CPP Property Services Training Package

Terms of Reference and Operating Protocols

Technical Advisory Group: Surveying and Spatial

Project name: Surveying and Spatial Qualification review and update

TOR: Version 2.3

# Terms of Reference

The Surveying and Spatial technical advisory group (TAG) is being formed to provide specialist advice and make recommendations to the Property Services Industry Reference Committee (IRC) into the review of the Surveying and Spatial components of the Property Services Training Package.

Specifically, the terms of reference for the TAG is to provide expert guidance on the update of the structure and composition of:

* **Seven qualifications:**
	+ CPP20116 Certificate II in Surveying and Spatial Information Services
	+ CPP30216 Certificate III in Surveying and Spatial Information Services
	+ CPP40216 Certificate IV in Surveying
	+ CPP40316 Certificate IV in Spatial Information Services
	+ CPP50116 Diploma of Surveying
	+ CPP50216 Diploma of Spatial Information Services
	+ CPP60116 Advanced Diploma of Surveying
* **Sixty Four units of competency:**

|  |  |
| --- | --- |
| * + [CPPSIS2012](https://training.gov.au/Training/Details/CPPSIS2012)
 |  Assist in collecting basic spatial data |
| * + [CPPSIS2013](https://training.gov.au/Training/Details/CPPSIS2013)
 |  Store and retrieve basic spatial data |
| * + [CPPSIS2015](https://training.gov.au/Training/Details/CPPSIS2015)
 |  Assist with surveying and spatial field activities |
| * + [CPPSIS2016](https://training.gov.au/Training/Details/CPPSIS2016)
 |  Assist with load transfers |
| * + [CPPSIS3011](https://training.gov.au/Training/Details/CPPSIS3011)
 |  Produce basic maps |
| * + [CPPSIS3015](https://training.gov.au/Training/Details/CPPSIS3015)
 |  Collect basic surveying data |
| * + [CPPSIS3016](https://training.gov.au/Training/Details/CPPSIS3016)
 |  Provide field support services for surveying and spatial projects |
| * + [CPPSIS3018](https://training.gov.au/Training/Details/CPPSIS3018)
 |  Transfer loads |
| * + [CPPSIS3019](https://training.gov.au/Training/Details/CPPSIS3019)
 |  Produce basic plans of surveys |
| * + [CPPSIS3020](https://training.gov.au/Training/Details/CPPSIS3020)
 |  Perform basic surveying computations |
| * + [CPPSIS3021](https://training.gov.au/Training/Details/CPPSIS3021)
 |  Visually interpret image data |
| * + [CPPSIS4022](https://training.gov.au/Training/Details/CPPSIS4022)
 |  Store and retrieve spatial data |
| * + [CPPSIS4024](https://training.gov.au/Training/Details/CPPSIS4024)
 |  Source and assess spatial data |
| * + [CPPSIS4025](https://training.gov.au/Training/Details/CPPSIS4025)
 |  Collect spatial data using GNSS |
| * + [CPPSIS4026](https://training.gov.au/Training/Details/CPPSIS4026)
 |  Digitally enhance and process image data |
| * + [CPPSIS4027](https://training.gov.au/Training/Details/CPPSIS4027)
 |  Organise surveying field services |
| * + [CPPSIS4030](https://training.gov.au/Training/Details/CPPSIS4030)
 |  Operate surveying equipment |
| * + [CPPSIS4031](https://training.gov.au/Training/Details/CPPSIS4031)
 |  Perform surveying computations |
| * + [CPPSIS4032](https://training.gov.au/Training/Details/CPPSIS4032)
 |  Conduct field surveying operations |
| * + [CPPSIS4034](https://training.gov.au/Training/Details/CPPSIS4034)
 |  Maintain spatial data |
| * + [CPPSIS4035](https://training.gov.au/Training/Details/CPPSIS4035)
 |  Apply GIS software to solve spatial data problems |
| * + [CPPSIS4036](https://training.gov.au/Training/Details/CPPSIS4036)
 |  Operate spatial software applications |
| * + [CPPSIS4037](https://training.gov.au/Training/Details/CPPSIS4037)
 |  Produce computer-aided drawings |
| * + [CPPSIS4038](https://training.gov.au/Training/Details/CPPSIS4038)
 |  Prepare and present GIS data |
| * + [CPPSIS4039](https://training.gov.au/Training/Details/CPPSIS4039)
 |  Design and produce maps |
| * + [CPPSIS4040](https://training.gov.au/Training/Details/CPPSIS4040)
 |  Collect spatial data using terrestrial technologies |
| * + [CPPSIS4041](https://training.gov.au/Training/Details/CPPSIS4041)
 |  Set out site and building works |
| * + [CPPSIS5031](https://training.gov.au/Training/Details/CPPSIS5031)
