

Survey Co-ordination Regulation 1969

Unvalidated References:

Survey Co-ordination Act 1967

Survey Act 1969

This reprint of this Statutory Instrument incorporates all amendments, if any, made before 25 November 2006 and in force at 1 July 2001.

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Legislative Counsel

Dated 25 November 2006

INDEPENDENT STATE OF PAPUA NEW GUINEA.

Chapter 203.

Survey Co-ordination Regulation 1969

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Survey Co-ordination Regulation 1969

MADE under the *Survey Co-ordination Act 1967*.

Dated 200 .

1. INTERPRETATION.

In this Regulation, unless the contrary intention appears “control survey” means a survey effected for the purpose of establishing within the country, points the horizontal or vertical positions of which are determined relative to such origin or origins as are prescribed.

2. CENTRAL PLAN REGISTER.

The Central Plan Register shall be in Form 1.

3. LIAISON OFFICER TO KEEP CERTAIN REGISTERS.

(1) A liaison officer shall keep—

(a) a register, to be known as a “Departmental Register of Survey Plans”, containing full, accurate and up-to-date particulars of every survey plan in the possession of his public authority; and

(b) a register of bench marks in Form 2 containing a record of all permanent bench marks established or maintained by the public authority together with a sketch showing the location of each bench mark.

(2) Each entry in a register of bench marks must be made in duplicate and one copy forwarded to the Surveyor General within one month after the making of the entry.

4. CERTIFICATION OF LISTS OF PLANS.

A list or supplementary list compiled by the liaison officer under Section 4 or 7 of the Act forwarded to the Surveyor General in accordance with the provisions of the Act shall be endorsed with a certificate in Form 3.

5. NOTICE OF INTENTION TO COMMENCE SURVEY.

A notice under Section 5(1) of the Act shall be in Form 4.

6. INSTRUCTIONS AS TO PROPOSED SURVEY.

In relation to a survey being carried out or proposed to be carried out by or on behalf of a public authority, the liaison officer of the authority shall give to the surveyor, or, where the survey is other than a survey under the *Survey Act 1969*, to the person carrying out or supervising the survey, all instructions and directions necessary to ensure compliance with the requirements of the Surveyor General.

7. PERMANENT MARKS.

(1) The permanent marks established under the Act shall be of the standard type indicated in Schedule 2 or such other type as the Surveyor General, by notice in the National Gazette, authorizes.

(2) A permanent mark shall be so placed that it is safe from possible accidental damage or interference and does not constitute a hazard to traffic.

(3) In rural areas a permanent mark may protrude slightly above the ground surface.

(4) A permanent mark shall be so placed and constructed as to be capable of being used as a theodolite reference point and a level bench mark.

8. RADIATIONS.

Where a permanent mark is established, sufficient radiations shall be taken to enable the position of the permanent mark to be accurately reinstated if reinstatement becomes necessary.

9. PARTICULARS ON PLANS IN CENTRAL PLAN REGISTER.

The particulars to be stamped or marked on plans in the Central Plan Register under Section 8(3)(b) of the Act are—

- (a) the recorded number of the plan; and
- (b) the classification, determined in accordance with Section 11, of the survey from which the plan was prepared; and
- (c) the date of recording of the plan; and
- (d) the initials of the officer by whom the plan is marked or stamped.

10. CONVENTIONAL SYMBOLS.

The conventional symbols to be used on plans to be lodged in or registered by the Central Plan Office must conform to the following requirements:—

- (a) on plans of cadastral surveys—as specified in Schedule 3; and
- (b) on plans of engineering surveys—as specified in Section 19 of the Australian Standard Engineering Drawing Practice of the Institution of Engineers, Australia (known as CZ1 1966), as amended from time to time; and
- (c) on plans of topographic surveys—as specified in the Standard Topographical Map Symbols of the Australian National Mapping Council (known as NMP/58/108).

11. CLASSIFICATION OF SURVEYS.

(1) Surveys shall be classified in accordance with the appropriate table in Schedule 4.

