



Applicant Handbook

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Table of Contents

1. Background.....	1
1.1. Legislation.....	1
1.2. Competency Assessment Theory	1
1.3. Competency Framework.....	3
2. Board Assessment Process	6
2.1. Documentary Evidence	6
2.1.1. Application Format.....	6
2.1.2. Assessment Procedure.....	8
2.1.3. Reporting Procedures.....	11
2.2. Professional Assessment Project.....	11
2.2.1. Commencement of a PAP	12
2.2.2. Application Format.....	12
2.2.3. Assessment Procedure.....	13
2.2.4. Reporting Procedure.....	15
2.3. Panel Interview	15
2.3.1. Application Format.....	15
2.3.2. Assessment Procedure.....	15
2.3.3. Reporting Procedure.....	16
3. Appeals	16
4. Competency Training Agreements.....	16
5. Fees.....	17
References.....	18

Background

The competency assessment system introduced by the Board was required by the introduction of the *Surveyors Act 2003*. The Act itself drew on assessment ideas that have been around for some time. It is useful for assessors to have an idea of how the Act is structured and the background theory to competency assessment.

1.1. Legislation

The *Surveyors Act 2003* made significant changes to the assessment procedure for people who wish to be registered with the Surveyors Board. The major change was to remove reference to Professional Training Agreements (PTAs) and to require the Board to use a competency based assessment process. It is worth noting that the Act has a definition of competency which differs from the common literature definition. The Act defines competency as a combination of “**qualifications, skills, knowledge and experience**”(s39).

At its essence the new Act has made a clear distinction between the role of registration, which only the Board can do, and the role of assessing the fitness for registration which bodies other than the Board may be qualified to do. In s41 the Board is empowered to accredit other entities to perform the assessment of competency on their behalf. The Act also states that an assessing entity may use any process it sees fit to do the assessment provided it can prove to the Board that the assessment process is valid. It is clear that in the absence of accredited entities it is the role of the Board to be an assessor of last resort. However the Board must keep a separation, as far as is reasonable, between its assessment function and its registration function.

To ensure that the different assessing entities using different procedures will arrive at the same outcome for an applicant it is necessary to create a consistency mechanism. In s39 the Board is required to create a competency framework for each level of registration and endorsement. These documents are an explicit list of the qualifications, skills, knowledge and experience that applicants must display before they can be registered at the level they desire. Each assessing entity is required to use this framework as the ‘yardstick’ in examining an applicant. The frameworks were developed in consultation with industry bodies in 2005 and were reviewed in 2007.

The Act makes no mention of training of surveyors. However the Board recognises that suitably qualified surveyors do not appear from nowhere and has developed a Competency Training Agreement (CTA) process to facilitate surveyor training. Discussion of this is outside the scope of this document.

The role of the assessment process is to examine that applicant against the competency framework appropriate to the registration that is sought. If the applicant is considered suitable a Certificate of Competency is issued and the applicant takes that to the Board when he or she seeks registration.

1.2. Competency Assessment Theory

It is often the case when common words are coopted to a new purpose their specific meaning in that context can become imprecise. There is a subtle distinction between someone who is *competent* and someone who has *competency*. A competent person has the ability to do a job whereas competency looks at other factors which

affect whether the job is carried out effectively, efficiently and economically (Rutherford 1996). A person who has competency understands the task within a context, is aware of their responsibilities to other groups and can apply skills and knowledge to new situations. The assessment of competency should not focus solely on the appraisal of technical skills. The skills and knowledge that a person can bring to bear on a situation will change with time, so not only will competency be obtained but it will need to be maintained.

Where competency assessment differs from traditional assessment is that the assessment is independent of the learning process rather than an integral part and the evidence is collected primarily from workplace performance rather than examinations and assignments (Fletcher 2000). In effect it says that how a person obtained the knowledge, values, skills and attitudes or how long it took them is irrelevant; what is important is that they can prove that they have them (Rutherford 1996). The evidence of competency is not performance in a set of standard tasks, but rather the evidence is selected by the applicant and presented to the assessor.

As the realm of acceptable evidence is widened it is important to have measures of the quality of evidence. Quality evidence must be authentic, valid, current and sufficient (Toop *et al.* 1994; Fletcher 2000). Authentic evidence is that which is related directly to the person that is being assessed. The assessor needs to be satisfied that the person presenting the evidence did in fact produce the evidence individually, or if they were part of a team must be sure of which sections of the evidence was their work. Valid evidence is that which is directly related to the competency that is being assessed. Current evidence is that which is related to the particular point in time the assessment is being made. The assessor needs to be satisfied that the person presenting the evidence would be capable of reproducing that evidence now if it was required. Sufficient evidence is that which is related to the quantity of the evidence. The assessor needs to be satisfied that there is enough evidence to be confident that this represents the typical performance of the person being assessed as well as that all the competencies have been demonstrated. The evidence links the person's current abilities to the standards, and the standards reflect the required abilities for the role that needs to be fulfilled.

Competency frameworks provide guidance to the assessor and the candidate on three key aspects of competency: what needs to be achieved, how well it needs to be done and under what conditions or in what context (Fletcher 2000) as well as giving a guide to acceptable evidence (Rutherford 1996).

