B.                                                                                                          | Specify where footing type and tie-down details located.                                                                                                                                                                                                                                                                               |
| 1.3E.                                                                                                          | Specify team supervised and floor system installed.                                                                                                                                                                                                                                                                                    |

**ASSESSOR COMMENTS: PRACTICAL TASK 1**

|       |                                                                                                  |
|-------|--------------------------------------------------------------------------------------------------|
| 1.4C. | Specify structural and non-structural wall systems installation supervised to ensure compliance. |
| 1.5D. | Specify how quality finishes were assured for roof systems.                                      |
| 1.6C. | Specify supervision and checks made:                                                             |

## CPCCBC4010

### APPLY STRUCTURAL PRINCIPLES TO RESIDENTIAL AND COMMERCIAL CONSTRUCTIONS

#### Practical Task 1

##### Description of task:

The participant must demonstrate the skill and ability to apply structural principles to the construction of one building project including the following points. Documented evidence of all criteria must be presented (*template (HO3) available for use if required*)

- Analyse the structural integrity of building project
  - Read the plans to determine and document the intended use of the building, class and climate zone from the NCC. (*template available- HO3*)
  - Analyse the project documents for compliance with NCC bushfire, high wind, earthquake and alpine environment requirements. (*template available- HO3*)
  - Analyse and document building design and structural integrity from project plans and specifications, building standards and codes. (*template available- HO3*)
  - Determine and document the effect of section properties on various materials. (*template available- HO3*)
  - Determine and document if structural performance meets the General Requirements and Performance Requirements of NCC. (*template available- HO3*)
  - Confirm analysis of structural integrity with relevant industry professionals.
  - Conduct pre-commencement site inspection to confirm analysis.
- Plan, coordinate and manage the laying of footings.
  - Identify earthworks and footing or slab configuration from project plans and specifications.
  - Establish cut and fill, excavation and compaction compliance with geotechnical report.
  - Assess performance of reinforcement, concrete and other elements which contribute to structural integrity of specified footings.
  - Determine compliance with building and construction regulations, standards and codes.
  - Set out footings in accordance with project plans and specifications.
- Plan, coordinate and manage laying of flooring systems
  - Identify flooring systems materials, components and configuration from project plans and specifications.
  - Determine footing type and tie-down details.
  - Assess suspended flooring system component sections' compliance with standards and codes' span requirements. (*template available- HO3*)
  - Determine if floor framing and flooring is compliant with NCC Performance Requirements for climate zone, fire resistance and rising damp requirements. (*template available- HO3*)
  - Supervise and confirm laying of specified floor system complies with project documentation.
- Plan, coordinate and manage the building of wall systems.
  - Determine and analyse structural and non-structural wall systems used in the planning of the building and construction project. (*template available- HO3*)
  - Determine materials used for timber and steel framing and structural steel members meet the Performance Requirements of the NCC and timber framing complies with AS 1684 Residential timber-framed construction.
  - Adhere to and check processes for erecting structural and non-structural wall systems to ensure these comply with manufacturer's specifications and building and construction standards and codes.
  - Apply bracing, tie-downs, tolerances, allowances, and fixing and installation of wall frame components for compliance with relevant Australian Standards, codes and manufacturer specifications.
  - Manage processes to ensure quality of the frame, whether factory pre-cut and pre-nailed, factory pre-cut and assembled on site, or cut and assembled on site.
  - Determine and apply allowances for services to be installed.
  - Ensure the installation of windows and doors is compliant with building and construction standards and code and manufacturer's specifications.
- Plan, coordinate and manage the building of structural roof systems.
  - Identify type of structural roof system and components and determine compliance with Performance Requirements of NCC.
  - Plan, implement and check erection of structural roof, roof trusses or hand cut roof members comply with building and construction standards and codes and accepted industry construction practices.

## Practical Task 1

- Plan, implement and check installation of roof sarking and cladding, skylights, roof ventilators and service penetrations comply with building standards, codes and manufacturer specifications.
- Manage processes to ensure roof systems' quality finish.
- Plan, coordinate and manage wall cladding.
  - Assess structural performance of cladding to be used for bracing in the frame construction for compliance with building and construction standards, codes and manufacturer specifications.
  - Determine cladding, vapour permeable sarking or waterproof membrane and components meet the Performance Requirements of NCC.
  - Supervise and check installation of specified cladding complies with building and construction standards, codes and industry-accepted industry practices.