(2) A control survey shall be classified in accordance with the standards of accuracy specified in Table 1 of Schedule 4.

(3) A survey, other than a control survey, that attains to a standard of accuracy specified in the first column of Table 2 of Schedule 4 shall be classified as a survey of the class set out in the second column of that table opposite to the standard of accuracy so specified.

(4) For the purposes of this section, the following provisions apply in the determination of the classification of surveys, other than control surveys:—

- (a) in a closed traverse, the perimeter divided by the misclose shall not exceed the figure shown in Table 2 of Schedule 4 for the appropriate class;
- (b) for the purposes of Paragraph (a), the misclose shall be determined as $a^2 + b^2$ where “a” is the difference in latitude and “b” is the difference in departure;
- (c) in the lines of levels the difference between the forward and backward runs of levels shall not exceed ek where “e” is the allowable difference per kilometre and “k” is the total number of kilometres levelled.

(5) Where the standard of accuracy is intermediate between any of the standards specified in Table 1 or Table 2 of Schedule 4 the lower classification shall be shown.

12. STANDARDS OF ACCURACY OF SURVEYS.

(1) For the purposes of Section 6(5) of the Act—

- (a) control surveys shall conform to the standard of accuracy of the appropriate class specified in Table 1 of Schedule 4; and
- (b) other surveys shall conform to the standard of accuracy of the appropriate class specified in Table 2 of Schedule 4; and
- (c) the standard of accuracy prescribed in respect of any class of survey shall be deemed to be the minimum standard of accuracy for surveys of that class.

(2) The Surveyor General is responsible for the standard of accuracy of a control survey.

13. ACCURACY OF CONNECTION TO PERMANENT MARKS.

Connections to permanent marks made under the Act shall conform to the same standard of accuracy as the survey being connected.

14. ALTERATION OF RECORDED PLAN.

Where a plan showing details of an alteration is required by Section 8(6)(b) of the Act to be forwarded to or lodged with the Surveyor General, the plan shall be drawn to the same scale as the relevant recorded plan, but if the details of the alteration are not clear when the Plan is drawn to that scale the plan shall be drawn to a larger scale.

15. PLACEMENT, ETC., OF PERMANENT MARK.

A notice under Section 15 of the Act shall be in Form 5.

16. DAMAGE, ETC., TO PERMANENT MARK.

A report under Section 16 of the Act shall include—

- (a) the number and position of the permanent mark to which the report relates; and
- (b) the extent of the irregularity or disrepair or of the damage to the permanent mark; and
- (c) the approximate date when the damage or irregularity was caused; and

(d) if practicable, the name of the person responsible for the irregularity or for the damage to the permanent mark; and

(e) particulars of any action taken to restore the permanent mark.

17. REMOVAL OR ALTERATION OF PERMANENT MARKS.

(1) Where it is necessary to remove or alter a permanent mark for any of the reasons specified in Section 19(2) of the Act, the person responsible for the building, reconstruction or other work shall give to the Surveyor General notice of the proposed removal or alteration at least 14 days before the proposed removal or alteration.

(2) On receipt of a notice under Subsection (1), the Surveyor General shall give to the person by whom the notice was given such directions as to the preservation, removal, alteration, replacement or re-establishment of the permanent mark as are necessary.

(3) Any costs incurred by reason of compliance with any directions under Subsection (2) shall be defrayed by the Surveyor General or public authority responsible under the Act for the maintenance of the permanent mark.

18. PREVENTION OF DAMAGE TO MARKS.

A public authority shall take all precautions necessary to prevent a permanent mark from becoming damaged or obscured in consequence of any work carried out by the authority.

19. CONSTRUCTION, ETC., OF CERTAIN ROADS AND FOOTPATHS.

(1) Before proceeding with any construction, alteration or reconstruction of a road or footpath where permanent marks have not been established, a public authority shall notify the Surveyor General of its intention to do so.

(2) On receipt of a notice under Subsection (1), the Surveyor General may—

(a) establish such permanent marks; or

(b) direct the public authority to establish such permanent marks,

in the area as he thinks necessary.