A common critique of competency-based assessment is that it underplays knowledge and undervalues creation of new knowledge (Masters *et al.* 1990; Young 1996). Technical intelligence is about how a task can be achieved whereas critical intelligence is about whether the task is worth doing (Anderson 1991). In the working lives of professional surveyors the exercise of critical intelligence is important but it is not necessarily explicitly demonstrated. Since the evidence of technical proficiency is easier for the applicant to obtain and easier for the assessor to evaluate it leads to an assessment that is heavily weighted towards the observable technical skills and neglects the role of factual and procedural knowledge. There is a danger that an overemphasis on the common work processes means that the system assesses competence rather than competency (Campbell 2006). The challenge is to find valid techniques for applicants to show that they see

that professional practice is not purely a technical activity but it has a critical and ethical dimension.

The key defining characteristics of a competency-based assessment scheme are that the scheme assesses more than just technical skills, separates the training and education function from the assessment function and assesses against an explicit set of standards using primarily workplace-sourced evidence of flexible form.

1.3. Competency Framework

The Board competency framework consists of nine documents, one for each level of registration or endorsement and an overview document. Each framework document is divided into a number of *Units of Competency* (Units) which are major segments of the overall competency, typically representing a major function of surveyors. Each unit is further subdivided into *Elements of Competency* (Elements) which are observable functions or activities. Each element has an indicative list of actions that may be necessary to do if the element is to be successfully completed. These are the *Performance Criteria* (Descriptors).

Competency is developed through the appropriate combination of qualifications, skills, knowledge, and experience. This competency framework relates the Units of Surveying Competency, Elements of Competency, and Performance Criteria to the level of performance that the applicant is required to demonstrate.

The competency frameworks are composed of the following elements:-

1. An overall description of the level of competency to be achieved.
2. For each unit, a description of the level of competency to be achieved in this unit.

Each Unit of Surveying Competency has up to four levels of competency that may be attained by an applicant. The levels recognise increased competency based on knowledge, skills, experience and qualifications. Table 1 details the link between the Unit of Surveying Competency and the levels that are required in order to establish competency for various grades of registration. Table 2 details the link between the Unit of Surveying Competency and the level that is required in order to establish competency for each specialist endorsement.

A separate framework has been prepared for each individual level of registration and each individual endorsement. They set out, in detail, the required Units of Surveying Competency and Elements of Competency as well as the associated level to be demonstrated by applicants, together with Performance Criteria, that spell out both the breadth and level of competency required to be demonstrated by the applicant.

TABLE 1: Units of Surveying Competency and Levels of Competency Required to Achieve Various Levels of Registration

- Note:- 1 Assessment is undertaken to ensure that the applicant is competent in the field of the endorsement selected.
 2 Endorsement is available only to Registered Surveyors.
 3 At least one of the optional units must be completed by Registered Surveyor applicants.
 4 Refer to the Competency Framework documents for details of the assessment relating to the grade of registration selected.

Unit of Surveying Competency	Grades of Registration and the Associated Unit Level		
	Surveying Associate Doc. No. SBQ-CF- 0101	Surveying Graduate Doc. No. SBQ-CF- 0102	Registered Surveyor Doc. No. SBQ-CF- 0103
1 - Professional Practice	Assessed	Assessed	Assessed
2 - Collection of Data and Information	Assessed	Assessed	Assessed
3 - Management of Data and Information	Assessed	Assessed	Assessed
4 - Presentation of Information	Assessed	Assessed	Assessed
5 - Business, Management and Supporting Quality Assurance Programs	Assessed	Assessed	Assessed
6 - Communications	Assessed	Assessed	Assessed
7 - Spatial Referencing Systems and core data bases	Not Applicable	Assessed	Assessed
8 - Land Administration and Property Development	Not Applicable	Assessed	Optional (See Note 3) Assessed
9 - Controlling, Measuring and locating Developments	Assessed	Assessed	Optional (See Note 3) Assessed
10 - Research, Development, and Commercialisation	Not Applicable	Not Applicable	Optional (See Note 3) Assessed
11 - Education & Training	Not Applicable	Not Applicable	Optional (See Note 3) Assessed

TABLE 2: Units of Surveying Competency and Assessment Required to Achieve Endorsement

Note:- 1. Endorsement is available only to Registered Surveyors

2. Re-assessment is undertaken to ensure that the applicant is competent in the field of the endorsement selected.

3. Refer to the Competency Frameworks documents for details of the assessment relating to the endorsement selected.

Unit of Surveying Competency	Doc. No.	Consulting Endorsement	Technical Endorsements			
		Consulting SBQ-CF-0104	Engineering SBQ-CF-0105	Cadastral SBQ-CF-0106	Hydrographic SBQ-CF-0107	Mining SBQ-CF-0108
1 - Professional Practice		Re-assessed	Not re-assessed	Re-assessed	Not re-assessed	Not re-assessed
2 - Collection of Data and Information		Not re-assessed	Not re-assessed	Re-assessed	Re-assessed	Not re-assessed
3 - Management of Data and Information		Not re-assessed	Re-assessed	Re-assessed	Re-assessed	Re-assessed
4 - Presentation of Information		Not re-assessed	Re-assessed	Re-assessed	Re-assessed	Re-assessed
5 - Business, Management and Supporting Quality Assurance Programs		Re-assessed	Not re-assessed	Not re-assessed	Not re-assessed	Not re-assessed
6 - Communications		Re-assessed	Re-assessed	Re-assessed	Re-assessed	Re-assessed
7 - Spatial Referencing Systems and core data bases		Not Applicable	Not re-assessed	Re-assessed	Assessed	Not re-assessed
8 - Land Administration and Property Development		Not Applicable	Not Applicable	Assessed	Assessed	Not re-assessed
9 - Controlling, Measuring and locating Developments		Not Applicable	Assessed	Not Applicable	Assessed	Re-assessed
10 - Research, Development, and Commercialisation		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
11 - Education & Training		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

2. Board Assessment Process

The assessment process developed by the Board is an attempt to minimize some of the traditional weaknesses in the competency assessment approach. A typical assessment process will consist of three stages. The first is a documentary evidence stage; the second is the retention of the Professional Assessment Project (PAP) and last is a panel interview.

