

Notice to Surveyors

T1/2025

Electronic Distance Measuring (EDM) instrumentation calibration

1. Requirement to calibrate EDM instrumentation.
2. Medjil, the new EDM instrumentation calibration portal.

1. Requirement to calibrate EDM instrumentation.

Background

Under the Licensed Surveyors (General Surveying Practice) Regulations 1961, Regulation 20, Calibration:

- (1) A surveyor shall calibrate measuring equipment at regular intervals (not exceeding 2 years) in accordance with accepted practice.
- (2) The Surveyor General is to arrange for a standard or standards to be available to enable surveyors to comply with subregulation (1).

Section 10 of the *National Measurement Act 1960* requires that where Australian legal units of measurement have been defined for a physical quantity, measurements of that physical quantity shall only be legal when they are traceable to the Australian primary standards of measurement.

Traceability is the process whereby a measurement can be referenced back to the appropriate Australian primary standards of measurement through a hierarchy of calibrations of higher accuracy. Traceability is necessary both to ensure that all measurements are derived from, and are consistent with, the primary standard as well as meeting the legal requirements.

The Western Australian Land Information Authority (Landgate) is appointed by the National Measurement Institute (NMI) as a Verifying Authority for Length and is accredited by the National Association of Testing Authorities (NATA) against ISO 17025.

Under this authority, Landgate maintains EDM instrumentation calibration facilities at Curtin, Busselton and Kalgoorlie, for surveyors to calibrate their EDM instrumentation. These facilities are issued with a certificate of verification of a reference standard of measurement in accordance with Regulation 13 of the National Measurement Regulations 1999 (*National Measurement Act 1960*).

These reference standards (certified distances) are entered into Medjil at regular intervals to provide an accurate and up to date reference standard. Both the EDM instrumentation calibration facilities and Medjil are available to all surveyors.

Requirement

Practising Licensed Surveyors are reminded of the importance of complying with the Licensed Surveyors (General Surveying Practice) Regulations 1961, Regulation 20.

The calibration of EDM instrumentation is the responsibility of the Practising Licensed Surveyor certifying the correctness of the survey. The certified results of such actions must be traceable to the Australian primary standard of measurement, which is its legal traceability and for this purpose can only be undertaken at calibration facilities made available by the Surveyor General.

EDM instrumentation calibration details must be recorded on the index page of field records lodged at Landgate. The index page must include the date of calibration and the baseline facility where the calibration was undertaken. This information must align with the EDM instrumentation (equipment with serial number) also listed on the index page.

2. Medjil, the new EDM instrumentation calibration portal.

Background

Landgate in collaboration with other jurisdictions, has developed a new online EDM instrumentation calibration portal, known as Medjil, which replaces BaselineWA. Medjil has undergone thorough testing and verification over the last few years, most recently through beta version usage with feedback received from stakeholders, including surveyors.

Medjil (meaning accurate in Whadjuk Noongar language) addresses many recommendations from previous BaselineWA software reviews including user experience enhancement, the addition of an internal register of instruments and the addition of record keeping of instrument certifications and calibrations. Calibration procedures for Medjil are based on published technical specifications, scientific papers and ISO standards.

In line with NMI standards, Landgate has recently completed calibration of the three EDM instrumentation baselines (Curtin, Busselton and Kalgoorlie) and new sets of reference standards (certified distances) are now published in Medjil.

Medjil meets Landgate's cyber security standards and can be accessed 24/7. When processing EDM calibration measurements, please refer to the user guides available under the portal resources tab. The general user guide provides a quick reference on how to register and operate the portal.

Requirement

Practising Licensed Surveyors are required to process their EDM instrumentation calibrations through Medjil, which can be accessed via <https://medjil0.lb.landgate.wa.gov.au/>

Practising Licensed Surveyors intending to produce calibration certificates from measurements before March 2025 must still use BaselineWA software.



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30 May 2025