



**TURKS AND CAICOS ISLANDS**

**CHAPTER 9.03**  
**LAND SURVEY ORDINANCE**  
**and Subsidiary Legislation**

**Revised Edition**  
showing the law as at 31 August 2009

This is a revised edition of the law, prepared by the Law Revision Commissioner under the authority of the Revised Edition of the Laws Ordinance 1997.

This edition contains a consolidation of the following laws—

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**CHAPTER 9.03**  
**LAND SURVEY ORDINANCE**  
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## **CHAPTER 9.03**

### **LAND SURVEY ORDINANCE**

*(Ordinances 4 of 1967 and 9 of 1997)*

AN ORDINANCE TO PROVIDE FOR THE REGULATION OF SURVEYS

#### **Commencement**

*[14 October 1967]*

#### **Short title**

1. This Ordinance may be cited as the Land Survey Ordinance.

#### **Interpretation**

2. In this Ordinance, unless the context otherwise requires—

“authorised surveyor” means a surveyor authorised under this Ordinance to perform land title surveys in the Islands;

“Public Survey” means any survey for or by the Government for whatever purpose;

“survey” means a survey for the delineation and demarcation of land boundaries, and a survey for the purpose of any law which requires the production of a land title survey, plan or diagram;

“Survey Regulations” means regulations made under the provisions of this Ordinance.

#### **Land title surveys**

3. No person shall produce or perform any survey, unless he is duly authorised to do so under the provisions of this Ordinance.

#### **Authorisation of surveyors**

4. The Governor may, in the form set out in Schedule 1 to this Ordinance, and on payment of the prescribed fee, authorise a person to perform surveys under this Ordinance, in accordance with the Survey Regulations.

#### **Authority to be renewed annually**

5. Any authority issued under the provisions of section 4 shall expire on the last day of December following the date of issue and may be renewed on the first day of January or on any subsequent date in any year on the payment of the prescribed fee, provided that, if the holder thereof has infringed any of the provisions of this Ordinance or of the Survey Regulations, the Governor may refuse to renew his authorisation.

### **Government surveyors deemed to be authorised**

6. Any surveyor directly employed by the Government shall be deemed to be authorised under the provisions of this Ordinance for the period of his employment.

### **Revocation of authority**

7. The Governor may authorise at any time, for sufficient cause revoke or suspend any authority to survey issued under this Ordinance.

### **Public Surveys**

8. The Governor may authorise at any time the performance of a Public Survey.

### **Survey plans**

9. Any plan or diagram pertaining to a sub-division in a development scheme shall be prepared by an authorised surveyor, who shall prepare the same in accordance with the Survey Regulations and endorse thereon a certificate in the form set out in Schedule 2 to this Ordinance.

### **Entry upon land**

10. (1) Any authorised surveyor may enter from time to time upon any land, with such assistants as he thinks fit, for the purpose of making any survey and may fix or set up thereupon survey marks, monuments, pegs, poles or beacons:

Provided that no beacon or mark may be placed in any garden or yard attached to any dwelling-house or other occupied premises without the consent of the owner or the occupier of the dwelling-house or other occupied premises, provided that such consent shall not be unreasonably withheld.

(2) Before entry, every such surveyor shall give reasonable notice to the owner or occupier of the land, and shall, if requested by that owner or occupier, produce and show his authority.

(3) Any person wilfully obstructing or preventing any survey authorised under subsection (2) of this section commits an offence and is liable on summary conviction to a fine of \$500. (*Amended by Ord. 9 of 1997*)

### **Compensation for damage to property**

11. (1) The surveyor shall be liable for compensation payable for all damage caused during a survey under section 10 of this Ordinance and shall pay compensation to any person having suffered damage arising from the survey.

(2) Any disputes under this section shall be referred to and determined by the Court.

### Interference

12. Any person acting without the authority of the Governor who shall wilfully obliterate, remove or damage any trigonometrical station, survey or boundary mark, monument, pole or beacon, affixed, set up or emplaced for the purposes of any survey within the meaning of this Ordinance, or any other survey authorised by the Governor, commits an offence and is liable on summary conviction to a penalty of \$1,000 or to imprisonment for six months, and in addition may be ordered to pay the cost of repairing or replacing the thing obliterated, damaged or removed, and of making any survey rendered necessary by the act for which the conviction is given. (*Amended by Ord. 9 of 1997*)

### Regulations

13. Subject to the provisions of this Ordinance, the Governor may from time to time, make regulations—

- (a) prescribing and altering the fees which may be charged for issue or renewal of certificates of authority to survey, the scrutiny and examination of survey plans and diagrams or for searches in the survey records;
- (b) prescribing the forms to be used and the specification of plans and other documents required under this Ordinance;
- (c) regulating the conduct of surveys and the accuracy of plans under any law relating to or affecting surveys of land;
- (d) prescribing penalties for the breach of any Survey Regulations;
- (e) for any purpose which may in his opinion be necessary or expedient for giving full effect to the provisions of this Ordinance.