2.1. Documentary Evidence

In the first stage the applicant needs to supply the assessor with a properly authenticated portfolio of evidence that addresses each of the elements. In this evidence the applicant details what qualifications, skills, knowledge and experience they have which they believe is sufficient to exceed the standard set by the framework. This written assertion is supported by materials such as plans and authentication by a third party. It is important to note that the authentication merely states that the applicant actually did the work or produced the material that they are relying on. The authentication does not state whether the work was of a sufficient standard or not. That is the task of the assessor.

2.1.1. Application Format

As there is a large amount of material required to support applications for endorsements or registration as a Surveyor it is necessary for applications to be prepared in a consistent form. If the evidence is not prepared and presented in the required format or is poorly organized or referenced there is no obligation on an assessor to continue with the assessment. Applicants should be aware that the onus is on them to put their case to the assessor and it is not for the assessor to make a case for them out of a pile of poorly related material.

Evidence Format

While the process leaves the selection of evidence to the discretion of the applicant, the format that evidence is presented in is limited.

Academic Qualifications

Evidence that is sourced from academic qualifications can be presented in two ways. Both the Queensland universities that provide surveying degrees have mapped their degrees against the competency frameworks. These mappings have been pre-approved by the Board. For example the four year Bachelor of Spatial Science offered by the University of Southern Queensland should satisfy 50-60% of the Surveyor competency framework. In the case of a mapped degree which has been successfully completed it will be sufficient for the applicant to include a certified copy of the testator.

For degrees from other institutions in Australia and New Zealand it will be necessary for the applicant to provide a certified copy of their academic record as well as descriptions of the subjects published in the relevant university handbook. It will also be necessary for the applicant to explicitly show where the content of individual subjects relates to the descriptors of the element and claim that the knowledge and skills obtained is sufficient.

Before qualifications from overseas institutions can be used their status must be ascertained through the Bureau for the Assessment of Overseas Qualifications that was established by CRSBANZ. This will be done through the standard Board process. Once the degree has been ascertained to be equivalent in standard to an Australian qualification then it may be used as described in the previous paragraph.

Individual Elements (IEs)

An individual element is a written paragraph between 100 and 300 words in length signed and dated by an authenticating party. In the paragraph, written in the first person, the applicant describes a task or project they have completed that they think is sufficient evidence that they have attained the element. Applicants are encouraged to choose projects that are sufficient to cover the entire element rather than just one or two descriptors. It is suggested that no more than two IEs are used to address any element.

In IEs applicants are encouraged to write a narrative using the STAR framework. First describe the (S)ituation you found yourself in, next the (T)ask you were required to perform, next the (A)ction you took and finally the (R)esults of those actions. The narrative should refer to documentary material they have included that explains the task further or shows the result of the action. An example of an IE is included in Appendix B.

All IEs should be submitted in hardcopy as well in *Word 2003* format.

Career Episode Reports (CERs)

It is obvious that to address the entire framework with just IEs would make for a large document. In reality most surveying projects involve a large range of skills that are described across many elements. To reflect this and to minimize the size of the applications applicants are encouraged to use CERs.

A CER can be a description of any project or period of work that can address several elements, or several descriptors in one element or even several descriptors from several elements. It may start with an abstract or overview and will hopefully use the STAR framework. The CER will focus on personal contributions and responsibilities, problems faced, solutions found, judgements made and the results and impact of these. A column next to the project description should be included. In this column the applicant must explicitly relate the activities being described to the competency framework descriptors and elements. Any documentary evidence supplied by the applicant must be clearly referenced within the CER. Once again it must be authenticated by a third party. An example of a CER is included in Appendix C.

All CERs should be submitted in hardcopy as well in *Word 2003* format.

Authenticators

Both the previous evidence types requires a person to take responsibility for confirming that the applicant has done what they have purport to have done. It is preferable that all evidence is authenticated by a registered surveyor but if that is not possible then it is acceptable to use someone who has knowledge of the specific element and membership of a professional body that has a disciplinary mechanism. As a last resort work can be authenticated by someone who has personal knowledge of the work being reported and is willing to sign a Solemn Declaration under the *Oaths Act 1867-1988*.

Executive Summary

Each application will require an executive summary laying out what evidence is presented for each element and where that evidence can be found in the supporting material. The summary will list each element in a table with adjoining columns showing what evidence is provided and a space for the assessor to make comments. Each separate piece of evidence should be given a unique reference. An example page of an executive summary is given in Appendix A of this document.

A pro forma soft copy of this summary for each framework will be available on the Board website.

2.1.2. Assessment Procedure

As discussed in Section 1.2 competency in an element will be successfully attained if the evidence that is presented is authentic, valid, current and sufficient.

When applying for assessment the applicant gives permission for the assessor to contact any person who has authenticated their evidence. It should be safe to assume that those people who have authenticated the evidence have the qualifications that they claim but if it appears suspicious assessors are entitled to check the veracity of the validation. If any evidence is found to be fraudulent the assessment is terminated and the Board will use the disciplinary powers it has under s69 and s70 of the Act.