 |  Plan spatial data collection |
| * + [CPPSIS5032](https://training.gov.au/Training/Details/CPPSIS5032)
 |  Capture new spatial data |
| * + [CPPSIS5035](https://training.gov.au/Training/Details/CPPSIS5035)
 |  Obtain and validate spatial data |
| * + [CPPSIS5036](https://training.gov.au/Training/Details/CPPSIS5036)
 |  Integrate spatial datasets |
| * + [CPPSIS5037](https://training.gov.au/Training/Details/CPPSIS5037)
 |  Maintain spatial data systems |
| * + [CPPSIS5038](https://training.gov.au/Training/Details/CPPSIS5038)
 |  Develop spatial databases |
| * + [CPPSIS5039](https://training.gov.au/Training/Details/CPPSIS5039)
 |  Plan and implement spatial projects |
| * + [CPPSIS5040](https://training.gov.au/Training/Details/CPPSIS5040)
 |  Interpret and collate spatial data |
| * + [CPPSIS5043](https://training.gov.au/Training/Details/CPPSIS5043)
 |  Design spatial data storage systems |
| * + [CPPSIS5044](https://training.gov.au/Training/Details/CPPSIS5044)
 |  Develop subdivision survey designs for local- government approval |
| * + [CPPSIS5046](https://training.gov.au/Training/Details/CPPSIS5046)
 |  Set out stormwater systems |
| * + [CPPSIS5047](https://training.gov.au/Training/Details/CPPSIS5047)
 |  Conduct GNSS surveys |
| * + [CPPSIS5048](https://training.gov.au/Training/Details/CPPSIS5048)
 |  Conduct engineering surveys |
| * + [CPPSIS5049](https://training.gov.au/Training/Details/CPPSIS5049)
 |  Plan and implement surveying projects |
| * + [CPPSIS5051](https://training.gov.au/Training/Details/CPPSIS5051)
 |  Apply land and planning law to surveying |
| * + [CPPSIS5052](https://training.gov.au/Training/Details/CPPSIS5052)
 |  Integrate surveying datasets |
| * + [CPPSIS5053](https://training.gov.au/Training/Details/CPPSIS5053)
 |  Perform advanced surveying computations |
| * + [CPPSIS5054](https://training.gov.au/Training/Details/CPPSIS5054)
 |  Perform geodetic surveying computations |
| * + [CPPSIS5057](https://training.gov.au/Training/Details/CPPSIS5057)
 |  Conduct precision surveys |
| * + [CPPSIS5058](https://training.gov.au/Training/Details/CPPSIS5058)
 |  Conduct geodetic surveys |
| * + [CPPSIS5060](https://training.gov.au/Training/Details/CPPSIS5060)
 |  Develop spreadsheets for spatial data |
| * + [CPPSIS5061](https://training.gov.au/Training/Details/CPPSIS5061)
 |  Locate underground services in surveying practice |
| * + [CPPSIS5062](https://training.gov.au/Training/Details/CPPSIS5062)
 |  Conduct photogrammetric mapping |
| * + [CPPSIS5064](https://training.gov.au/Training/Details/CPPSIS5064)
 |  Coordinate GIS data manipulation and analysis |
| * + [CPPSIS5065](https://training.gov.au/Training/Details/CPPSIS5065)
 |  Design basic engineering structures |
| * + [CPPSIS6021](https://training.gov.au/Training/Details/CPPSIS6021)
 |  Conduct open pit mine surveys |
| * + [CPPSIS6022](https://training.gov.au/Training/Details/CPPSIS6022)
 |  Produce mine drawings |
| * + [CPPSIS6025](https://training.gov.au/Training/Details/CPPSIS6025)
 |  Apply quality control measures to spatial products and services |
| * + [CPPSIS6031](https://training.gov.au/Training/Details/CPPSIS6031)
 |  Design basic mines |
| * + [CPPSIS6032](https://training.gov.au/Training/Details/CPPSIS6032)
 |  Conduct advanced GNSS control surveys |
| * + [CPPSIS6033](https://training.gov.au/Training/Details/CPPSIS6033)
 |  Conduct underground mine surveys |
| * + [CPPSIS6034](https://training.gov.au/Training/Details/CPPSIS6034)
 |  Conduct mining geology operations |
| * + [CPPSIS6035](https://training.gov.au/Training/Details/CPPSIS6035)
 |  Conduct complex engineering set-out surveys |
| * + [CPPSIS6036](https://training.gov.au/Training/Details/CPPSIS6036)
 |  Monitor engineering structures |
| * + [CPPSIS6037](https://training.gov.au/Training/Details/CPPSIS6037)
 |  Conduct advanced remote sensing analysis |
| * + [CPPSIS6040](https://training.gov.au/Training/Details/CPPSIS6040)
 |  Develop 2-D and 3-D terrain visualisations |
| * + [CPPSIS6041](https://training.gov.au/Training/Details/CPPSIS6041)
 |  Compile mine survey plans |

The TAG’s role includes providing advice in relation to the Case for Endorsement for these components and the associated Companion Volume Implementation Guide.