*(Amended by Ord. 9 of 1997)*

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**SCHEDULE 1**

*(Section 4)*

**AUTHORITY TO SURVEY UNDER SECTION 4  
OF THE LAND SURVEY ORDINANCE**

This is to certify that.....  
of ..... having produced  
sufficient credentials, and having paid the prescribed fee, is hereby authorised to perform  
land title surveys in the Islands during the period ending 31st December, 20.....

Dated at .....this ..... day of ..... 20.....

GOVERNOR.

Authority No.....

Original Fee..... paid.

Renewal Fee..... paid.

\_\_\_\_\_

**SCHEDULE 2**

*(Section 9)*

I, ..... of ..... being the holder of  
Authority to Survey No ..... dated.....  
hereby certify that this plan has been made from surveys executed by me, or under my  
own personal supervision and inspection, that both plan and survey are correct and have  
been made in accordance with the Regulations under the Land Survey Ordinance

or

I, ..... of..... being the holder of  
Authority to Survey No ..... dated .....  
hereby certify that this diagram correctly sets out the boundaries of the land being dealt  
with in the matter of

and has been made in accordance with the Regulations under the Land Survey  
Ordinance.

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*(Gazette Notice 48/1973 and Legal Notice 12/1987)*

**Commencement**

*[10 March 1973]*

PART I

PRELIMINARY

**Short title**

1. These Regulations may be cited as the Survey Regulations.

**Interpretation**

2. In these Regulations, except where the context otherwise requires—

“approximate” in relation to any boundary has the meaning ascribed to it in section 17 of the Registered Land Ordinance;

“authorised surveyor”, “plan”, “public survey”, “Registered Land Ordinance”, “Registrar”, “survey” and “surveyor” have the meaning ascribed to them in the Ordinance;

“Chief Surveyor” means the person for the time being holding the office of land surveyor to the Turks and Caicos Government;

“fixed” in relation to any boundary has the meaning ascribed to it in section 18 of the Registered Land Ordinance;

“Ordinance” means the Land Survey Ordinance;

“registration section” and “registration area” have the meaning ascribed to them in the Registered Land Ordinance;

“Registry Map” has the meaning ascribed to it in the Registered Land Ordinance.

PART II

REGULATIONS AFFECTING ALL SURVEYS  
MADE UNDER SECTION 14 OF THE PRINCIPAL ORDINANCE

**Disputes**

3. Any dispute between the Chief Surveyor and an authorised surveyor over the application or interpretation of these Regulations shall be referred to a Magistrate who will sit in Chambers with two assessors one of whom shall be nominated by the Chief Surveyor and the other by the authorised surveyor.

### **Units of measurement**

4. (1) All distances shown on plans shall be in English feet and decimals of an English foot.
- (2) All angular measurements shall be in degrees, minutes and seconds of arc.
- (3) For purposes of conversion from international metres to English feet, the relationship to be used shall be one international metre = 3.280840 English feet or one English foot = 0.3048 international metres.

### **System of co-ordinates and projections**

5. The figure of the earth and the projection to be used in the computation of co-ordinates of any survey shall be the Universal Transverse Mercator Projection zone 18 for Registration Areas West Caicos and Providenciales and zone 19 for all other Registration areas using the Clarke 1866 figure having elements: semi-major axis 6378206 international metres flattening 1/295.0.

### **Maintenance of measuring instruments**

6. (1) Every authorised surveyor shall maintain his theodolite, measuring bands and all other equipment in good order, and the Chief Surveyor may refuse to authenticate any survey which has been made with defective equipment.
- (2) The Chief Surveyor may at any time require any authorised surveyor to submit any measuring equipment for his inspection.

### **Presentation of surveys**

7. (1) Every authorised surveyor shall be personally responsible for the accuracy, fidelity, and completeness of every survey presented by him for the approval of the Chief Surveyor.
- (2) It shall be the duty of every surveyor making any survey under these Regulations to record all the relevant information that may aid in securing the accuracy and completeness of every such survey.
- (3) Every surveyor shall perform sufficient work to enable him to apply a thorough check to every part of his survey.
- (4) Every surveyor shall present his plan computations and connected documents of every survey in such a manner as the Chief Surveyor may require, and if any surveyor forwards to the Chief Surveyor any plan computation or connected document which does not conform substantially with the appropriate requirements, the Chief Surveyor may, at his discretion, return the plan computation and connected documents to the surveyor and may refuse to authenticate such plan, computation or connected document until it has been made to conform with the appropriate requirements.
- (5) All surveys returned to a surveyor shall be re-submitted to the Chief Surveyor without undue delay.