The length of time that evidence will remain viable will depend on the element for which it is presented. This decision is left to the discretion of the assessor, however any evidence should use the techniques and instruments that are typical for the time of assessment. If an applicant is using academic qualifications to address elements the degree should be treated with caution if it is more than 10 years old.

The judgement of evidence's validity and sufficiency are left to knowledge and experience of the assessor. Assessors are strongly encouraged to seek advice from other assessors if they have any doubts in specific circumstances.

Each element will be scored on the following scale from 0-4 based on the evidence that is provided.

- 0 – No relation at all to the element or not authenticated
- 1 - Evidence is insufficient or lacks depth to illustrate adequately competence
- 2 - Either the evidence is appropriate but further explanation may be required or the explanation is appropriate but further documentary evidence may be required

3 - Satisfactory level of competence has been illustrated

4 - Competence clearly identified and documented to a high standard

The descriptors are an indicative list only but any descriptors that are not addressed at all should be noted and a justification made as to why it has no relevance. If the assessor agrees that the omission is not significant it will be noted in the assessor's report to the Board. Descriptors that are consistently omitted will be tracked and examined when the framework is reviewed. Similarly any additional actions that the applicant feels is necessary to complete the element should be highlighted and the assessor will note it for possible inclusion in the element's descriptors.

Once all the evidence has been assessed the result of the whole assessment will be made based on the scores awarded to each of the elements. It should be noted that all elements are not equal in significance and the final outcome should take in to account the relative merits of each score and their importance.

The outcomes of this stage should be pass, minor shortfall, significant shortfall or outright fail. The outcomes are shown diagrammatically in Figure 1.

An outright fail will mean the unilateral termination of the competency assessment. In this case the evidence is considered seriously inadequate and the assessor is not obliged to give any feedback on where it is deficient.

Where the evidence has a significant shortfall the assessor will identify the elements that have been successfully addressed and then the applicant can decide to terminate the process, resubmit better evidence and an additional fee within a negotiated period or undertake professional development to acquire the missing competencies. If this development exceeds a negotiated timeframe (of the order of six months) the application will need to be remade.

Where there is a minor shortfall in evidence the assessor will provide the applicant with feedback and a short period to rectify the shortfall

In all circumstances the assessor is under no obligation to coach the applicant in what activities they can undertake to improve their competencies but there is nothing that precludes them from doing this if they wish.

