

Interpreting Important Agricultural Land Maps

Resource Planning & Development Unit

This fact sheet outlines how to interpret Important Agricultural Land maps to inform local strategic planning process.

Pilot Mapping Project

In 2011- 2012, in consultation with government, industry and community stakeholders the Department of Primary industries investigated a new process for mapping agricultural lands.

This was necessary because the previous Agricultural Suitability Maps developed in the 1980s and 90s are outdated and flawed and are usually unsuitable for digitising. They also fail to identify important resource lands for all agricultural industries.

Important Agricultural Land maps identify lands that are highly suitable for important agricultural industries at a **local and regional scale**.

They complement the mapping of state/nationally significant agricultural lands developed for Strategic Regional Land Use Plans (Department of Planning & Infrastructure).

The maps were developed using currently available spatial data sets and were verified by stakeholder workshops. They are supported by a series of agricultural industry profiles.

Important Agricultural Land maps and associated information was developed to inform;

- local government strategic land use planning, in particular the development of Local Environmental Plans and strategies,
- local / regional economic development strategies and industry development strategies.

The pilot project mapped highly suitable lands for each leading agricultural sector in six case study local government areas (LGA's). Orange, Blayney Cabonne and Forbes in the central west, and Singleton and Muswellbrook in the Upper Hunter were selected because of their diverse agricultural landscapes and industries.



Industry and Departmental representatives review a draft Important Agricultural Land Map during the pilot project.
Photo: Melissa Kahler

Map Constraints

Regardless of the scale at which a map is viewed, its precision is determined by the quality of the data used to create the maps.

Expressed as a ratio, the map scale indicates the relationship between a unit of length on a map and the length it represents on the ground.

The scale of the most critical data sets used to map Important Agricultural Land is 1:250,000. This means that 1 cm on the map corresponds to 250,000cm or 2.5 km on the ground and 1 square centimetre on the map corresponds to 6.25 square kilometres (625 ha) on the ground.

Important Agricultural Land Maps are not suitable for assessing development proposals; rezoning proposals; or for property specific planning purposes.

The smallest area able to be accurately identified on the data used for mapping Important Agricultural Lands is 250 ha.

Boundary Accuracy

Data sets, such as Land and Soil Capability, that were used to map Important Agricultural Lands, identify discrete classes with distinct boundaries.

Biophysical features, however, typically change gradually over considerable distances. For mapping purposes the mapped boundary lines between discrete areas may represent the halfway point between two classes, or the best fit location.

Farming landscapes also typically involve a complex mix of geology, terrain and soil features. The ability to accurately delineate such changes depends on the capacity to map such variations and the scale of the map.

Data sources

The Important Agricultural Land maps were developed using data sets available for most areas of the state, as listed in Table 1. Those data sets were used to enable the mapping process to be consistently applied to other regions.

Table 1: Data sources for Pilot mapping project

Data Source	Scale
Average yearly rainfall (1921-1995) <i>Bureau of Meteorology</i> (derived using ANUCLIM software of the Fenner School of Environment and Society, ANU)	1:5,000,000
draft NSW Land & Soil Capability (2011-12) <i>Office of Environment and Heritage</i>	1:250,000
NSW Soil Fertility (2011) <i>Office of Environment and Heritage</i>	1:250,000
Terrain Slope (2010), Shuttle Radar Topography Mission 2000 Australia, <i>Geoscience Australia</i>	90m
Altitude (2010), Shuttle Radar Topography Mission 2000 Australia, <i>Geoscience Australia</i> ,	30m
Bathurst Geology (1998). Second Edition (geological map SI55-08) <i>Australian Geological Survey Organisation / Geological Survey of New South Wales</i>	1:250,000

Land Use Planning Applications

Important Agricultural Land maps, digital data and industry profiles for each leading agricultural sector mapped are available for each of the six pilot project local council planning groups.

Important Agricultural Land maps and the profiles can inform the development of local strategic plans by helping planning authorities identify areas that are most suitable for their areas leading agriculture industries.

In particular the maps can help councils to support sustainable agricultural development and minimise land use conflicts by;

- Zoning Important Agricultural Lands for Primary Production (RU1 or RU4),
- Adopting supportive planning criteria including; permissible land uses, minimum lot sizes and development control plans.

Property specific development proposals require a far greater level of accuracy and detail than is available from Important Agricultural Land maps. This may include soil, water, vegetation and infrastructure and marketing studies.

A series of development assessment guidelines are available on the Departmental website to help consent authorities to assess property specific development applications.

Further Information

The Agriculture Land Use Planning website: (www.dpi.nsw.gov.au/environment/landuse-planning/agriculture) includes:

- Important Agricultural Land maps and profiles
- [ABS data summaries \(2006\)](#)
- [Guidelines on Development Assessment](#)
- [Land Use Conflict Risk Assessment Guide, NSW DPI 2011](#)

Email landuse.enquiries@dpi.nsw.gov.au for:

- Digital spatial (GIS) data on Important Agricultural Land maps for the pilot project council areas
- advice on strategic land use planning and LEP reviews / developments.

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