These terms of reference are subject to the scope and timelines of activity order TPD/2018-19/002 as follows:

* The Property Services IRC will update seven surveying and spatial qualifications in response to an identified skill and regulatory gap to meet the current industry skills needs.
* The Case for Endorsement for these components and the associated Companion Volume Implementation Guide are to be submitted to the Department of Education and Training on or before May 2020.

Other information of use:

* Draft Project Scope and Management Plan.

# Roles and responsibilities of the technical advisory group

The TAG will:

* provide advice to support the development and implementation of the Project Scope and Management Plan
* contribute to identifying and validating the current and future industry training needs
* provide advice to support the development of unit content and the approach to the structure of qualifications and skill sets
* provide advice on articulation, pathways, specialist tools, equipment and software and industry conditions to help inform the Companion Volume Implementation Guide
* facilitate broader consultation and engagement with industry stakeholders
* monitor identified and emerging risks and advise on their prevention, mitigation and management
* assist in promoting the final products and their take-up by industry and other stakeholders.

# Decision making

The TAG does not have any decision-making role.

# Role of individual group members

The role of the individual members of the TAG is to commit to:

* participating in regular meetings
* actively contributing to the TAG’s work both during and between meetings
* nominating a proxy and advising Artibus Innovation if unable to attend a meeting
* facilitating access to additional and specialised industry expertise
* demonstrating a genuine interest in the initiatives and advocating for the project’s outcomes
* acting in the public good.

# Independent Chair

The TAG will be chaired by an Independent Chair, which will be:

* the IRC Chair, or a nominee from the IRC; or
* a nominee determined by the IRC.

The Independent Chair is responsible for facilitating the TAG to achieve its terms of reference, including:

* Approving meeting agenda;
* Ensuring the TAG develops and conforms to a project plan when progressing its terms of reference;
* Facilitate meetings to achieve consensus wherever possible, where consensus means encouraging TAG members to develop, and agree to support, a position on advice to the IRC in the best interest of the project outcomes.
* Ensuring communication with all TAG members;
* Facilitating the formulation of TAG advice to the IRC, along with supporting evidence, in accordance with its terms of reference and its project plan;
* Communicating the views of the TAG to the IRC.
* Manage disagreements in accordance with the process contained in [Attachment A](#_Working_Groups).

In undertaking their role, the Independent Chair will:

* Ensure that the time in meetings is used effectively and that discussion on agenda items in TAG meetings is focussed, succinct and evidence‑based;
* Facilitate open and constructive communications amongst TAG members and encourage their contribution to TAG deliberations (in or out of session); and
* Guide and summarise TAG discussions, rather than participate in the detail of those discussions.

# Secretariat support

Artibus Innovation will, subject to budgetary constraints, provide the TAG with reasonable secretariat support in terms of:

* liaising with the Independent Chair on the preparation of meeting agenda;
* preparing and distributing meeting agenda papers;
* arranging meeting venues and associated logistics;
* recording meeting outcomes; and
* assisting the TAG to prepare its advice to the relevant Industry Reference Committee(s).

# Membership

In addition to the Independent Chair, the TAG shall be comprised of:

* one representative of the training system;
* one representative of a National Regulatory Forum;
* one employee representative;
* five representatives of industry; and
* a minimum of one representative from each IRC where the scope of work covers both the CPC Construction, Plumbing and Services and CPP Property Services Training Packages.

Other members may be included in the group as required.

Process for selecting TAG Members:

* Members will be chosen through a public nomination process managed by the SSO. The SSO will provide the TAG Independent Chair with a criteria assessment of applications.
* All applicants will be notified of their standing once nominees have been reviewed by the Independent Chair in conjunction with the SSO.
* The Independent Chair will recommend the makeup of the TAG to the IRC which will validate the membership. Any subsequent changes to the TAG require further validation by the IRC.
* Due consideration will also be given to the requirements of States and Territories, particularly in terms of geographic coverage if, and when required.

# Meetings

## Meeting Agenda

All meetings will be conducted according to an agenda approved by the Independent Chair.

Artibus Innovation will forward a proposed agenda and accompanying agenda items to the Independent Chair at least seven working days prior to a scheduled meeting.

TAG members may request that items relevant to the TAG’s terms of reference be placed on the agenda. Such requests must be forwarded to Secretariat at least ten working days prior to a scheduled TAG meeting using the template at Attachment A.

The Independent Chair shall approve the agenda at least five working days prior to a scheduled meeting.