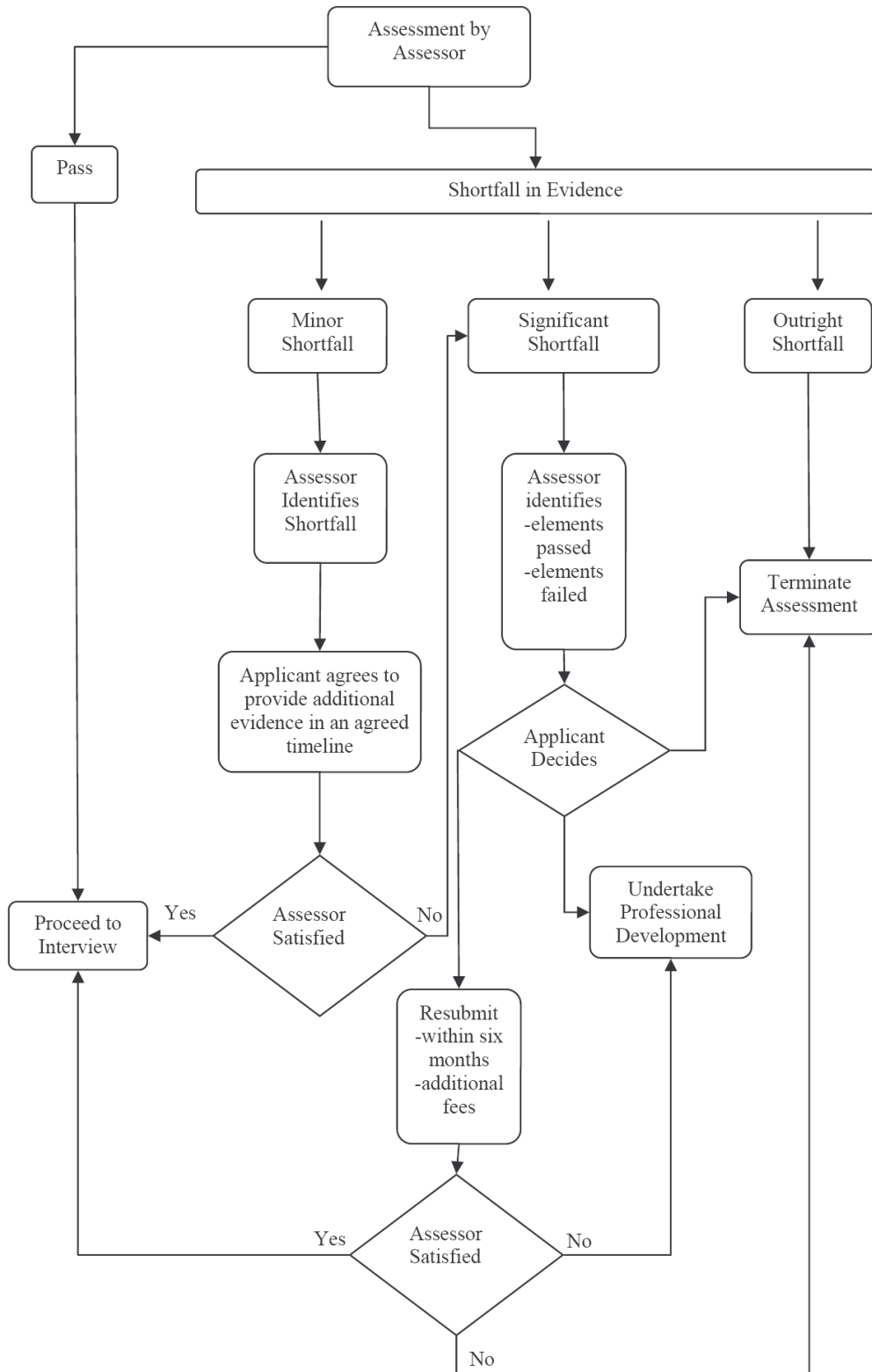


Figure 1 Assessment outcomes and pathways

The final result will be reported to the applicant through the Board office. Assessors are required to return the assessment within one month of being issued. If any situations arise that will affect this timeline the assessor should notify the Board office as soon as possible.

2.1.3. Reporting Procedures

The outcome of the assessment will be conveyed to the Chief Examiner in a standard form. This form will be copied and sent to the applicant. In the case of minor and significant shortfalls this document will include feedback to the applicant. Although the format of that feedback will vary according to each assessor an example is included in Appendix D.

The interview stage is an opportunity for the applicant's evidence to be further explored in areas where it may be weak. However due to the inclusion of the PAP there may be many months between the documentary assessment and the interview. In the case of a successful assessment a confidential form containing advice to the Chief Examiner will be included. This document will give the assessor a chance to note any reservations they have about the evidence that the applicant has presented. These may be those areas where the assessor considers that applicant to be weak or where the assessor has used their discretion. This form will also include a list of all people who have validated the evidence and their registration status.

2.2. Professional Assessment Project

The Professional Assessment Project (PAP) is an opportunity for the applicant to display their competencies while being observed by the assessor. The project should embrace work undertaken in the normal course of business of the firm or authority in which the applicant is employed.

The PAP has been retained from the previous assessment regime. As before, the applicant will suggest an assistant assessor and the Board will appoint an external assessor. The Board has from time to time adopted certain views on how a PAP may be used for assessment. The applicant has already demonstrated technical ability by completing the documentary evidence stage. The PTA is considered to constitute a demonstration at a reasonable (not specialist) level of the person's ability.

The PAP allows the Board, through the external assessor, to assess the applicant's performance and competency in all aspects (ethical/professional, administrative and technical) of the practice of surveying.

The administrative ability is assessed by the assessors observing the applicant's performance in discussion, negotiation and written communication. If the project is within the public sector, similar negotiations would be assessed with respect to the client department. These examples are not exhaustive but provided there is a significant administrative input, an assessment can be made.

The Board requires some technical content within the project but not necessarily as demanding as that in the documentary evidence. If an applicant is applying for multiple endorsements it is necessary for them to complete more than one PAP or one project that covers the technical content of each endorsement.

If the project breaks down at an advanced stage it is not necessary for the applicant to start again on a new project. If, for example, the process stops due to unwillingness/inability of the clients to accept Council conditions, the assessors can proceed from that point by discussing with the applicant what the applicant's advice

to the client would be and how he/she would proceed with an appeal or whatever the succeeding steps might be. The assessor could, if necessary, observe the applicant in the field on another job to assess the field aspect.

The Board's view is that provided it can be satisfied, through advice from the assessors, of the applicant's ability as a professional surveyor, it should allow the process to be as smooth as practicable.

The Board also considers that by the time the applicant is presenting a PAP, the applicant should have a good understanding of their role and responsibility in the community and in relation to their fellow professionals. Assessors may well initiate discussion on this and other aspects of professionalism.

2.2.1. Commencement of a PAP

As it will take some time to collate an applicant's evidence as well as complete a PAP it is desirable to allow an applicant to commence a PAP before they have had their evidence assessed.

At present applicants in a PTA can commence their PAP before the PTA is completed. This works because the continuous assessment model of the PTA gives an indication of what stage of development an applicant has reached before the finalisation of the PTA.

The new system uses a summative assessment model which means the Board will have no idea of an applicant's competency until all the documentary evidence is collated. To allow applicants who have the required competencies to get the recognition they deserve promptly it will be possible to commence a PAP before the documentary evidence is assessed. To take advantage of this opportunity an applicant must include in their application a detailed resume of their practical experience as well as a recommendation from their nominated assistant assessor to the effect that the applicant has a strong chance of successfully passing the documentary evidence stage.

Applicants should be aware that commencing their PAP too early will limit their ability to successfully complete the project and may be against their long term interest.

2.2.2. Application Format

Before submitting their "*Application for Approval of a Proposed PAP*" the applicant shall, in consultation with the assistant assessor, make all arrangements necessary for the performance of the project.

The applicant shall prepare and submit a Project Outline, as per the application form checklist:

- The Project Detail would include describing the nature of the project proposed, a brief description of the category of surveying to be undertaken, the objectives of the project and the methods being adopted to achieve the objectives of the project;
- Details of the Applicant's intended involvement in the project;
- Project timeline;
- Project cost estimates;
- Locality map;

- Proposal plan;
- Nominate the assistant assessor for the project.

The assistant assessor proposed by the applicant shall support the application with a statement of their intention to perform the necessary supervision of the project.

The Board shall appoint the external assessor.

