

March 2012

NOTES FOR GUIDANCE OF

PROFESSIONAL LAND SURVEYORS IN TRAINING

1 INTRODUCTION

1. These notes which have been approved by the South African Council for Professional and Technical Surveyors, have been compiled with a view to assisting students in surveying at South African Universities and others who intend qualifying for registration as professional land surveyors in terms of Section 7(4)(a) of the Professional and Technical Surveyors' Act, 1984 as amended. Candidates must note that the said Act and the Rules framed thereunder make provision for the registration in different divisions of the register according to their post-graduate training. Adherence to the requirements as set out below, will assist materially in avoiding unnecessary delays.

1.1 Definitions

The "Council" means the South African Council of Professional and Technical Surveyors established in terms of Act 40 of 1984, or such agent acting on its behalf.

"MENTOR" refers to a practicing, registered Professional Land Surveyor or otherwise determined by Council, who acts as guide and advisor to young entrants to the profession.

"PLATO" means the South African Council of Professional and Technical Surveyors established in terms of Act 40 of 1984, or such agent acting on its behalf.

2. STATUTORY REQUIREMENTS

- 2.1 In the first instance a candidate who wishes to register as a professional land surveyor, in the register provided for in Section 7(4)(a) of the Act, must first register in terms of Section 21(1) as a professional land surveyor in training after obtaining the degree in surveying at a South African university, or it's equivalent as certified by the South African Council for Professional and Technical Surveyors.
- 2.2 A candidate who wishes to qualify for registration as a professional land surveyor and who will be entitled to undertake topographical, engineering and related surveys shall undergo such post-graduate work integrated learning as set out in paragraph 3.3 and pass a law examination and practical test set by the Council within such period as it may determine.

- 2.3 Section 20(1) of the Professional and Technical Surveyor's Act, 1984 sets out the requirements for registration as a professional surveyor. A candidate must therefore submit certified copies of his or her birth and degree certificates to the Council as soon as possible. "Certified" means "certified to be a true copy" by a Commissioner of Oaths or a Justice of the Peace.

3. WORK INTEGRATED LEARNING (WIL)

3.1 Period of Learning

The period of work integrated learning is a minimum of 300 working days and the nature of such training shall be approved and controlled by the Council. All experience must be obtained after the date of completion of the requirements for the academic qualification, provided that the candidate applies for registration as a professional surveyor in training within two months of such date, failing which his or her period of training will be deemed to commence as from his or her actual date of application for registration as professional surveyor in training.

Training must be continuous and only in exceptional cases will a break in training be condoned. The normal acceptable minimum period of training with a single practitioner or firm of practitioners is 45 working days (i.e. two months), although lesser periods may be accepted in the case of categories of work given below.

A break in training will not be condoned unless a candidate makes timely application to the Council for such a break.

The requirements laid down for training in this memorandum must be strictly adhered to and the required training must be obtained working under the personal supervision of a practising professional land surveyor or other suitably qualified person approved by the council.

The candidate is required to notify the Council as soon as possible after registering as a professional surveyor in training and starting his or her work integrated learning, of the name of the professional land surveyor, firm or organisation with whom he or she is working. Any change in address or a change to another professional land surveyor, firm or organisation must be reported to the Registrar.

3.2 Nature of Learning

Training in all categories of work must be varied and be undertaken under the personal supervision of a professional land surveyor or other suitably qualified person, approved by the Council, who has been practising as such for at least five years after registration.

It is permissible to train under a professional land surveyor in salaried employment, but taking into consideration the requirements specified below, it is sometimes difficult to obtain the full range of WIL in such circumstances. In case of doubt the candidate should refer the matter to the Council.

It is important that the mentor should be a person who can instruct and provide the required experience. The mentor must also be capable of providing guidance in professionalism, professional ethics and professional practice. The candidate must select a mentor who can provide the correct quality of WIL. In case of doubt the candidate should refer the matter to the Council. In such a case the name, qualifications and experience of the mentor, other than a professional land surveyor, must be supplied to the Council so that it can assess the suitability of such a person.

3.2.1 Compulsory Training

150 Working days which comprises :

	TYPE OF WORK	WORKING DAYS
i	<p>Cadastral Surveys (New Townships)</p> <p>This includes township design and the calculation of all the data necessary to carry out the physical survey and to prepare the general plan, as well as the physical survey of the township.</p>	15
ii	<p>Cadastral Surveys (Existing Properties)</p> <p>This includes the determination of the original boundaries based on the physical and mathematical evidence available, the writing of the reports justifying his or her decision and the physical survey of these properties and must include a reasonable mix of both urban and rural situations.</p>	30
iii	<p>Control Survey Network</p> <p>High order network of control survey points. To include the planning, reconnaissance, specifications, measurement and adjustment. A three dimensional network to be included.</p>	15
iv	<p>Town Planning and Conveyancing</p> <p>To include the preparation and drafting of the documents necessary to make application for consent to subdivide or consolidate, to apply to amend a town planning scheme, as well as a reasonable exposure to and an understanding of the registration process.</p>	20

v	Sectional Title Surveys Including the physical survey of the building and the sections (excluding the re-establishment of the site boundaries), the preparation of sheet 1 and the determination of the participation quota schedule	15
vi	Engineering Surveys Including topographical, staking, setting out and precise the engineering surveys as well as volume determinations.	25
vii	Office of the Surveyor-General To include work in the various departments as the Surveyor-General may deem fit.	30
	TOTAL	150

Item (vii) may only be undertaken after the candidate has completed a minimum of 150 working days as a registered professional land surveyor in training and after items (i), (ii), (iv) and (v) above have been completed.

3.2.2 Additional Training

The balance being a minimum of 150 Working days to be made up of a combination of the above and at *least* two of the options listed below.

(a) Photogrammetry **20 Working days**

General work in a photogrammetric environment including the planning and execution of photo control survey.

(b) Hydrographic Surveys **20 Working days**

To include the planning, measurement and reduction of results

(c) Geospatial Information Management **20 Working days**

To include the design and specification of the system, including the database, data capture, information maintenance, spatial queries and spatial analysis.

(d) Mine Surveys 20 Working days

To include work in a mine survey office and some underground experience.

Note ; It is expected of the candidate to undertake the work at a complex level and degree of difficulty.

- (e)** Or work for a period of not less than **20 working days** in a discipline not listed in paragraphs 3.2.1 and 3.2.2.(a) to 3.2.2.(d) above, which must be in a recognised field of expertise compatible with the calling of a person registered in the category of Professional Land Surveyor. Any person wishing to take up this option is required to, in good time prior to commencing with this training, first request the consent thereto of the Council. Such a request must be in writing addressed to the registrar and must include details of the type of work and the person under whom the experience is to be gained.

3.2.3 (a) The number of working days given in 3.2.1 and 3.2.2 includes both office and field work. The ratio of office to field should be of the order of 2:1.

- (b) Office work should include planning, specification writing, interviews with the client, writing of proposals to the client, calculations and adjustments, analysis of results, and writing of the final report to the client. General office administration such as personnel management, logistics and financial management can also be included.
- (c) A detailed daily diary of all work undertaken during the training period must be kept. This may be called for by the Council in cases of doubt. This diary must give an adequate description of the work done, the dates and the category of work with the number of working days in each category.
- (d) The use of modern technology is highly desirable and the candidate must endeavour to become au fait with this technology.

3.3 Work Integrated Learning Training Schedule (WIL)

When applying to the Council for evaluation of his or her training, the candidate shall supply a WIL Schedule as an extract from the diary prepared in the form of the attached specimen. This schedule must be compiled in chronological order and totalled. **Each page must be signed by the mentor (with whom the candidate has trained) and the candidate.**

The WIL schedule must contain an adequate description of the work performed to enable the Council to evaluate the type and scope of the work completed.

The detailed day to day diary from which the WIL schedule is an extract must be retained by the candidate in the event of the Council requiring more detailed information.

Should the Council be of the opinion that the learning is inadequate or does not cover a wide scope of work, it may require the candidate to undergo further training.

3.4 Requirements of a Mentor

A mentor must be a practising professional land surveyor who has been practising as such for a minimum period of five years. Provided that the Council may, on written application by the mentor, relax the requirement of the five years experience. Provided further that where the experience to be gained is in a field of expertise that could not normally be obtained under the guidance of a professional land surveyor or professional surveyor then, with the consent of the Council, such experience may be obtained under the personal supervision of a suitably qualified person.