### **Permissible errors of measurement**

8. All measurements must be made in accordance with regulations 33, 34 and 37 and the Chief Surveyor may refuse to authenticate any survey which contains errors in excess of those that can be expected from measurements properly carried out in the manner specified.

### **Checking of surveys**

9. The Chief Surveyor may at any time depute any surveyor to check in the field any survey made under the Ordinance by any other surveyor, and such check may include the verification of any information recorded in connection with such survey mark established under the Ordinance or any regulations made thereunder.

### **Information prior to survey**

10. (1) Before carrying out any survey, every authorised surveyor shall be provided, or shall provide himself with all available information in respect of any previous survey of the parcel of land to be surveyed and of any adjoining parcel.

(2) Applications to the Chief Surveyor for this information shall be in writing and shall, whenever applicable, make reference to the approval for subdivision, or other transaction.

(3) The Chief Surveyor shall make available to any authorised surveyor all technical information in his possession. Where the authorised surveyor extracts the information himself by personal search no fee will be payable, but where the information is extracted on his behalf by the Chief Surveyor, the fee prescribed in the Schedule hereto shall be paid.

### **Prior approval of statutory authorities**

11. Before submitting any survey to the Chief Surveyor, an authorised surveyor shall ensure that approval has been obtained for a subdivision or other transaction of any parcel of land in any case where such approval is required by any Ordinance and that the survey submitted conforms with such approval.

### **Authority for entry upon land**

12. (1) In pursuance of sections 4 and 5 of the Ordinance the Chief Surveyor shall furnish to every surveyor an official letter of authority in Form A in Schedule 1 of the Ordinance.

(2) Every surveyor shall present his letter of authority to any owner or occupier of land who demands proof that such surveyor is duly authorised to enter upon his land.

### **Employment of unqualified assistants**

13. (1) No authorised surveyor shall employ an unqualified assistant without the written approval of the Chief Surveyor.

(2) When such approval is given it shall be for a period of not more than two years in the first instance and may thereafter be renewed for further periods at the discretion of the Chief Surveyor.

(3) The work done by any such assistant shall be under the direct personal control of the authorised surveyor, who shall himself carry out a sufficient check to ensure that the work done by such assistant is correct. The authorised surveyor shall accept full personal responsibility for all work performed by his unqualified assistant.

(4) The authorised surveyor shall supply a certificate as provided by Schedule 2 of the Ordinance.

(5) If the Chief Surveyor finds that an unqualified assistant has performed any work which has not been supervised and checked by the authorised surveyor he may suspend approval for the employment of the unqualified assistant.

#### **Fees chargeable by Chief Surveyor**

14. The Chief Surveyor shall charge the fees prescribed in the Schedule hereto.

### PART III

#### SURVEY MARKS, BOUNDARY BEACONS AND BOUNDARIES

#### **Design and specification of survey marks**

15. (1) The design of survey marks shall be as specified by the Chief Surveyor, except in special circumstances which must be set out in the report on the survey.

(2) Every new triangulation or trilateration station other than a purely auxiliary station shall be permanently marked.

(3) In third order traverses as defined in regulation 36, all traverse stations shall whenever possible be permanent points.

#### **Placement of survey marks**

16. (1) Where the boundaries of a parcel are required to be fixed in accordance with section 18 of the Registered Land Ordinance, any beacons required to be placed to define accurately the boundaries of the parcel shall be of such type as the Chief Surveyor may require.

(2) Where a boundary is inadequately defined and it is necessary to place a beacon to define the approximate position of the boundary, such beacons shall conform to the requirements of paragraph (1) of this regulation.

(3) With a view to facilitating the location of isolated boundary beacons, such beacons shall be referenced to any nearby telephone pole, suitable tree or other prominent physical feature wheresoever possible.

#### **Line beacons and shore beacons**

17. (1) (a) Where a rectilinear boundary intersects a curvilinear boundary and a beacon required by regulation 16 cannot be placed at the intersection, a beacon shall be placed on the rectilinear boundary as near as possible to the intersection. Such beacon shall be known as a line beacon.

(b) Where the rectilinear boundary continues on both sides of the curvilinear boundary line beacons shall be placed on both sections of the rectilinear boundary.

(2) When a line beacon has been placed in accordance with regulation 17(1) the distance from the line or shore beacon to the actual boundary shall be measured to the precision required by regulation 65(2).

(3) All subdivisions of a parcel, the boundaries of which have been fixed, which is situated across a road reserve shall be fully beacons as self contained units.

(4) Where a curvilinear feature is adopted as a subdivisional boundary of a parcel, the boundaries of which have been fixed, the several subdivisions and any remainder shall be fully beacons as self contained units.

#### **Placing beacon on boundary line**

18. Where a beacon is placed on a boundary line that has been fixed, it shall be proved to be on line by establishing either directly or indirectly its relationship with the terminal beacons of the line.