2.2.3. Assessment Procedure

The assessment of a PAP is a combination of the observations by the two assessors of the applicant's performance as well as a formal assessment of the project report.

The applicant should:

- determine the objectives of the project,
- plan the work,
- obtain all consents necessary,
- make a full search of relevant existing data,
- **personally** perform the surveys and calculations,
- supervise the drawing of plans or maps,
- prepare a costing statement,
- arrange lodgement of the results of the project, and
- submit a report to the assessor on each of the above actions.

Both the assessor and assistant assessor shall assess the competency of the applicant by observing their performance on the project and shall conduct such oral or practical examinations as they deem necessary.

The Board will conduct further oral examination at the interview stage either in the category of surveying chosen for the PAP or in other relevant matters.

The assessor and assistant assessor will take into consideration the check list set out below. The check list refers specifically to a cadastral project. A number of its headings will apply equally to a project in some other branch of surveying, others will not. The assessor of the latter type project will need to take this into account. The assessor may see fit to introduce alternative components to meet particular requirements.

The check list is to be regarded as a guide and will not be converted into a quantitative marking scheme by the allocation of marks to the components or sub-components.

CHECKLIST

Objectives

Discussions with client; identification of purpose of the survey; completion date to meet client needs.

Planning

Instruments and other equipment; personnel; travelling and accommodation; notice of entry; time schedule; cost estimate; ascertain the relevant land tenure, encumbrances, reservations, etc.; administrative process adopted.

Approvals

Correspondence and discussions with client and planning authority and/or the Department of Natural Resources and Water on consent matters such as zoning. Also the assessment of conditions of approval and their relevance.

Search

Location map; search of Department of Natural Resources and Mines documentation (plans, field notes, PSM sketches, proclaimed survey area data, etc.).

Field Work and Calculations

Datum; reinstatement; field procedures; meridian; marking; survey records; calculations; report on field survey.

Plan

Supervision of draftsman; compliance with Survey Plan Guidelines; suitability for proposed action.

Costing Statement

Charge out rates in accordance with contractual arrangements, explanation of unforeseen costs.

Lodgement of Results

Endorsement of plan by surveyor, registered proprietor, Local Authority, Chief Executive - Department of Natural Resources and Mines (if required), lodgement of plan and any other supporting documents with the registering authority.

Professional Aspects

The Applicant's professional approach to the project in terms of compliance with the code of professional conduct and relationships with the client, statutory bodies and other professionals.

The assistant assessor shall report to the assessor on the performance of the applicant throughout the project and on the applicant's ethical/professional, administrative and technical performance aspects as these pertain to the project.

2.2.4. Reporting Procedure

As the Board's eyes and ears, the assessor and the assistant assessor offer judgements and opinions on the applicant's performance. This is so that the applicant can satisfy the Board of their capacity to maintain a high level of performance in all aspects (ethical/professional, administrative and technical) of the practice of surveying.

In order to be satisfied the Board seeks from the assessors a full report which, as well as commenting on the points listed, discloses all doubts or deficiencies about the applicant's performance and offers opinions on any matter connected with the project or resulting from discussions with the applicant.

The assessor is required to conclude the report with a recommendation on whether the applicant, in the assessor's opinion, has shown competency and professionalism. The assessor recommends whether the applicant is fit to be registered as a surveyor and be granted the endorsements for which the application has been made.

2.3. Panel Interview

2.3.1. Application Format

The final stage of the assessment process will be a formal interview. Generally this applicant interview will be with a small panel but it may be with the assessor alone. At the interview the applicant will be given some feedback from the assessor on the evidence that was presented or questioned about some aspects of the evidence, however the primary focus will be assessing the applicant on aspects of professional and ethical standards. This may take the form of comments on ethical dilemmas that are proposed by the panel.

There should be an opportunity for the applicant to give feedback on the process of the assessment. It should be made clear to the applicant that any negative comments will have no influence on the assessment outcome.

2.3.2. Assessment Procedure

If possible the panel will consist of assessors who have assessed the previous stages of the assessment. If a Board member is part of the panel then it is possible that the interview can double as a registration interview. Prior to the interview the panellists will receive the advices to the Chief Examiner that were produced at the previous two stages. These may guide the panellists in the selection of questions during the interview.

The assessment is left to the professional judgment of the panel.

2.3.3. Reporting Procedure

Because the panel will need to discuss the adequacy of the applicant's responses, the applicant will not be advised at the interview of the success or otherwise of the assessment.

After the applicant has left the panel will decide on the outcome of the interview. One of the panellists will be delegated to convey the result of the assessment to the Chief Examiner who will pass on the result to the applicant. If the outcome of the interview is a fail the reasons must be given.

3. Appeals

In the case of an applicant who feels that they have been incorrectly assessed there is an appeals mechanism. All appeals must be made in writing to be considered.

In the first instance the appeal is directed to the assessor. It must state the specific grounds for the appeal. The assessor has one month to respond to the appeal.

If the applicant still feels aggrieved then they may appeal to the Chief Examiner. Once again the appeal must be in writing and specific. The chief examiner has one month to respond to the appeal.

The final option for appeal is to the full Board. Providing the appeal is submitted before the meeting papers have closed the appeal will be dealt with at the next Board meeting.