20. NUMBERING AND INDEXING OF FIELD NOTES.

(1) Field notes made for the purpose of a survey carried out by or on behalf of a public authority, a plan of which is a recorded plan or which is specified on any list forwarded to the Surveyor General, shall be numbered, indexed and maintained in good order by the public authority.

(2) The number of a field note specified in a list referred to in Subsection (1) shall correspond with the number specified on the field note.

21. PRODUCTION OF FIELD NOTES.

The Surveyor General may, by written notice, require the liaison officer of a public authority to produce for inspection and examination any field notes of a survey carried out by or on

behalf of the authority a plan of which is a recorded plan or which is specified on any list forwarded to the Surveyor General.

22. STANDARD TAPES.

(1) The Surveyor General may require a public authority to maintain a standard tape at any office that is the usual headquarters of that public authority in a particular area.

(2) A standard tape maintained under Subsection (1) must be submitted to the Surveyor General for examination and checking at intervals not exceeding five years and at such other times as the Surveyor General requires.

(3) The Surveyor General shall notify the liaison officer of any necessary adjustment to be made in comparing the standard tape with field tapes.

(4) A standard tape maintained under this section shall not be used for any purpose other than comparison with field tapes.

(5) The adjustment of measurement by comparison of the standard tape with field tapes is the responsibility of the public authority.

(6) The Surveyor General may require the field tapes intended for use on any survey by or on behalf of a public authority to be submitted to him for checking—

- (a) before the survey is commenced; or
- (b) at any reasonable time during the survey; or
- (c) immediately after the completion of the survey.

(7) A staff used in connection with a survey that is to be recorded in the Central Plan Register shall be checked, at regular intervals, by comparison with a standard staff or a standard tape, and every level book relating to that survey shall be endorsed with a note indicating that the staff has been so checked and the date on which the check was made.

23. LINES OF LEVELS.

Where practicable, all lines of levels forming part of a survey carried out under the Act shall be referred to a recorded bench mark, and a description of the bench mark used for datum and the reduced level adopted shall be shown in the level book.

SCHEDULE 1

PAPUA NEW GUINEA.

Survey Co-ordination Act 1967.

Form 1 – CENTRAL PLAN REGISTER.

Act, Sec. 8. Form 1.Reg., Sec. 2.

Public Authority:	Recorded B.M. No.:	
	Locality:	
<hr/>		
Type of bench mark:	Date installed:	
By whom installed:		
Levelled from:		
Levelled by:	Date: . . . 20...	L. Book No.
<hr/>		
Adopted level of permanent bench mark:		
<hr/>		
Remarks:		
<hr/>		
	Sketch (To be drawn in black waterproof ink.)	
Dated . . . 20...	Liaison Officer:	

Form 3 – CERTIFICATE AS TO CORRECTNESS OF LIST OF PLANS.

Reg., Sec. 4. Form 3.

Public Authority:

I certify that this is a correct list of all plans (or of the particulars required by the Surveyor General of all plans) made, obtained or held by the abovesaid public authority in the period to which the list refers.

Dated . . . 20...

Liaison Officer:

PAPUA NEW GUINEA.

Survey Co-ordination Act 1967.

Form 4 – NOTICE OF INTENTION TO COMMENCE SURVEY.

Act, Sec. 5(1). Form 4.Reg., Sec. 5.

Public Authority:

The Surveyor General.

Sir,

Notice of intention to commence a survey in accordance with the particulars set out below is given in accordance with Section 5(1) of the *Survey Co-ordination Act*.

Allotment:

Section:

Portion:

Town:

Milinch:

Footwall:

Type of survey:

Surveyor:

Probable classification:

Purpose and extent of survey, and remarks (*attach sketch*):

Dated . . . 20...

Liaison Officer:

PAPUA NEW GUINEA.

Survey Co-ordination Act 1967.

Form 5 – NOTICE OF PERMANENT MARK.

Act, Sec. 15. Form 5Reg., Sec. 15.

Type of Permanent Mark: Registered No.

Material of . . . , Finish of

Sketch.

