



# POST GRADUATE TRAINING PLAN (PTP)

NAME OF GRADUATE: Jack Smith

Signature: *JSmith*

This training plan has been prepared in conjunction with the graduate surveyor's supervisor.

NAME OF SUPERVISOR: Helen Nguyen

Registration Status: Registered Surveyor, Engineering Endorsement

Signature: *Helen Nguyen*

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# Statement of Progression to Surveyor Registration

## Progression 2013

I gained additional experience in total station and GNSS operation in numerous examples set out surveys.

I prepared 2 CERs covering the Framework Unit 1 and Unit 2. I have calibrated 3 total stations at the Gold Coast range and have completed an IE describing the results. CER 2 also covered elements of S3.4 – Occupational Health and Safety.

Submitted CERs for progressive lodgement in October, 2013 and received a pass in all descriptors submitted with the exception of 2.3(v) and 2.3 (viii).

I updated my PTP and submitted it for my 2014 registration.

## Progression 2014

I am currently preparing 2 CERs covering most of Unit 3 and Unit 6. I intend to complete these CERs and submit them in September.

I was also given some introductory training in using calculation software (12D) and AutoCAD drafting. This has provided me with the knowledge necessary to undertake topographical and volume surveys.

I am getting more experience on small and medium size topographic jobs and expect to independently undertake a large topographic job soon.

## Future Planned Learning

S4.5 Electronic models and plans – more practice and experience required in calculation and drafting software.

Unit 5 Communication – more exposure required to dealing directly with other professionals and clients.

**Unit 1: Personal Qualities**

<b>Element</b>	<b>Descriptors</b>	<b>Proposed Work Experience</b>	<b>Proposed Timeframe</b>	<b>Date CER Assessed</b>
S 1.1 Possess a tertiary qualification in surveying	Applicants will need to demonstrate that they: <ul style="list-style-type: none"> <li>i. Have completed a course of study of at least three years fulltime duration acceptable to the Surveyors Board of Queensland or have been previously registered as a Surveyor by the Surveyors Board of Queensland</li> </ul>	Copy of 4 year Degree  SBQ assessment of overseas 4 year degree	Submit October 2013	Passed December2013
S 1.2 Are professional in their dealings with the public	Applicants will need to demonstrate that they: <ul style="list-style-type: none"> <li>i. Have not conducted themselves in a manner that erodes the public confidence in the profession</li> </ul>	CER Description of personal Qualities Statement of no contrary evidence	Submit October 2013	Passed December2013
	<ul style="list-style-type: none"> <li>ii. Have not been unfair or unethical in their dealings with the public</li> </ul>	Reference from supervisor	Submit October 2013	Passed December2013
S 1.3 Know and comply with published ethical codes	Applicants will need to demonstrate that they: <ul style="list-style-type: none"> <li>i. Understand and can explain the Surveyors Board of Queensland's <i>Code of Practice for Surveyors</i></li> </ul>	CER Description of personal Qualities Reference to elements of code	Submit October 2013	Passed December2013
S 1.4 Keep their knowledge and skills current	Applicants will need to demonstrate that they have made themselves aware of changes in surveying practice through activities such as: <ul style="list-style-type: none"> <li>i. Attending continuing professional development events</li> </ul>	CER Description of personal Qualities Attendance at conferences	Submit October 2013	Passed December2013
	<ul style="list-style-type: none"> <li>ii. Reading literature relevant to surveying practice</li> </ul>	Research on Scanners	Submit October 2013	Passed December2013
	Applicants will need to demonstrate that they: <ul style="list-style-type: none"> <li>i. Can describe the regulation of surveying in Queensland</li> </ul>	CER Description of personal Qualities	Submit October 2013	Passed December2013

S 1.5 Know what limitations apply to their work	ii. Have not undertaken work beyond limits of personal skills and expertise	Refer to Surveyors Board Presentation Statement and reference from supervisor	Submit October 2013	Passed December2013
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**Unit 2: Collection of Data and Measurement**