#### **Beacons placed from computed data**

19. Where a beacon is placed from computed data, its position shall be proved by an independent field check and calculation.

#### **When beacons cannot be placed**

20. When the corner of a parcel the boundaries of which are required to be fixed, falls within inaccessible ground where a beacon cannot be placed, the position of such corner shall be permanently referenced by at least one indicative beacon placed on a boundary line as near as possible to the corner. The details of the situation shall be indicated on the plan.

#### **Damaged beacons to be repaired**

21. Where an old beacon of the parcel under survey is found to be damaged, the surveyor shall repair or renew the beacon and shall make a record of the repairs in his field notes.

#### **Trigonometrical stations to be repaired**

22. (1) Every surveyor engaged on a public survey who discovers any trigonometrical or traverse station to be damaged and in need of repair shall carry out such repair as may be necessary.

(2) An authorised surveyor not engaged on a public survey is not required to repair any damaged trigonometrical or traverse station, but he shall report in writing to the Chief Surveyor the name, number and position of any such station and the nature of the damage he has observed.

### **Missing beacons**

23. Missing beacons shall be noted in the surveyor's report (regulation 62 refers) and in order to demonstrate that he has searched in the right place the surveyor shall furnish such measurements and observations as may be necessary.

### **Re-establishment of missing beacons**

24. If a surveyor is required to re-establish a missing beacon, he shall submit his field notes, computations and report to the Chief Surveyor.

### **Redundant beacons**

25. Where the existence of a visible redundant beacon is likely to lead to confusion, it shall be removed and replaced by an underground witness mark.

### **Surveys and re-establishment of boundaries**

26. (1) In every survey of land where the position of a feature or beacon defining the boundary of a parcel is found to differ materially from that indicated by the relevant previous survey, the surveyor shall exercise the greatest care—

- (a) in establishing that the discrepancy actually does exist;
- (b) in collecting all evidence which may have a bearing on the eventual action to be taken.

(2) A careful search shall be made at the position indicated by the previous survey to ascertain whether or not any evidence of the old boundary feature or beacon still exists and the position of any building or other development in the immediate vicinity of the boundary shall be recorded.

(3) Where the situation allows, the surveyor, before taking further action shall provide the Chief Surveyor and the Registrar with a full report and shall request instructions.

## PART IV

### SURVEYS PERFORMED BY TRIANGULATION

#### *Trilateration, Traverse and Air Surveys*

### **Guiding principle**

27. All authorised surveyors shall assist, as far as is consistent with efficient and economical surveying, in the establishment and increase of permanent control marks of all types throughout the Islands.

*Triangulation and Trilateration*

**Geodetic and secondary triangulation**

**28.** All geodetic and secondary triangulation and trilateration shall be carried out under the control of the Chief Surveyor, and shall normally be performed by Government surveyors.

**Lower order triangulation**

**29.** (1) All new triangulation and trilateration of a lower order than geodetic or secondary required to provide general control for cadastral surveys shall be brought into harmony with existing control by methods conforming with current survey practice.

(2) When issuing survey data for such work to an authorised surveyor, the Chief Surveyor may recommend either a particular sequence in the computation of new work or any special computations which the circumstances may require, and it shall be the duty of an authorised surveyor so informed not to depart from the Chief Surveyor's recommendation without reasonable cause.

**Tertiary and minor triangulation**

**30.** For the purpose of regulations 31 and 32, tertiary triangulation or trilateration means triangulation or trilateration established to an accuracy which makes it suitable for use as a basis of further triangulation or trilateration; minor triangulation or trilateration means triangulation or trilateration established to a lower accuracy and suitable only as a basis for fixing local traverses and beacons.

**Instruments used for triangulation and trilateration**

**31.** (1) A micrometer theodolite of an approved pattern reading directly to one second of arc, or better, shall be used for tertiary triangulation.

(2) A micrometer theodolite of an approved pattern reading directly to twenty seconds of arc, or better, shall be used for minor triangulation.

(3) Electronic distance measuring equipment of an approved pattern shall be used for trilateration distance measurement.

**Method of taking triangulation**

**32.** (1) The minimum requirement for tertiary and minor triangulation shall be two arcs observed on different zeros:

Provided that two rounds observed on different faces and different zeros may be sufficient for observations to points situated less than 6,000 feet distant.

(2) An arc of angular observations for triangulation shall consist of two rounds observed in opposite directions on the same zero, one round being on face left and the other on face right.

(3) For each arc a suitable reference station shall be selected and both rounds of the arc shall be closed on to it, and the misclosure of each round shall be appropriate to the class of theodolite used.

(4) The difference between measurements of any angle on different arcs shall be appropriate to the class of theodolite used.