The decision of the Independent Chair on the agenda will be final.

## Conduct of Meetings

Meetings will be facilitated by the Independent Chair.

A quorum will be half the regular membership plus one.

Artibus Innovation will:

* distribute the agenda approved by the Independent Chair and associated meeting papers to the TAG members at least five working days prior to the scheduled meeting;
* inform the Independent Chair of any proxies;
* provide minutes and action items to TAG members no later than five working days after the meeting; and
* provide a summary of the meeting outcomes to the IRC, to enable informed decision making.

# Travel support

Artibus Innovation will support one face to face meeting of each TAG, in accordance with Artibus Innovation travel policy at a location agreed by the Independent Chair and Artibus Innovation.

# Working Groups

The TAG may agree to establish a limited purpose working group of its members to assist in efficiently and effectively progressing specific issues relevant to the TAG’s Terms of Reference and approved project plan. A Working Group does not have any decision-making role.

Artibus Innovation may agree to provide Secretarial support to a Working Group subject to its funding agreement with the Department.

If the TAG establishes a working group, it must determine:

* Terms of Reference and specific project plan for its operations; and
* the membership of the working group (which must include at least one member of the TAG).

Working Groups must report to the TAG in accordance with their Terms of Reference and approved project plan. The timelines in the approved project plan for a Working Group must enable the TAG to achieve its approved TAG project plan.

Working Groups must:

* be convened by the TAG Independent Chair;
* operate according to an agenda approved by the TAG Independent Chair; and
* operate on the basis of consensus wherever possible, where consensus means Working Group members develop, and agree to support, a position on advice to the TAG in the best interest of the project outcomes.

If, in the opinion of the Independent Chair, a Working Group is not operating within or unable to complete its Terms of Reference or Project Plan, the Independent Chair may disband the Working Group. In such cases, the Terms of Reference for the Working Group revert back to the TAG.

1. Disagreements Resolution
	1. Objective

The objective of this policy is to ensure that disagreements on issues relevant to the TAG Terms of Reference are handled consistently, efficiently and fairly and that, where possible, consensus is achieved.

* 1. Principles

Each TAG may need to contend with situations where members have material disagreements on matters relevant to its Terms of Reference.

In seeking to resolve such disagreements the Independent Chair will apply the principles of fairness and impartiality, having specific regard to the following:

1. all TAG members involved shall be afforded fair treatment in the process of resolving the disagreement;
2. the disagreements will be handled fairly and in good faith;
3. all TAG members involved in the disagreement will have the opportunity to state their view and the underlying evidence that supports that view; and
4. Resolution of disagreements will be via an open and structured process that encourages consensus, and which is in line with the Artibus Innovation’s requirements under the SSO Funding Agreement.
	1. Information required

To resolve a disagreement, the Independent Chair will rely on information provided by the relevant TAG members about the disagreement and information Artibus Innovation may already hold.

To help the Independent Chair resolve a disagreement quickly and efficiently, the relevant TAG members will be requested to provide information on their view on the issue in question and the underlying evidence that supports that view.

* 1. Resolving Disagreements

Broadly, the disagreements management process involves the following steps:

Table 1. Steps in disagreements management process

|  |  |
| --- | --- |
| Acknowledge | Acknowledge to the relevant TAG members that a material disagreement exists in relation to an issue that requires some resolution.  |
| Develop Discussion Paper  | The Independent Chair will liaise with each of the relevant parties to clearly document their views on the issue and the evidence that supports that view. The Independent Chair will review the different views and develop and document feasible options for resolving the disagreement.The Independent Chair will then develop a brief Discussion Paper on the issue and distribute to the parties. |
| Discuss and resolution | The Independent Chair will convene discussions on the issue between the relevant TAG members, with the discussion to be informed by the Discussion Paper. The Independent Chair will use its best endeavours to help the relevant TAG members achieve a consensus resolution on the issue within 10 business days of the initial discussion. Where a consensus resolution is not able to be achieve within 10 business days, the Independent Chair will either:* Conclude that resolution of the disagreement is not possible and put a statement on the issue in the TAG’s advice to the IRC. The statement will clearly set out the nature of the disagreement, the relevant TAG member views and supporting evidence, the options put to the TAG member and the outcome of the disagreement resolution process; or
* Specify a date when the discussion and resolution period must be concluded.
 |
| Record | The Company will record the outcome on the disagreement in the Issues Register.  |

# TAG Agenda Item Outline

|  |  |
| --- | --- |
| Meeting Date |  |
| Agenda Item  | #XX |

|  |  |
| --- | --- |
| Subject: |  |
| Description: |  |
| Background: |  |
| Key Issues for Discussion: |  |
| Risks & Other implications: |  |
| Recommendation: |  |
| Attachments: |  |