<b>Element</b>	<b>Descriptors</b>	<b>Proposed Work Experience</b>	<b>Proposed Timeframe</b>	<b>Date CER Assessed</b>
S 2.1 Collect data by measurement	Applicants will need to demonstrate that they: i. Use adequate redundant measurements to validate data	CER on detail survey b/s checks, known points, overlapping	Submit October 2013	Passed December2013
	ii. Ensure measurements are legally traceable	IE on Total Station at Gold Coast Range DNRM Software analysis	Submit October 2013	Passed December2013
	iii. Evaluate the various measurements methods and procedures available	CER on detail survey Consider methods suitable to accuracy specifications	Submit October 2013	Passed December2013
	iv. Assess the effectiveness of the measurement method adopted	CER on detail survey Were specifications met efficiently	Submit October 2013	Passed December2013
S 2.2 Search and acquire existing data	Applicants will need to demonstrate that they are able to: i. Extract required information from relevant geographic and land information records, survey data bases, and general information depositories	CER on detail survey Underground services search "as constructed"	Submit October 2013	Passed December2013

		CER on cadastral search		
S 2.3 Can use and maintain GNSS surveying instruments	Applicants will need to demonstrate that they are able to:			
	i. Define coordinates systems likely to be encountered by GNSS users and calculate GNSS coordinates			
	ii. Discuss the principles of GNSS observations	CER on practical sections – detail survey control traverse GNSS	Submit October 2013	Passed December 2013
	iii. Make observations using a GNSS receiver	And		
	iv. Explain GNSS observations techniques, and calculate and			
	v. evaluate levels of accuracy associated with GNSS observations	IE (individual element) for theoretical components, relating back to CER		Not Passed
	vi. Identify error sources in GNSS observations, and explain			Passed December 2013
	vii. the uses and critical factors of differential GNSS techniques			
viii. Output GNSS observations in existing local co-ordinate systems including ground based systems		Not Passed		
S 2.4 Apply quality assurance principles	Applicants will need to demonstrate that they are able to:			
	i. Comply with an accepted quality assurance program	IE on compliance audit of CER related to company QS	Submit October 2013	Passed December 2013
	ii. Rectify non-compliance with quality standards	IE on correction to QS element identified in external audit 2013	Submit October 2013	Passed December 2013

**Unit 3: Development Surveys**

Element	Descriptors	Proposed Work Experience	Proposed Timeframe	Date CER Assessed
S 3.1 Setout minor works	Applicants will need to demonstrate that they are able to : i. Read, interpret and understand design and construction plans	I have substantial setout experience	Submit CER by October 2014	
	ii. Set out works	Proposed CER – House Setout 243 Willow Street, Coomera.	Submit CER October2014	
	iii. Communicate results to client, construction staff and other consultants		Submit CER October2014	
	iv. Use adequate redundant measurements to validate data		Submit CER October2014	
S 3.2 Perform topographic surveys	Applicants will need to demonstrate that they have: i. Completed a variety of topographic surveys that were fit for purpose using terrestrial and GNSS instruments.	I have experience but no appropriate project.	Submit CER July 2015	
	ii. Use adequate redundant measurements to validate data	Expect to complete a project the end of 2014.	Submit CER July 2015	
	iii. Accurately described the origin of datums and other explanatory notes		Submit CER July 2015	
S 3.3 Survey and calculate volumes and quantities	Applicants will need to demonstrate that they: i. Collect topographic data at appropriate accuracy and density for volume purpose	<u>Require more experience in this area</u> Undertaking 12D training and projects under direction of supervisor.	Submit CER July, 2015	
	ii. Calculate and report volumes to an accuracy justified by the measurement method		Submit CER July, 2015	

S 3.4 Know and apply occupational health and safety requirements	Applicants will need to demonstrate that they: i. Can describe the requirements of occupational health and safety legislation in Queensland that is pertinent to their work environment	CER Completed	October 2013	Passed December 2013
	ii. Use occupational health and safety procedures that comply with the relevant legislation	CER Completed	October 2013	Passed December 2013

**Unit 4: Process Field Measurements**

<b>Element</b>	<b>Descriptors</b>	<b>Proposed Work Experience</b>	<b>Proposed Timeframe</b>	<b>Date CER Assessed</b>
S 4.1 Can detect errors in existing data and field observations.	i. Identify errors in data that is supplied by other parties	CER Future Cadastral Survey	March 2015	
	ii. Use quality assurance processes to ensure that errors are detected and eliminated		March 2015	
S 4.2 Understands the accuracy of existing data and creates new data with appropriate accuracy.	i. Determine the accuracy and reliability of data	CER Future Cadastral Survey	March 2015	
	ii. Define the limitations of collected data		March 2015	
S 4.3 Can combine existing data with new survey data	i. Are able to deduce or estimate the accuracy limitations of existing data sets	CER Future Cadastral Survey	March 2015	
	ii. Do not use data sources of insufficient accuracy in survey products		March 2015	