These tasks may be simulated or real. The Participant is to gather evidence of how they have completed each component of the Practical Task, which is to be submitted with this Practical Assessment sheet. The Observer is to provide detailed comments on the tasks completed by the Participant (on the Observer Comments, overleaf). The Assessor is to verify the Observer's comments, noting their findings in the Assessor Comments (on the back of the Practical Assessment cover page) and provide the assessment outcome.

### Resources required:

Construction site and plans, specifications and drawings for one residential or commercial construction; workplace quality policies and procedures; technology to access building and related industry codes, standards and manufacturer product information and materials specifications; Technology to access the NCC and current relevant Acts and Regulations. PPE as required. Materials and tools Documentation of design and construction (suitability or evidence of suitability) (template available- (HO3)).

### Observer details

|                                                   |                                                                                      |
|---------------------------------------------------|--------------------------------------------------------------------------------------|
| Name of observer:                                 | BERNARD TRAVERS                                                                      |
| Role of observer<br>(Confirm suitability to sign) | PROJECT MANAGER                                                                      |
| Email address of observer                         | BERNARD.TRAVERS@GARFIELDCONSTRUCTION.COM                                             |
| Signature of observer:                            |  |
| Date:                                             | Select Date. 19.3.2025                                                               |

| When completing the task, did the Participant:                                                                                                                     | Tick if satisfactorily completed.<br>Provide comments if left unticked. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>1 Analyse the structural integrity of building project.</b>                                                                                                     |                                                                         |
| 1.1A. Read the plans to determine and document the intended use of the building, class and climate zone from the NCC. (template available- HO3)                    | <input checked="" type="checkbox"/>                                     |
| 1.1B. Analyse the project documents for compliance with NCC bushfire, high wind, earthquake and alpine environment requirements.                                   | <input checked="" type="checkbox"/>                                     |
| 1.1C. Analyse and document building design and structural integrity from project plans and specifications, building standards and codes. (template available- HO3) | <input checked="" type="checkbox"/>                                     |
| 1.1D. Determine and document the effect of section properties on various materials. (template available- HO3)                                                      | <input checked="" type="checkbox"/>                                     |
| 1.1E. Determine and document if structural performance meets the General Requirements and Performance Requirements of NCC. (template available- HO3)               | <input checked="" type="checkbox"/>                                     |
| 1.1F. Confirm analysis of structural integrity with relevant industry professionals.                                                                               | <input checked="" type="checkbox"/>                                     |
| 1.1G. Conduct pre-commencement site inspection to confirm analysis.                                                                                                | <input checked="" type="checkbox"/>                                     |