4. Competency Training Agreements

The *Surveyors Act 2003* makes no reference to obligatory training. However the Board realises applicants and supervisors may need guidance when attaining competency and so they have developed the concept of a Competency Training Agreement (CTA). The CTA is loosely based on the PTA that was part of the old process. However the PTA was compulsory but the CTA is voluntary. **A CTA is completely optional.**

The competency framework explicitly states what qualifications, skills, knowledge and experience are required to attain each level of registration or endorsement. This documented level of expectation means the starting point of the assessment process can and will be a self assessment done by the applicant. It would be advisable for the applicant to do that assessment in conjunction with a suitably qualified supervising surveyor to help give an objective opinion of their abilities. There can be three outcomes from a self assessment. An applicant can decide that they have the competencies and the evidence to back it up, they have the competencies but not the evidence or they do not have all the competencies. If the outcome is either of the last two then the applicant may want to enter into a CTA.

If an applicant chooses to enter into a CTA they will create a structured training program that also generates proof of competency that is assessed by an independent assessor. The agreement involves three parties, the applicant, supervising surveyor and the Surveyors Board. The agreement will be unique to the

applicant because it will address the specific gaps in their qualifications, skills, knowledge and experience so there is no minimum length and no maximum length.

There will be three parts to a CTA. The first part will detail the experience and qualifications of the applicant and proposed supervising surveyor as well as a profile of the applicant's employer. This will allow the Board to satisfy itself that the supervisor is able to deliver suitable training and that the company allows the applicant to gain a sufficient breadth and depth of practical experience. This will also allow the applicant and their supervisor to identify expertise, equipment or opportunity limitations on the available training.

The next section will identify the acknowledged shortfalls in the applicant's qualifications, skills, knowledge and experience and identify tasks that are likely to produce the experience and provide evidence that they will display the applicant's competencies. An example is provided in Appendix E.

The last section will be a training and education schedule that will show how the tasks can be completed within the prevailing time and money constraints of the applicant and his or her employer. It is anticipated that it may take the form of a Gantt chart.

Lastly it should be noted that it is possible to start a CTA before an applicant's tertiary qualifications have been completed. The Board is aware that many students work and gain valuable experience while still studying. It may be advisable for applicants to develop CTAs when they reach an advanced stage of their tertiary education.

5. Fees

The fees payable for applicants for assessments as at July 2008 are as follows:

Assessment type	Fee
Associate – No qualifications	\$ 274.00
Surveyor only	\$ 684.00
Surveyor + 1 endorsement	\$ 1368.00
Each subsequent endorsement as part of the same application	\$ 684.00
Endorsement only	\$ 684.00
PAP assessment	\$ 361.30
Panel Interview	Nil

Note that fees are set by regulation and there are also fees for applications for registration.

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Appendix A- Example Executive Summary

Element	Descriptor	Evidence	Assessor Notes
Unit 1 : Professional Practice			
1.1 Advance the science of surveying and the image of surveyors		IE 1 CER 3	
1.2 Fulfil community service obligations	i,iii,iv	IE 2	
	ii, v	CER 4	
1.3 Follow an accepted code of professional conduct and ethics		CER 6	
1.4 Undertake a program for personal professional development and continuing education		IE 7 CER 2	
1.5 Understand and apply sustainable development and environmental principles		Assoc Dip Surveying USQ	
1.6 Accept responsibility for professional activities		CERs 5,6 & 8	

Appendix B- Example of an Individual Element

Competency Element Claimed	Individual Element Title: <i>Use modern surveying technologies to collect data</i>
2.3 iii,iv,v,vi	<p>As a result of a client instruction I realised that I lacked skills and up-to-date knowledge in the area of GPS detail surveys. To overcome these shortcomings I decided that I required more training and sought a short course in RTK GPS.</p> <p>I attended the AJU Workshop (see attendance certificate in appendices) at the University of Hard Knocks on 20th-22nd July 2007. At this workshop I was instructed in the RTK theory, field techniques and the processing of data.</p> <p>As a result of this workshop I can now produce detail surveys on local co-ordinate systems with the use of GPS. An example of this is a shown in the Appendices.</p> <p>Although I now possess sufficient skill in RTK GPS I plan to enhance these skills by doing a course in rapid static surveys.</p>

