



THE SURVEYORS BOARD of the NORTHERN TERRITORY

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NT SURVEYORS BOARD DIRECTION SURVEY REQUIREMENTS AND GUIDELINES FOR THE ISSUE OF SECTION 19 (ALRA) LEASES AND SECTION 19A (ALRA) HEADLEASES AND SUBLEASES FOR ABORIGINAL COMMUNITIES. (OCTOBER 2017)

1. BACKGROUND

The purpose of this document is to provide the NT Registered Licensed Surveyor with the general survey requirements and guidelines on how to perform a geodetic and cadastral survey on Aboriginal Land which is subject to leases under the *Aboriginal Land Rights (Northern Territory) Act 1976*.

Under the *Aboriginal Land Rights (Northern Territory) Act 1976*,

- leases can be issued under Section 19; and
- Headleases and subleases can be issued under Section 19A.

2. DEFINITIONS

In this document, unless the contrary intention appears -

“CRM” means a co-ordinated reference mark

“Surveyor” means a surveyor Licensed under the *Licensed Surveyors Act NT*.

“survey” means a survey on Aboriginal Land which is subject to leases under Section 19 of the *Aboriginal Land Rights (Northern Territory) Act 1976*.

“Survey Practice Directions” means Survey Practice Directions 2014 – Surveys Outside Coordinated Survey Areas or Survey Practice Directions 2003 – Surveys Within Coordinated Survey Areas

3. GENERIC PLAN PROCESS

The plan process for this type of survey generally adheres to the process for normal survey plans of subdivision or for leases. The process is as follows –

- a) Client engages a Surveyor to undertake the work and prepare a survey plan. Note – if necessary the Surveyor may contact the Surveyor-General to obtain provisional survey and plan requirements.

- b) Client or Surveyor obtains relevant statutory consent for the proposal. Normally this will be a Development Permit, however if the survey is excluded from the requirements of the *Planning Act* an endorsement by Strategic Land Planning will be required.
- c) Surveyor applies for data allocation, survey and plan requirements from the Surveyor-General through Survey Approval Online (SAO). This application will include:
 - evidence that the development has the relevant statutory consent, and
 - any requests for approval to deviate from the *Survey Practice Directions*.
- d) Surveyor undertakes survey work.
- e) Surveyor lodges the survey plan and information (with the appropriate documentation which includes relevant statutory requirements) with the Surveyor-General through Survey Approval Online (SAO).
- f) Surveyor-General processes and registers the survey plan and then checks the plan for compliance with relevant legislation and/or requirements.
- g) Surveyor-General approves plan.
- h) Surveyor or Client then lodges the relevant documentation with the Registrar General (Land Titles Office) to facilitate the registering and issuing of a lease.

4. DATA ALLOCATION

A request is to be submitted to the Surveyor-General's through Survey Approval Online (SAO), for the allocation of data (survey reference, parcel numbers and heading), approval of survey methodology (if required), survey requirements (which includes boundary marking, CRM requirements) and survey plan requirements.

The request should include –

- a) a diagram of proposed boundaries
- b) all variations being sought, including the method of survey, with respect to *Survey Practice Directions*
- c) description of disposal action or proposed tenure
- d) documentation that validates the authenticity of the proposed survey – including relevant statutory consents endorsing the proposed development. Normally this will be a Development Permit, however if the survey is excluded from the requirements of the *Planning Act* an endorsement by Strategic Land Planning will be required.
- e) other documentation to assist with the determination of survey requirements. For example -
 - information from local and/or service authorities with respect to their requirements to ensure the protection of their facilities/infrastructure

- access considerations
- information with respect to other interests

Note: If an **Engineering Survey** (or ‘detail’ survey) is to be undertaken to determine the lot layout, it would be beneficial to establish CRMs at this stage, so they can be used as survey control for the whole project. Survey Services from Survey Branch may be approached prior to this Engineering Survey for CRM requirements. Survey details and requirements for Engineering Surveys should be sought from the Client or their representative.

5. GENERAL SURVEY PRACTICE

The Surveyor must comply with:

- the provisions of the *Licensed Surveyors Act*, and
- the *Survey Practice Directions*

The surveys for Aboriginal community areas will be considered as ‘urban’ surveys and thus must comply with the relevant clauses in the *Survey Practice Directions*, unless stated otherwise in this Direction or a variation has been granted by the Surveyor-General prior to commencement of the survey.

5.1 Boundary Marking

Head lease (Section 19A)

The current ‘minimum’ marking requirements for head lease surveys are:

- a) marking of all corners of the head lease;
- b) marking the boundaries adjacent to roads and tracks;
- c) intermediate marks to be placed so that they are intervisible or at no more than 2km apart; and
- d) boundary line marks will be required on boundaries that extend to low water.

A minimum of three (3) CRMs are to be established at the extremities or near to the corners of the head lease boundaries to provide control for additional CRMs and surveys within the head lease as development continues. The location of such CRMs needs to be done in conjunction with the Survey Services from Survey Branch.

Please note, head lease boundaries cannot extend outside the existing Aboriginal freehold title boundaries.

Leases (Section 19) and Subleases (Section 19A)

Each proposed lease/sub-lease will be allocated an administrative lot number in the Townsite (refer to Section 4 on Data Allocation).