Every mentor must provide, **directly to the Council**, a confidential written assessment on the competency of the candidate which assessment must include, *inter alia*, the type of non technical aspects gained by the candidate while in his or her employ, with emphasis on the professional aspects such as dealings with clients, attitude to senior and subordinate co-workers and assistants, punctuality and reliability and management skills acquired.

A person who has been found guilty of improper conduct or is practising under threat of a suspended sentence may not act as a mentor.

4. Law Examination

An applicant for registration as a Professional Land Surveyor must apply to the Registrar to write a Law Examination in terms of Section 20(1)(c) of Act No 40 of 1984

Law examinations can be written in most major centres twice a year. Applicants will be notified of the time and venue for each examination accordingly.

The applicant will be expected to have a comprehensive knowledge of the laws relating to registration of a Professional Land surveyor. He or she should also be acquainted with certain aspects of related legislation as set out in the details below.

Refer to a separate document on all PLATO Law Examinations obtainable from the Registrar. See attached annexure for law exam syllabus.

N.B. Most of the relevant legislation can be down-loaded from the following websites:

<http://www.plato.org.za/6legislation.php>
www.polity.org.za/govdocs/legislation

Or can be obtained from ;

LexisNexis. Johannesburg 011-784-8009, Durban 031-2683111
Cape Town 021-5558900.

The law examination consists of **three** written papers.

The first paper is on the *Geomatics Profession Act 19/2013* and Rules, and is an open book exam. The second and third papers on the Land Survey and Deeds Registry Acts and Regulations and other applicable legislation respectively, but not exclusively as set out in 4.1 and 4.2 below.

4.1 The first paper (Exam A) of 2 hours duration is based on the *Geomatics Profession Act 19/2013* and Rules, and is an open book exam.

- 4.2 (a) The second paper (Exam B) of 3 hours duration is an open book exam and will be on the Land Survey Act and Deeds Registries Act (including Regulations)
- (b) The third paper (Exam C) of 3 hours duration is a closed book exam and will be on other acts and court cases as indicated for PLS on the exam Syllabus.

Candidates must obtain not less than 65% in all three papers. The Registrar will notify the candidate of a pass or failure.

See attached annexure for law exam syllabus.

5. Details of Practical Tests

The practical tests will consist of the following tasks:

(a) Cadastral Survey:

The candidate will be required to prepare all the relevant survey records, reports and diagrams for submission to the Surveyor-General as if he or she was already as registered professional land surveyor. This task must be based on an actual survey in which the candidate was actively involved during his or her period of training and must be of sufficient complexity to show the competency of the candidate. The complexity of this task will be assessed by the Surveyor-General who may make whatever changes he feels necessary to ensure a suitable standard of difficulty. The Surveyor-General will examine the records, reports and plans presented and report to the examiner on the acceptability or not of the same.

(b) Boundary Re-determinations

The candidate will be required to carry out at least four boundary re-determinations and prepare a report setting out both the mathematical and legal reasons for his or her decision in each case. Two of these tasks should be rurally based and two urban based situations. For each task the candidate will be provided with salient information, such as the surveyed values of the found beacons, diagram information, the types of beacons found, the condition of the beacons and any other relevant information that could have a bearing on his or her decision. These tasks may or may not be fictitious cases. The tasks will be issued and the results evaluated by the Surveyor-General who will report on the acceptability or not to the examiner.

6. Application for Law Examinations and Practical Tests

- 6.1 The law examinations and practical tests are scheduled to take place twice annually, usually **in March and November**, at the offices of the Surveyors-General.
- 6.2 When a candidate is of the opinion that he or she has met the requirements of paragraph 6, he or she may apply to the Council to write the examinations and tests. Such application must be submitted not less than six (6) weeks before the due date of the examination and a candidate must indicate where he or she wishes to write the examination. The exact date may be ascertained from the Registrar.
- 6.3 The application must be accompanied by:-
- (a) The schedule of training (see paragraph 7)
 - (b) Certificates of training in respect of each supervisor with whom the candidate has served.
 - (c) An examination fee which must reach the Registrar not later than two (2) weeks before the examinations. The fee is determined annually by the Council and the amount is available from the Registrar.
- 6.4 Council will notify the candidate of the acceptance of his or her application and, if successful, will inform him or her where and when to report for the examination.