(5) Where electronic distance measuring equipment is used, sufficient observations shall be taken to eliminate any ambiguities and achieve the accuracy required by regulation 8.

### **Fixing of beacons**

**33.** (1) Triangulation, trilateration, or a combination of these techniques for determining the position of beacons, shall be carried out in accordance with the procedure laid down in regulations 29 to 32 and the method of computation shall conform with current survey practice.

(2) Beacons may also be fixed by—

- (a) intersection, provided at least three suitable rays are observed on to the point to be fixed;
- (b) resection, provided at least four points in favourable positions for such fixing are observed;
- (c) any other method which is capable of fixing a point with no less accuracy than that of the methods of intersection and resection:

Provided that no point fixed by any of the methods specified in subparagraphs (a), (b) and (c) of this paragraph shall be used to form the basis of further triangulation or trilateration.

### **Instructions for basic control**

**34.** In areas where no triangulation exists an authorised surveyor shall request instructions from the Chief Surveyor as to the datum and method of survey to be used.

### *Traverse Surveys*

#### **Geodetic and secondary traverses**

**35.** All geodetic and secondary traverses shall be carried out under the control of the Chief Surveyor and shall normally be performed by Government Surveyors.

#### **Main control traverses**

- 36.** (1) (a) All main control traverses shall be observed to third order standard.
- (b) Where such lines are measured by means of a measuring band all such lines shall be double chained.
  - (c) Where such lines are measured by means of electronic distance measuring equipment sufficient observations shall be taken to eliminate any ambiguities.
  - (d) All such field operations shall be appropriate to a standard of accuracy of not less than 1:20,000.

- (e) Where a surveyor is unable to close his work within the limits prescribed by the Chief Surveyor, the Chief Surveyor may at his discretion authorise or instruct the surveyor to accept a lower order of misclosure.
- (2) (a) All other control traverses for the survey of rectilinear boundaries shall be observed to fourth order standard.
- (b) Field operations for such surveys shall be appropriate to a standard of accuracy of 1:10,000, but computational misclosures shall be allowed to the same degree of accuracy as the datum supplied by the Chief Surveyor.
- (c) A surveyor shall not use a loop traverse closing on his starting point if it is practicable to traverse between two previously fixed stations.
- (d) When a surveyor is unable to close his work within the limits prescribed by the Chief Surveyor, the Chief Surveyor may at his discretion authorise or instruct the surveyor to accept a lower order of misclosure, otherwise the surveyor shall close his new work by a loop traverse, orientation being confirmed in a satisfactory manner.
- (3) (a) The survey of curvilinear boundaries such as roads, high water marks, etc., shall be made by subsidiary traverse or by air-survey methods:  
Provided that this regulation shall not preclude any more accurate method.
- (b) Such surveys of curvilinear boundaries shall be carried out to a standard of accuracy appropriate to the plotting scale of the plan of the survey.
- (4) Where traverses are very short, a reasonable misclosure shall be allowed irrespective of the minimum requirements under these Regulations.

#### **Angular measurement of traverses**

- 37.** (1) A theodolite permitted by regulation 31(1) shall be used for all third order traverses where the distances are measured with electronic distance measuring equipment.
- (2) A theodolite permitted by regulation 31(2) shall be used for all other third and fourth order traverses.
- (3) At every traverse station of third and fourth order traverses, not less than two rounds of angular measurements on different faces and different zeros shall be observed.
- (4) Angular measurements for subsidiary traverses, may be made either with a theodolite or a compass of approved pattern, subject to the necessity to achieve the standard of accuracy required by regulation 36(3)(b). If a compass is used, both forward and back observations must be observed at each station.
- (5) It is not necessary to close rounds of traverse observations on to a reference station.

### **Linear measurement of traverses**

- 38.** (1) (a) All linear measurements of third and fourth order traverses shall be measured using equipment and methods appropriate to the standards of accuracy specified in regulation 36(1) and (2).
- (b) Slopes shall be determined by a theodolite, with a degree of precision appropriate to the standards specified in regulation 36(1) and (2), and where the slope is in excess of 10° the theodolite shall be read on both faces.
- (c) All measurements shall be reduced to the horizontal at mean sea level. In addition measurements made with a measuring band shall be corrected for temperature and, where appropriate, sag.
- (2) (a) All linear measurements of subsidiary traverse shall be measured using equipment and methods appropriate to the standards of accuracy specified in regulation 36(3).
- (b) Slopes shall be determined by a theodolite or abney level with a degree of precision appropriate to the standards specified in regulation 36(3).
- (c) All measurements shall be reduced to the horizontal.

### **Surveys of curvilinear boundaries**

- 39.** (1) In a survey of curvilinear boundaries by the techeometric method, distances determined by staff readings shall not normally exceed 500 feet and all three stadia readings on the staff shall be read.
- (2) Offsets to curvilinear boundaries from a traverse line which substantially exceed 150 feet shall be set out instrumentally or geometrically and the method shall be recorded in the field notes.