| When completing the task, did the Participant:                                                                                                                                                                                                          | Tick if satisfactorily completed.<br>Provide comments if left unticked. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1.1H. Assess new and emerging building technologies for application to the construction process and their compliance with NCC requirements and relevant Australian Standards.                                                                           | <input checked="" type="checkbox"/>                                     |
| <b>2 Plan, coordinate and manage the laying of footings.</b>                                                                                                                                                                                            |                                                                         |
| 1.2A. Identify earthworks and footing or slab configuration from project plans and specifications.                                                                                                                                                      | <input checked="" type="checkbox"/>                                     |
| 1.2B. Establish cut and fill, excavation and compaction compliance with geotechnical report.                                                                                                                                                            | <input checked="" type="checkbox"/>                                     |
| 1.2C. Assess performance of reinforcement, concrete and other elements which contribute to structural integrity of specified footings. <i>(template available- HO3)</i>                                                                                 | <input checked="" type="checkbox"/>                                     |
| 1.2D. Determine compliance with building and construction regulations, standards and codes. <i>(template available- HO3)</i>                                                                                                                            | <input checked="" type="checkbox"/>                                     |
| 1.2E. Set out footings in accordance with project plans and specifications.                                                                                                                                                                             | <input checked="" type="checkbox"/>                                     |
| <b>3 Plan, coordinate and manage laying of flooring systems.</b>                                                                                                                                                                                        |                                                                         |
| 1.3A. Identify flooring systems materials, components and configuration from project plans and specifications.                                                                                                                                          | <input checked="" type="checkbox"/>                                     |
| 1.3B. Determine footing type and tie-down details.                                                                                                                                                                                                      | <input checked="" type="checkbox"/>                                     |
| 1.3C. Assess suspended flooring system component sections' compliance with standards and codes' span requirements. <i>(template available- HO3)</i>                                                                                                     | <input checked="" type="checkbox"/>                                     |
| 1.3D. Determine if floor framing and flooring is compliant with NCC Performance Requirements for climate zone, fire resistance and rising damp requirements. <i>(template available- HO3)</i>                                                           | <input checked="" type="checkbox"/>                                     |
| 1.3E. Supervise and confirm laying of specified floor system complies with project documentation                                                                                                                                                        | <input checked="" type="checkbox"/>                                     |
| <b>4 Plan, coordinate and manage the building of wall systems.</b>                                                                                                                                                                                      |                                                                         |
| 1.4A. Determine and analyse structural and non-structural wall systems used in the planning of the building and construction project. <i>(template available- HO3)</i>                                                                                  | <input checked="" type="checkbox"/>                                     |
| 1.4B. Determine materials used for timber and steel framing and structural steel members meet the Performance Requirements of the NCC and timber framing complies with AS 1684 Residential timber-framed construction. <i>(template available- HO3)</i> | <input checked="" type="checkbox"/>                                     |
| 1.4C. Adhere to and check processes for erecting structural and non-structural wall systems to ensure these comply with manufacturer's specifications and building and construction standards and codes.                                                | <input checked="" type="checkbox"/>                                     |
| 1.4D. Apply bracing, tie-downs, tolerances, allowances, and fixing and installation of wall frame components for compliance with relevant Australian Standards, codes and manufacturer specifications.                                                  | <input checked="" type="checkbox"/>                                     |
| 1.4E. Manage processes to ensure quality of the frame, whether factory pre-cut and pre-nailed, factory pre-cut and assembled on site, or cut and assembled on site.                                                                                     | <input checked="" type="checkbox"/>                                     |
| 1.4F. Determine and apply allowances for services to be installed.                                                                                                                                                                                      | <input checked="" type="checkbox"/>                                     |
| 1.4G. Ensure the installation of windows and doors is compliant with building and construction standards and code and manufacturer's specifications.                                                                                                    | <input checked="" type="checkbox"/>                                     |
| <b>5. Plan, coordinate and manage the building of structural roof systems.</b>                                                                                                                                                                          |                                                                         |
| 1.5A. Identify type of structural roof system and components and determine compliance with Performance Requirements of NCC. <i>(template available- HO3)</i>                                                                                            | <input checked="" type="checkbox"/>                                     |
| 1.5B. Plan, implement and check erection of structural roof, roof trusses or hand cut roof members comply with building and construction standards and codes and accepted industry construction practices. <i>(template available- HO3)</i>             | <input checked="" type="checkbox"/>                                     |
| 1.5C. Plan, implement and check installation of roof sarking and cladding, skylights, roof ventilators and service penetrations comply with building standards, codes and manufacturer specifications. <i>(template available- HO3)</i>                 | <input checked="" type="checkbox"/>                                     |
| 1.5D. Manage processes to ensure roof systems' quality finish.                                                                                                                                                                                          | <input checked="" type="checkbox"/>                                     |

| When completing the task, did the Participant:                                                                                                                                                                                    | Tick if satisfactorily completed.<br>Provide comments if left unticked. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>6. Plan, coordinate and manage wall cladding.</b>                                                                                                                                                                              |                                                                         |
| 1.6A. Assess structural performance of cladding to be used for bracing in the frame construction for compliance with building and construction standards, codes and manufacturer specifications. <i>(template available- HO3)</i> | <input checked="" type="checkbox"/>                                     |
| 1.6B. Determine cladding, vapour permeable sarking or waterproof membrane and components meet the Performance Requirements of NCC. <i>(template available- HO3)</i>                                                               | <input checked="" type="checkbox"/>                                     |
| 1.6C. Supervise and check installation of specified cladding complies with building and construction standards, codes and industry-accepted industry practices.                                                                   | <input checked="" type="checkbox"/>                                     |

Observer comments: