Department of Lands

# Policy for NSW Lambert Conformal Conic Projection

## Issue

Adoption of standard parameters for a Lambert Projection for NSW based on the GDA94 datum. This will provide uniformity of the data in Lamberts projection and promote a "Whole of Government" approach for data and information sharing in NSW.

## Background

The Lambert Projection is often used for projecting a large landmass such as the whole of NSW. Lambert is a conformal projection with the scale true along the standard parallels. Over larger map areas however, distortions occur due to the changes in scale at points away from the standard parallels. The choice of the two standard parallels affects the distribution of the distortion within the map. By establishing a standard for the parallels to be used, the data of different users will be consistent.

Various parameters for the Lambert Conformal Conic projection have been used in NSW for many years. In 1967 the Central Mapping Authority established Lambert Projection parameters for its use, but this was not always adopted by other agencies. Other agencies adopted different Lambert projection parameters that provided a preferred outcome for their requirements.

Whilst this approach provides benefits to individual users, it can lead to confusion with data and information exchange unless the projection metadata is clearly defined. The introduction of the GDA94 datum provides an opportunity to rectify this situation, by also establishing standard Lambert parameters within GDA94.

The adoption of the GDA94 defined Lambert parameters is appropriate for the storage and application of mapping and GIS data. With the inclusion of appropriate metadata, a defined GDA94 Lambert projection will provide consistency for exchange of NSW GIS data.

Under the direction of the GDA Steering Committee, this issue was reviewed within the Department of Lands (Lands), SMIC, SMAC and SMMF. It was agreed to adopt a standard Lambert Projection consistent with that utilised by the Roads and Traffic Authority (RTA) for many years, and adapted by the RTA for GDA94 since 1998.

The GDA94 Lambert Projection parameters to be adopted by Lands are:

| Datum | GDA94 |
|---|---|
| Standard Parallels | -30° 45' 00"<br>-35° 45' 00" |
| Latitude of Origin<br>Central Meridian | -33° 15' 00"<br>147° 00' 00" |
| False Easting<br>False Northing | 9 300 000 m<br>4 500 000 m |

Appropriate metadata should be included with GDA94 Lambert Projection data.
Projection files: GDA 1994 Lamberts_CC.prj GDA 1994 Lamberts_CC.xml

## Policy Approval

The Lands GDA94 Lambert Conformal Conic Projection Policy using the above parameters for NSW is approved. This Policy should be implemented as appropriate.

P Harcombe
Chief Surveyor