Authenticator **Name:** __Harry Smith_____

Qualifications: __Registered Engineering Surveyor_____

I verify that the above narrative is a true account of the candidates own work

Signature: _____

Date:_____

Contact No.:_____

Appendix C- Example of a CER – Associate application

Competency Element Claimed	Career Episode Title: <i>Orion Springfield Town Centre</i> Dates of Career Episode: 16/05/04 – 16/05/07
	<p>The project was split into two stages. Stage 1 involved the connection of the existing Springfield Greenbank Arterial road into the site via a newly proposed bridge while stage 2 provided all the external civil infrastructure and carparks for the shopping centre. Listed below are a number of the responsibilities included in my role as party leader.</p> <ul style="list-style-type: none"> ➤ Establish control network for civil works setout. ➤ Establish level datum for control stations. ➤ Provide detailed setout of all earthworks, services, roads and bridges. ➤ Volume calculations for earthworks. ➤ Prepare as constructed reports on all roads, pavement, bridges and services (sewer, water & stormwater). ➤ Provide assistance to foreman in plan interpretation and other associated calculations.
2.1 i, ii, iv	<p>I performed a closed traverse between a number of control stations provided which had known horizontal coordinates (site) and an AHD vertical datum. Extra stations placed in positions unlikely to be disturbed by construction but still convenient for use in setout were placed and connected to by the traverse. I carried out a least squares adjustment on the network holding the given control points as fixed; thus a constrained adjustment was achieved and coordinates for all the control stations in the network calculated and the horizontal site datum established. I paid particular attention to the error residuals making sure acceptable tolerances were adhered to. I located three permanent survey marks with MGA coordinates to satisfy Ipswich City Councils (ICC) as-constructed datum requirements. The level datum was derived from the know coordinates (AHD) supplied and assigned to the rest of the stations by means of a level run.</p>
2.2 i, ii, iii	
4.1 – 4.4	<p>To ensure accurate volumes could be calculated for cut/fill quantities, I completed a DTM survey over the natural surface of stage1 before any civil works commenced with contours for stage2 provided electronically. Volumes were calculated between the natural surface tin and all the subsequent surfaces requiring volumes between. An example of one of these calculations is included in Appendix A. Subsequent TINs were also created over the road subgrade for calculation of gravel quantities. I used the exact method for volume calculation using 12D software with reports and cut/fill sketches created using this application.</p>
6.3 i	<p>With regard to council's datum for the as-constructed reports, I also used 12D to perform the transformation between the non-projection site coordinates and the projection MGA coordinates, a process that incorporates the scale factor. A number of batters that were part of pre-works done by another company, did not adhere to the design specifications. I located the extents of these batters in the field and used 12D to generate cross sections to aid in their construction.</p>
3.2 i	<p>Electronic drawings, upon request, were supplied and I overlaid them onto the project control. This allowed me to create a number of alignments and setout files where information was not provided for on the plans.</p>

<p>1.6 i, ii 2.2 i, ii, iii 3.3 i, ii, iii 4.1 – 4.5 7.1 - 7.3</p>	<p>My role as party leader involved detailed setout of various civil infrastructures from centreline and kerb staking, services location, batter pegging, bridge works, volume calculations and as-constructed locations pertaining to a great many of the above. I have included examples of the design plans I was required to interpret in Appendix B. To facilitate in the above setout a number of setout tables were provided. These consisted of various setout coordinates, horizontal and vertical design for control lines, stormwater and sewer long sections to aid in invert determination and road cross sections. I used the control lines along with the grades provided in the cross sections to create a number of horizontal and vertical alignments and grouped the data in the setout tables into more manageable files using the software TPSETOUT. I setout all of the civil works using this program with many functions available for road and batter setout.</p>
<p>1.1 i 6.1 i, ii, iii, iv, v</p>	<p>Significant liaising between the client and myself was required, involving regular interaction relating to plan interpretation, general setout needs and any setout questions that arose. This extended to other disciplines where I would often communicate with sub-contractors in matters relating to setout. With the constant revision of drawings and a number of these needed electronically, I coordinated directly with engineers and designers to facilitate the updating of revised electronic drawings.</p>
<p>2.1 iii 5.1 i, ii, iii</p>	<p>I ensured quality assurance (QA) was met with QA files of all setout data recorded and stored, with references made to them in my field notes and using a date system of filing for traceability.</p>
<p>1.4 i, ii 6.2 i, ii, iii</p>	<p>The project was completed with the as-constructed data being entered into ICC databases for their records, enabling fast and easy retrieval of all associated data. Although this was done by the client, it was my task to provide the preliminary sketches. I have included an example in Appendix C. I attended the meeting held with council to demonstrate the functionality of the system and learn skills necessary for future database entry.</p>

Authenticator **Name:** Paul Cooper

Qualifications: Registered Engineering Surveyor

I verify that the above narrative is a true account of the candidates own work

Signature: _____

Date: _____

Contact No.: _____

Appendix D- Example applicant feedback – Surveying Graduate Application

Unit	Element	Comment
Professional Practice		Acceptable
Collection of data and Information		Acceptable
Management of Data and Information		Acceptable
Presentation of Information	Produce models	No specific examples have been provided
	Certify data	Evidence does not relate to element
Business, Management, and Supporting Quality Assurance Programs	Apply project management principles	You have not described project management principles nor shown when they were applied
	Apply self management principles	No specific examples have been provided
Communications	Communicates effectively	This document is sufficient evidence. No authentication is required.
	Prepare and comprehend surveying documents	The report referred to in paragraph 2 should be supplied
Spatial Reference Systems and Core Data Bases		Acceptable
Land Administration and Property Development	Advise on appropriate land tenure and land tenure systems	Paragraph 1 does not relate to element In paragraph 2 no specific examples have been provided
Controlling the Location of Developments		Acceptable

Appendix E- Example Activity Planning Sheet – Surveyor Application

Element	Existing Evidence	Proposed Task	Proposed Evidence
Unit 4: Presentation of Information			
4.1 Assemble data into specific data or information sets	USQ- BSPS CER 3- Farm GIS – “Tycallah”	Nil	
4.2 Compile and produce maps, plans and charts and photographs	USQ- BSPS	Do own drafting for Idents 3 Detail surveys > 2ha	IE + 2x CERs Ident Plans Detail & DTM -files
4.3 Provide digital spatial information	Nil	Prepare as-con for Council GIS	CER As-con files
4.4 Produce models	USQ- BSPS	Prepare as-con for Council GIS	CER As-con files
4.5 Formally present information orally to client, government agencies and public forums	USQ BSPS	Nil	
4.6 Prepare reports	USQ- BSPS	Write reinstatement report for a complex reinstatement & lodge as Field notes	CER Field notes report
4.7 Certify data	USQ- BSPS	3 x height certificates	CER Certificate and calcs pages.
4.8 Provide advisory services	Nil	Prepare as-con for Council GIS	CER As-con files