(To be drawn in black waterproof ink, not necessarily to scale).

Note:—Measurements are to be shown from the permanent mark to as many nearby survey marks, buildings, fence posts, ketbs, etc., as practicable. Up to six measurements are desirable.

Measurements are in

Placed in connection with *(type of survey or work)*

Public Authority Plan No.:

Recorded Plan No.:

If levelled—reduced level of mark . . . to . . . datum.

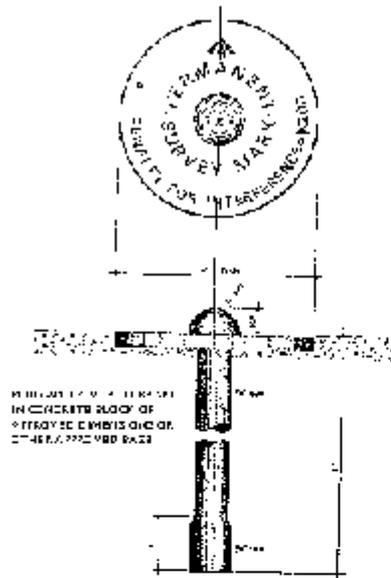
I certify that the permanent mark shown in this sketch has been placed on the ground in accordance with the *Survey Co-ordination Act*, and that the information set out above is correct.

Dated . . . 20..

Liaison Officer:
Public Authority.

SCHEDULE 2 – STANDARD TYPE–PERMANENT SURVEY MARK.

Reg., Sec. 7.



SCHEDULE 3 – SYMBOLS TO BE USED ON PLANS OF CADASTRAL SURVEYS.

Reg., Sec. 10.

(a) Horizontal control.

Triangulation.	Classification.		
	First Order.	Second Order.	Third Order.
Triangle misclosure not to exceed:–			
Average	1 second	3 seconds	5 seconds
Maximum	3 seconds	5 seconds	10 seconds
Check on base	1: 25,000	1: 10,000	1: 5,000
Probable error of base not to exceed	1: 1,000,000	1: 500,000	
Estimated actual error not to exceed	1: 300,000	1: 150,000	
Laplace Azimuths, probable error not to exceed	0.3 seconds	0.5 seconds	
Horizontal control surveys of a lower accuracy than the above shall be classified as Fourth Order.			
Traverses.	Classification.		
	First Order.	Second Order.	Third Order.
Position check not to exceed	1: 25,000	1: 10,000	1:5,000
Probable error of an angle not to exceed	5 seconds	3 seconds	6 seconds
Astronomic Azimuth, probable error of result	0. 5 seconds	2 seconds	5 seconds
Horizontal control surveys of a lower accuracy than the above shall be classified as Fourth Order.			

(b) Vertical control.

Classification.

First Order. Second Order. Third Order.

Difference between forward and backward runs of levels, where K is the length of the section in kilometres, not to exceed

0.0041K metres	0.0084K metres	.012K metres
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Control levels of a lower accuracy than the foregoing shall be classified as Fourth Order.

TABLE 2. – SURVEY OTHER THAN CONTROL SURVEYS.

Standard of accuracy.	Classification.
(a) Planimetric surveys–	
Where the standard of accuracy is equivalent to an error of closure not less than–	
1: 15,000	A
1: 10,000	B
1: 8,000	C
1: 6,000	D
1: 4,000	E
1: 2,000	F
1: 1,000	G
1: 500	H
and lesser accuracy	K
(b) Altimetric surveys–	
Surveys where the difference between the forward and backward runs of levels does not exceed–	
0.004 in 1 km	1
0.009 in 1 km	2
Surveys where the error of any spot level does not exceed 0.3 m	3
Surveys where the error of any spot level does not exceed 2 m	4
Surveys where the error of any spot level exceeds 2 m	5
Where the error in level of 90% of contour lines on any plan–	
does not exceed 50% of the contour interval	X
is greater than 50% of the contour interval	Y

Note It would be appropriate, in altimetric surveys, to classify by both numeral and letter.

Office of Legislative Counsel, PNG