The surveyor may request exemption from the “urban” marking requirements. Dispensation may be given for the boundary marking of some existing developed lots; however the marking of the boundaries of undeveloped lots is always required. The request must be included as part of the SAO Data

Allocation application for each survey, to obtain approval for variations to the marking requirements.

CRMs replace “urban” reference marking for lease sub-lease boundaries. The location of such CRMs must be done in conjunction with the Survey Services from Survey Branch to optimise distribution for the whole township.

Please note, where the Surveyor-General does not require marking of lots, the Client may request the Surveyor to undertake preliminary or temporary marking to assist with ‘service’ upgrade projects and boundary negotiations with the existing owners/tenants of proposed parcels. The type of marking required for these lots is to be determined with the Client.

5.2 Co-Ordinated Reference Marks (CRM)

CRMs are to be established, in the vicinity of the positions requested by the Survey Services from Survey Branch, and in accordance with the *Survey Practice Directions*.

Please note, the allocated CRM number must be stamped or affixed permanently to the CRM, and be used in all information lodged. Also, recovery marks for each CRM, as per the *Survey Practice Directions*, will still be required. CRM plaques and identification tags can be obtained from Survey Services of Survey Branch.

CRM diagrams are required for each CRM, to enable easy location. They are to show abuttal information (such as parcel, road) and survey connections to obvious road furniture and physical features, such as power poles, SEPs, building corners, fences etc. These connections are to be recorded to 0.1 m and 30 min of arc magnetic bearing. The CRM diagrams shall be submitted in A4 size and format as specified by the Surveyor-General. Refer to attached examples – Attachment 1a.

In remote areas it will be necessary to include a locality diagram. Refer to attached example – Attachment 1b and 1c.

The CRMs are to be surveyed by **STATIC Global Navigation Satellite Systems (GNSS)** observations or by a **method approved by the Surveyor-General**. Note Static means GNSS observations with a dual frequency code and carrier phase tracking receiver / antenna securely mounted onto a high quality tripod with tribrach and optical plummet.

Field observations and analysis, for the use of **static** GNSS for survey applications, are to comply with the survey requirements and quality as specified in the *Intergovernmental Committee on Surveying & Mapping (ICSM) Standard for the Australian Survey Control Network (SP1), Version 2.1* including the *Guideline for Control Surveys by GNSS* and the *Guideline for the Adjustment and Evaluation of Survey Control*.

Results of the GNSS CRM survey need to comply with the relevant clause in the *Survey Practice Directions*. Note – in previous terminology this survey accuracy equates to Class B and Order 2.

The GNSS survey is to include connections between CRMs and connection to local (GDA94) survey control marks, however if it is not practical to connect to a local control mark or there are insufficient survey control marks then observations are to be performed to collect RINEX data at several CRMs to enable processing by the online service AUSPOS. Refer to *ICSM SP1 - Guideline for Control Surveys by GNSS* for observation technique and requirements. Also this RINEX data (unedited) will need to be lodged so that Departmental staff can verify the co-ordination and create a survey control dataset. Survey Services in the Survey Branch is available to discuss these requirements with the Surveyor prior to the survey and its completion.

The web location for the ICSM SP1 Standard and Guidelines is - <http://www.icsm.gov.au/geodesy/sp1.html>

The following is required to be lodged:

- A GNSS Report that addresses - observation technique, adjustment methodology, ambiguity resolution, connection to datum, network diagram, final coordinates and Survey Uncertainty/Accuracy (tabulated), least squares adjustment, and certification/proof of instrument standardisation.
- GNSS Log field sheets; refer to attached example – Attachment 2;
- Observational data - raw (RINEX) and / or reduced baselines with VCV, Note if RINEX then please include the navigational file along with the observation file AND/OR AusPOS Report (with final ephemeris data “final orbits”)
- Co-ordinate Listing - a schedule of the adjusted GDA 94 co-ordinates (including ellipsoidal height) of the CRMs surveyed;
- CRM diagrams; and
- NTGESS Spreadsheet.

6. SURVEY PLANS

The survey plan for these surveys will be compiled in accordance with the *Plan Drawing Standards*, as approved by the Surveyors Board of the NT. In other words, the lodged plan is to be a typical survey which will also comply with the following requirements:

- a) Survey connections from lease boundaries to CRMs will be shown.
- b) CRM recovery marks and their survey connections will be shown.
- c) Occupation within 1 metre of any boundary will be shown
- d) Survey plan to be examined by an Accredited Survey Plan Examiner.
- e) Provision of a digital survey in the format prescribed by the Surveyor-General.
- f) If required, annotation on plan stipulating GNSS used in this survey or datum determination.

7. MISCELLANEOUS

7.1 Services / Utilities

The Surveyor will need to make provisions and undertake investigations for the protection of service infrastructure/facilities rights and/or interests. Consequently, it is recommended that the Surveyor discuss potential issues with the Client or their representative during their engagement/survey briefing, and any LTO potential registration issues with the Registrar General, Land Titles Office (LTO).

7.2 Access

The Surveyor will need to investigate with their Client or representative the allocation of access corridors or roads for these surveys and their location and dimensions. We advise that the Surveyor discuss LTO registration issues with the Registrar General (LTO) if these access corridors need to be registered,

7.3 Existing Interests

Existing registered interests that are affected by the head lease, lease or sublease surveys must be maintained. The Surveyor must discuss with the Registrar General (LTO) and Client or their representative the registration and administrative process to achieve the desired outcome.