### **Swinging of hanging traverses**

- 40.** Swinging of hanging traverses unsupported by independent checks shall not be used.

### **Verification of terminals of traverse**

- 41.** Where the means exist, every point of departure of a new traverse and every terminating point shall be verified by observations and measurements, which shall be recorded in the field notes.

### **Verification of datum**

- 42.** Where a previously co-ordinated traverse station is converted for use as a boundary beacon or where such traverse station is used to place or fix a boundary beacon, the surveyor shall verify the station by observations and measurements which shall be recorded in the field notes.

*Air Survey*

**Air Survey**

43. Air survey methods may be employed in special cases with prior written approval of the Chief Surveyor who may require details of the specifications and calibration data of the instruments to be used.

PART V

FIELD NOTES

**Field notes to be on special forms**

44. (1) Field notes shall be made on such forms or books as the Chief Surveyor may require.

(2) Authorised surveyors shall pay to the Chief Surveyor the cost price of any blank forms or books supplied to them by the Chief Surveyor.

**Recording of triangulation observations**

45. (1) At each triangulation and trilateration station every surveyor shall, when taking observations, record in his field notes the date, the time, the weather conditions and degree of visibility.

(2) When it is necessary for any reason, for a surveyor to divide his observations at any station into two sets, the second set shall incorporate at least two stations which have been observed in the first set.

**Recording of traverse observations**

46. All traverse observations and measurements shall be recorded in the field notes in the sequence in which they are observed or measured.

**Description of beacons**

47. A full description of every beacon and other mark used in the course of the survey, whether placed, found and used or adopted shall be recorded in the field notes.

**Field note entries**

48. (1) All observations and measurements made in the field shall be recorded clearly and legibly in hard pencil and shall be in such manner as the Chief Surveyor may require.

(2) All entries in field notes, which are not made in the field shall be written in blue or black ink.

(3) All entries in field notes shall be indexed and referenced in such a way that any competent person may be able to prepare a true plan therefrom and the entries shall be in such form that they have only one reasonable and correct interpretation.

### **Erasures and corrections**

**49.** (1) In no circumstances shall any erasure be made in field notes.

(2) Corrections shall be made by drawing a thin line through the erroneous entry so as to have the original entry legible; the correct entry shall be written outside the erroneous entry and not across it.

(3) Corrections to field notes shall be made in the field and shall be a true record of actual measurements or reobservation and shall be initialled by the surveyor.

### **Nomenclature**

**50.** (1) The letters, names or numerals, by which any beacon or survey mark is described in field notes shall be written in roman script.

(2) The Chief Surveyor shall issue an application or block of unique letters and numbers for beacons to an authorised surveyor for his exclusive use and the surveyor will maintain a record of emplacement, description and where appropriate, coordinates. The record shall be submitted to the Chief Surveyor at least once a year and at any time required by him.

### **Cover page and index**

**51.** (1) The cover page of field note forms or the cover of field note books shall contain such information as the Chief Surveyor may require.

(2) This information shall include the standard temperature and tension for the measuring band used in the survey and where measurements have been made in catenary the weight per 100 ft. of the measuring band.

(3) The pages of field notes shall be numbered and an index in alphabetical and numerical order of all observations and measurements in the field notes shall be given on the reverse of the cover or cover page.

### **Unorthodox methods**

**52.** When any surveyor is compelled to use unorthodox methods of survey owing to obstructions or difficulties in the field, he shall give explanatory notes and where necessary, diagrams in the field notes to explain clearly the method he has used and recorded.

### **Topographical features**

**53.** (1) Sketched topographical features in the vicinity of a beacon shall be recorded, where possible, to facilitate its location.

(2) All developments on any plot such as buildings, wells, boreholes shall be surveyed. Any other development such as pipelines which in the surveyor's opinion may involve a question of easement, right of way or any prescriptive rights shall also be surveyed.

PART VI  
COMPUTATIONS

**Computations to be on special forms**

54. (1) Computations shall be made on such forms as the Chief Surveyor may require.

(2) Authorised surveyors shall pay to the Chief Surveyor the cost price of any blank forms supplied to them by the Chief Surveyor.

**Method of entering computations**

55. Computations shall be clearly and legibly set out in ink, and the entry of numbers or words to indicate check on the computations shall be made in pencil or a different coloured ink:

Provided that red ink shall be reserved for use of the Chief Surveyor.

**Triangulation and trilateration**

56. Surveys carried out by triangulation or trilateration shall normally be set out and computed by the Direction Method or in conformity with any other current standard survey method.

**Traverses**

57. (1) In surveys carried out by traverse methods, each separate traverse shall normally be set out in suitable form so as to demonstrate the initial datum bearing or bearings, the bearing misclosure and the consequent adjustment of bearings.

