

Department of Primary Industries and Water

INFORMATION & LAND SERVICES

Geospatial Infrastructure Branch

Office of the Surveyor General



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TOPICS: | **Use of AUSPOS Positioning Service for the Coordination of Surveys of Land**
| **Use of Launceston City Council DSMs for Control for Surveys of Land; Survey Directions section 2.1.2.3**

DATE: | **1st May 2008**

It has come to my attention that there may be some uncertainty amongst surveyors as to the validity of the use of Geoscience Australia's AUSPOS positioning service and the use of Launceston City Council DSMs for the coordination of surveys of land.

Section 2.1.2.4 of the Survey Directions ensures that MGA coordinates and bearings shown on surveys of land can be related directly to the state geodetic control network by requiring traceability to marks held in the Office of the Surveyor General (OSG) Survey Control Marks Database (SURCOM). This is generally achieved by connecting surveys to such marks directly or through a registered survey.

AUSPOS POSITIONING SERVICE

The use of this positioning service is an acceptable means for the coordination of surveys of land.

The AUSPOS positioning service uses data from dual frequency GPS observations made at continually operating reference stations (CORS), which when processed together with submitted GPS data provides coordinates for the occupied station(s). This CORS network includes stations on the Australian National Network, which itself forms the basis for Tasmania's geodetic network. Thus, an AUSPOS position is inherently linked to marks held in SURCOM and is valid for providing MGA coordinate and bearing datum for surveys of land.

It remains the surveyor's responsibility to ascertain the positional uncertainty of the coordinates so obtained and to ensure that the manner in which they are used results in derived coordinates and bearings that meet the requirements of the Survey Directions. Surveyors using AUSPOS should ensure that they observe Geoscience Australia's guidelines available on its website at <http://www.ga.gov.au/geodesy/sgc/wwwgps>. Criteria for the validation of AUSPOS solutions are found in section 5 of the 'AUSPOS Online GPS Processing Report'. As a generalisation, AUSPOS solutions that meet all of the validation criteria should meet 2nd order positional uncertainty requirements. The use of redundant coordinate determinations will assist in the identification of potential gross errors.

LAUNCESTON CITY COUNCIL MARKS

The Launceston City Council's DSMs that have been rigorously adjusted to 2nd order standards are acceptable for the coordination of surveys of land.

While many of these marks are included in SURCOM, there are a significant number that form part of the Council's Permanent Survey Mark Register that are not. It is intended to include these marks in SURCOM following appropriate quality assurance by the OSG.

In the interim, information for those marks not in SURCOM is available from the OSG on request. The information includes the coordinates and positional uncertainty of the marks.

It remains the surveyor's responsibility to apply this information in combination with related survey work to meet the requirements of the Survey Directions.

A handwritten signature in black ink, appearing to read 'Peter Murphy', with a stylized flourish at the end.

Peter Murphy
SURVEYOR GENERAL