7. General

A candidate should not normally need more than three weeks to complete the law examinations and practical test. Continuity of the work is essential and a break will only be permitted in exceptional circumstances due to factors beyond the control of the candidate.

Marking will take place as soon as possible after completion of the work and the candidate should remain in close touch with the examiner until his or her requirements have been met.

Depending on the results of the written and practical examinations and taking cognizance of the confidential letters received by the Council from the mentors candidates may be required to undergo an oral examination or interview.

The Council will then decide whether or not he or she will be permitted to register or whether he or she will be required to re-write the examination after a further period of training.

The Registrar will notify the candidate accordingly and provide to the candidate the appropriate documentation to apply for registration.

March 2012

Decided Court Cases :

Van Niekerk & Union Government vs Carter 1917 (The de Bad case)

Barrington and others vs Colonial Government (1886)

Lange and another vs Minister of Lands, 1957

Hirsch vs Gill (1893)

Coetzee vs Potgieter (1909)

Riverton Diamond Syndicate vs
Union Government & Municipality of Windsorton (1921)

Surveyor-General vs Estate de Villiers (1923)

African and European Investments vs Warren and others (1924)

Wilderness Pty vs Union Government (1927)

Karim and others vs Union Government (1933)

Minister of Lands vs Swart (1957)

Durban City Council and others vs Minister of Agriculture (1982)

Restrictions on sub-divisions of land and townships

Provincial Legislation:

The relative sections in provincial ordinances, applicable in any one province, covering township establishment, division of land, closing of streets and public places, incorporation of land into townships and the removal of restrictive conditions of title.

Framing Mineral Area (Right) Diagrams.

When preparing yourself for the examinations, please ensure that you have a sound working knowledge of the procedures for framing mineral area (right) diagrams. This can be found in the Surveyor-General's (Pretoria) Circular Number 5/1984. You should understand the significance of servitudes and a study of the same circular and the Random Notes on Land Survey Practice by Mr T de Smidt would be to your advantage.

TRAINING SCHEDULE OF (FULL NAME & SURNAME) ;

PAGE NO. OFPAGES

D A T E	CADASTRAL SURVEYS													OTHER SURVEYS											
	DESCRIPTION OF PROPERTY AND SURVEY	Cadastral				Control Surveys		Town Planning & Conveyanc- ing		Sectional Title		Engineering Surveys		Photo- grammetry		Hydro- graphic		GIS		Mine Surveying		Optional 3.3.2.e.			
		OLD		NEW		Fld	Off	Fld	Off	Fld	Off	Fld	Off	Off	Fld	Fld	Fld	Off	Fld	Off	Fld	Off	Fld	Off	
		Fld	Off	Fld	Off																				
	Brought Forward																								
	TOTAL Carried Forward																								

CANDIDATE SIGNATURE; _____ FULL NAME & SIGNATURE OF MENTOR; _____

Off = Office (which includes administration, computing, draughting etc.) FLD = Field

(For additional copies required please photostat)

(FINAL PAGE)

TRAINING SCHEDULE OF (FULL NAME & SURNAME) :

PAGE NO. OFPAGES

DATE	CADASTRAL SURVEYS														OTHER SURVEYS								
	DESCRIPTION OF PROPERTY AND SURVEY	Township				Control		Town Planning & Conveyancing		Sectional Title		Engineering				Photo-grammetry		Hydro-graphic		GIS		Mine Surveyors	
		OLD		NEW		Fld	Off	Fld	Off	Fld	Off	Fld	Off	Fld	Off	Fld	Off	Fld	Off	Fld	Off	Fld	Off
		Fld	Off	Fld	Off																		
	Brought Forward																						
	TOTAL																						
	REQUIREMENT																						
	BALANCE																						
ADDITIONAL SURVEY COMPLETED																							

CANDIDATE SIGNATURE; _____

FULL NAME & SIGNATURE OF MENTOR; _____

Off = Office (which includes administration, computing, draughting etc.)

FLD = Field