(2) The positional misclosure, its distribution through the traverse, and the finally adjusted values of all traverse points shall be demonstrated in conformity with current standard survey practice.

**Independent checks to be made**

58. Before any surveyor forwards any computations to the Chief Surveyor for authentication he shall make an independent and complete check of all his calculations and such checks shall accompany the computations and be clearly demonstrated.

**Method of computing areas**

59. (1) The rectilinear areas of parcels, the boundaries of which have been fixed, shall be computed mathematically.

(2) When a portion of the boundary of a parcel, the boundaries of which have been fixed, is a curvilinear boundary, the area of the parcel shall be determined partly by computing from co-ordinates and partly by planimeter determination from a drawing of the curvilinear boundary which has been drawn in conformity with regulation 64.

(3) If necessary, the co-ordinates of accurately scaled points on the drawing of the curvilinear boundary shall be used in the computation, in order to reduce to a minimum the area to be determined by the planimeter.

**Method of measuring areas**

60. The areas of parcels, the boundaries of which are approximate only, shall be determined by planimeter measurement.

**Degree of accuracy of calculating areas**

61. Areas shall normally be calculated to the degree of accuracy specified in the following table—

	<i>Decimal places of an Acre</i>	
	<i>Fixed boundaries</i>	<i>Approximate boundaries</i>
Parcels not more than 5 acres ... ..	3	2
...		
Over 5 acres and not more than 25 ...	2	1
...		
Over 25 acres and not more than 100	1	Nearest acre
...		
Over 100 acres ... ..	Nearest acre	Nearest acre

**Presentation of computation**

62. The computations of every survey submitted for authentication shall be preceded by—

- (a) a report; and
- (b) a general index to the computations; and
- (c) a complete list of final co-ordinates of every point adopted or calculated in the survey; this list shall be arranged in groups comprising datum points, new triangulation, trilateration, and traverse stations, old or re-established boundary beacons and new boundary beacons, arranged in alphabetical and numerical order; and on this co-ordinate list, a description of every point shall be given and reference shall be made to the source of co-ordinates including datum plans or pages of computations.

PART VII  
PLANS

**Plans to be drawn on special forms**

63. (1) All plans shall be drawn in waterproof inks on such plan forms as the Chief Surveyor may require.

(2) Authorised surveyors shall pay to the Chief Surveyor the cost price of any plan forms supplied to them by the Chief Surveyor.

### **Scales to be used**

**64.** Plans shall be plotted at the same scale as the Registry Map of the registration section in which the parcel is situated:

Provided that in special circumstances plans shall be plotted at such scale as the Chief Surveyor may require.

### **Plotting of curvilinear boundaries**

**65.** (1) Where the consent of the Chief Surveyor has been obtained for the adoption of an existing survey of a curvilinear boundary, the surveyor shall—

- (a) make an accurate reduction of the larger scale plan for use at a smaller scale; or
- (b) make an accurate transfer for use at the same scale; or
- (c) replot from the original field notes and computations for use at a larger scale.

(2) Where a curvilinear rectilinear boundary intersects a curvilinear boundary and regulation 17(1) is applicable, the distance from each line beacon to the intersection shall be shown to the nearest foot, but the distances between successive beacons along the rectilinear boundary shall be shown to the degree of precision required by regulation 69(3).

(3) Where a curvilinear boundary of a parcel has been fixed, such curvilinear boundary shall be distinctively described.

### **Plotting by co-ordinates**

**66.** (1) All plans shall be plotted by rectangular co-ordinates.

(2) A plotting grid of squares covering the surveyed area shall be drawn in blue such that grid line values shall be at intervals of 250 metres or even multiples of 250 metres.

### **General rules**

**67.** (1) All detail shown on the plan shall be distinct and the cramping of figures shall be avoided.

(2) The north point on every plan shall be upwards and parallel to sides of the plan form.

### **Abutting boundaries**

**68.** (1) All boundaries abutting on any parcel which has been surveyed shall be shown on the plan.

(2) Where the parcel or parcels adjoin a surveyed road, and where the scale of plotting permits, the boundaries abutting on the other side of the road shall be shown.

### **Co-ordinates and numerical data**

**69.** (1) In every survey the co-ordinates of permanent control stations shall be tabulated on the plan.

(2) Where boundaries of parcels have been fixed, the following additional information shall be given on the plan—

- (a) the co-ordinates of block corners of regular shaped figures and of all beacons of irregular shaped parcels shall be tabulated;
- (b) the length and bearing of every boundary shall, when possible, be inscribed along the line to which they refer and such lengths and bearings shall be deduced from the final co-ordinates tabulated on the plan.

(3) Lengths when required by paragraph 2 of this regulation, shall be shown to one decimal place of a foot.