S 4.4 Can produce plans that are accurate, legible and useful	Applicants will need to demonstrate that they are able to:	CER Future Cadastral Survey	March 2015	
	i. Use a computer aided drafting package to produce paper plans			
	ii. Produce sketches that are fit for purpose			
S 4.5 Can produce electronic models and plans	Applicants will need to demonstrate that they are able to:	<a href="#">Require more experience in this area</a>	March 2015	
	i. Use a computer aided drafting package to produce electronic plans			
	ii. Create digital models of physical surfaces			
	iii. Attach attribute information to a digital model			
	iv. Transfer files between various formats			

**Unit 5: Communication**

Element	Descriptors	Proposed Work Experience	Proposed Timeframe	Date CER Assessed
S 5.1 Communicate effectively	Applicants will need to demonstrate that they are able to:	CER – onsite meetings, emails,	July 2015	
	i. Communicate effectively, orally and in writing		July 2015	
	ii. Issue clear, accurate instructions to subordinates		July 2015	
	iii. Successfully use electronic communications technologies			
S 5.2 Can speak effectively at meetings	Applicants will need to demonstrate that they are able to:	<a href="#">Require more experience in this area – particularly other professionals</a>	July 2015	
	i. Explain surveying matters in comprehensible and unambiguous language at small meetings of allied professions			



S 5.3 Prepare reports	Applicants will need to demonstrate that they are able to: i. Prepare logical and coherent reports for the benefit of surveyors, other professions and clients	Examples of survey plans and written reports	July 2015	
S 5.4 Certify data	Applicants will need to demonstrate that they are able to: i. Write certificates that are accurate and limited to areas of their professional competence	Cadastral form 13, checklist, signed off by endorsed surveyor	July 2015	
S 5.5 Provide advisory services	Applicants will need to demonstrate that they are able to: i. Provide sound advice to clients and fellow professionals on surveying and land management matters at an appropriate level of detail.	<u>Require more experience in this area</u>	July 2015	

**Unit 6: Survey Control**

Element	Descriptors	Proposed Work Experience	Proposed Timeframe	Date CER Assessed
S 6.1 Use geodetic reference systems	Applicants will need to demonstrate that they are able to: i. Use appropriate geodetic datums and map projections	CER on updating existing control using GNSS	October 2014	
	ii. Perform geodetic calculations of traverses and intersections using geographic coordinates		October 2014	
	iii. Perform geodetic calculations of traverses and intersections using UTM grid coordinates		October 2014	
	iv. Transform three dimensional coordinates between systems and between datums, with the aid of suitable software, to the required level of accuracy		October 2014	

S 6.2 Integrate survey control	Applicants will need to demonstrate that they are able to: i. Describe and comply with the regulation of surveying and mapping infrastructure in Queensland	Refer CER to appropriate acts and regulations	October 2014	
	ii. Find and recognise evidence of previous surveys	CER on updating existing control using GNSS	October 2014	
S 6.3 Establish, measure and adjust horizontal survey control	Applicants will need to demonstrate that they are able to: i. Establish project control networks using GNSS and terrestrial measurements	CER on control survey using T/STN	October 2014	
	ii. Evaluate and adjust measurements by appropriate adjustment methods	Refer to previous CER's on GNSS control	October 2014	
	iii. Use adequate redundant measurements to validate data		October 2014	
	iv. Mathematically adjust survey networks by the method of least squares using computer software packages	Use 12D adjustments	October 2014	
	v. Analyse and critically evaluate the adjustment		October 2014	
S 6.4 Establish, measure and adjust vertical survey control	Applicants will need to demonstrate that they are able to: i. Perform precise level measurements	CER on Vertical control using a bar code precise levelling instrument	October 2014	
	ii. Identify the effects of curvature and refraction on levelling and apply this knowledge to trigonometrical levelling	Relate GNSS heights to control.	October 2014	
	iii. Identify the equipment and methods used in precise levelling and the sources of error and the techniques to minimise their effects		October 2014	