- (4) (a) The area of every parcel shall be inscribed where possible within the figure to which it refers to the degree of accuracy prescribed by regulation 61 of these Regulations.
- (b) Sufficient space shall be left for the parcel number to be inserted by the Chief Surveyor.
- (c) No parcel number shall be inserted by any surveyor.

(5) All other data which may serve to clarify or complete any survey plan, shall be shown on the plan.

### **Triangulation charts**

**70.** When surveys have been made by triangulation or trilateration or a combination of these techniques, a chart drawn on a separate plan form shall be made showing all rays observed or measured or both. Such charts shall show a tabulated list of final co-ordinates of all permanent control points:

Provided that it shall not be necessary to draw a separate plan where the control points have been surveyed by methods permitted in regulation 33(2).

### **Colours and style of printing**

**71.** Every survey plan shall be drawn in accordance with the requirements of the Chief Surveyor, in respect of colours, style of printing and other details.

### **Topographical features**

**72.** (1) All topographical features that have been accurately fixed by survey, or have been sketched with reasonable precision, in accordance with regulation 53(1), shall be shown in their correct plotted positions on the plan.

(2) When form lines add nothing of significant value to the plan they shall not be shown.

(3) Topographical information may be taken from any official map published by the Chief Surveyor or any authority approved by the Chief Surveyor with due caution in regard to the limitations enjoined by the scale of the map.

(4) Where topographical information is taken from aerial photographs, the source shall be shown on the plan.

#### **Erasures or corrections**

**73.** (1) No erasures shall be made after a plan has been drawn in ink.

(2) Necessary corrections shall be made by scoring through the incorrect word, letter or numeral in ink and writing the correct word, letter or numeral outside the incorrect word, letter or numeral. Every such correction shall be initialled by the surveyor.

#### **Authentication by Chief Surveyor**

**74.** The Chief Surveyor may refuse to authenticate any plan submitted by an authorised surveyor which, in his opinion, has been drawn carelessly and untidily, or is received by him in a dilapidated or damaged condition.

### PART VIII

#### MISCELLANEOUS

#### **Public access to maps and plans**

**75.** Any authorised surveyor shall have access, free of charge, to every published map and plan in the possession of the Chief Surveyor:

Provided that the Chief Surveyor or his representative may refuse access as he may deem necessary in the public interest.

#### **Levelling information**

**76.** Where it is necessary to execute a levelling traverse either by spirit levelling or by trigonometrical methods in order to determine a boundary defined by reference to a vertical datum, e.g. high water mark or a contour line, the surveyor shall record in his field notes all the relevant observations, calculations, and data including the location and assumed level datum of the reference stations and the grounds on which the value of the level datum was accepted.

SCHEDULE

FEES

(Substituted by Legal Notice 12/1987)

	\$
1. <i>Authorisation of Surveyor</i> under section 4, Land Survey Ordinance .....	250.00
2. <i>Annual renewal of Authorisation</i> under section 5, Land Survey Ordinance .....	50.00
3. <i>Survey work undertaken by the Government Land Survey Department</i> on behalf of the public when conditions allow—	
(i) General boundaries	
(a) Survey of large parcel of land, first acre .....	300.00
each additional acre .....	200.00
plus proportional expenses	
(b) Subdivision, first lot .....	200.00
each additional lot .....	100.00
plus proportional expenses	
(c) Surveys for conditional purchases lease per Surveyor/Survey assistant per hour .....	20.00
plus proportional expenses	
(d) Replacement of boundaries, per boundary .....	75.00
plus proportional expenses	
(ii) Fixed boundary survey, per Surveyor/Survey assistant per hour .....	50.00
plus proportional expenses	
Provided that the Chief Land Surveyor may in his direction make such abatement to the above fees in respect of any land owned by a belonger where the fees for the survey are excessive having regard to the value of the land surveyed	
4. <i>Records</i>	
(i) Searches in the records for survey information, per file .....	5.00
(ii) Checking of authorised Surveyor's plans per mark for general or fixed boundary surveys.....	2.00
	<i>with a minimum fee of \$10</i>
5. <i>Drafting</i>	
(i) Drafting of Original Survey plans, per Surveyor/Survey Assistant hour .....	25.00
(ii) Traces from Original Survey Plans per hour minimum charge .....	5.00

6. <i>Reproduction</i>	
Dyeline or photostatic prints	
8½ x 11 inches per print .....	5.00
24 x 36 inches per print .....	10.00
Any size other than the above per sheet .....	15.00
7. <i>Maps and Plans for Sale</i>	\$
1/10,000 sheets (monochrome) each .....	5.00
1/25,000 sheets (coloured) each .....	5.00
1/200,000 sheets (coloured) each .....	8.00
Authorised Surveyors shall be entitled to a 20% discount on maps and plans required for survey work.	

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