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|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title                                               | NSW Landuse 2007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| Abstract                                            | <p>A data set of land use between June 2000 and June 2007 for New South Wales. Land use is classified to three separate classification schemes. These classification schemes are:</p> <ul style="list-style-type: none"> <li>• NSW Land Use Mapping Program (LUMAP).</li> <li>• NSW SCALD (Standard Classification for Attributes of Land) Classification</li> <li>• ALUM (Australian Land Use and Management) Classification.</li> </ul> <p>The LUMAP Classification is DECC's most recent classification for mapping of land use classes for NSW. It is a simple numeric classification, open-ended to enable additional classes to be added.</p> <p>Prior to LUMAP, the SCALD classification was the standard for mapping of land use in NSW. It is a combined alpha-numeric classification system.</p> <p>The ALUM classification is based upon the modified Baxter &amp; Russell classification and presented according to the specifications contained in <a href="http://adl.brs.gov.au/mapserv/landuse/index.cfm?fa=app.ALUMClassification">http://adl.brs.gov.au/mapserv/landuse/index.cfm?fa=app.ALUMClassification</a>.</p> <p>Version 6 of the classification describes the land use classes. Earlier copies of the data set may have used Versions 4 or 5.</p> <p>The mapping was commenced in April 2001 and completed by June 2007. The date of the data set is set as the land use occurring at the time the satellite imagery was acquired, which can range from 1999 to 2006. This dataset was updated in May 2011 to include values in the vacant attribute fields of Source, Source Date, Source Scale, Reliability and LU Mapping Date.</p> |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| Resource locator                                    | <table> <tr> <td><a href="#">Data Quality Statement</a></td><td> <p>Name: Data Quality Statement</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>DQS - NSW Landuse</p> <p>Function: download</p> </td></tr> <tr> <td><a href="#">NSW Land Use Mapping - metadataV2</a></td><td> <p>Name: NSW Land Use Mapping - metadataV2</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Comprehensive list of aerial photography used for the land use mapping</p> <p>Function: download</p> </td></tr> <tr> <td><a href="#">ALUM codes detailed classifications</a></td><td> <p>Name: ALUM codes detailed classifications</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Australian Land use and mapping codes detailed classifications</p> <p>Function: download</p> </td></tr> <tr> <td><a href="#">ALUM Codes classification</a></td><td> <p>Name: ALUM Codes classification</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Land Use ALUM codes classification</p> <p>Function: download</p> </td></tr> <tr> <td><a href="#">REST Service (JSON, SOAP)</a></td><td> <p>Name: REST Service (JSON, SOAP)</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Connect to REST Service (JSON, SOAP)</p> <p>Function: download</p> </td></tr> <tr> <td><a href="#">NSW Landuse 2007</a></td><td> <p>Name: NSW Landuse 2007</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Download Data package</p> <p>Function: download</p> </td></tr> </table>                                                       | <a href="#">Data Quality Statement</a> | <p>Name: Data Quality Statement</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>DQS - NSW Landuse</p> <p>Function: download</p> | <a href="#">NSW Land Use Mapping - metadataV2</a> | <p>Name: NSW Land Use Mapping - metadataV2</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Comprehensive list of aerial photography used for the land use mapping</p> <p>Function: download</p> | <a href="#">ALUM codes detailed classifications</a> | <p>Name: ALUM codes detailed classifications</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Australian Land use and mapping codes detailed classifications</p> <p>Function: download</p> | <a href="#">ALUM Codes classification</a> | <p>Name: ALUM Codes classification</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Land Use ALUM codes classification</p> <p>Function: download</p> | <a href="#">REST Service (JSON, SOAP)</a> | <p>Name: REST Service (JSON, SOAP)</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Connect to REST Service (JSON, SOAP)</p> <p>Function: download</p> | <a href="#">NSW Landuse 2007</a> | <p>Name: NSW Landuse 2007</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Download Data package</p> <p>Function: download</p> |
| <a href="#">Data Quality Statement</a>              | <p>Name: Data Quality Statement</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>DQS - NSW Landuse</p> <p>Function: download</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| <a href="#">NSW Land Use Mapping - metadataV2</a>   | <p>Name: NSW Land Use Mapping - metadataV2</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Comprehensive list of aerial photography used for the land use mapping</p> <p>Function: download</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| <a href="#">ALUM codes detailed classifications</a> | <p>Name: ALUM codes detailed classifications</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Australian Land use and mapping codes detailed classifications</p> <p>Function: download</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| <a href="#">ALUM Codes classification</a>           | <p>Name: ALUM Codes classification</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Land Use ALUM codes classification</p> <p>Function: download</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| <a href="#">REST Service (JSON, SOAP)</a>           | <p>Name: REST Service (JSON, SOAP)</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Connect to REST Service (JSON, SOAP)</p> <p>Function: download</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| <a href="#">NSW Landuse 2007</a>                    | <p>Name: NSW Landuse 2007</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Download Data package</p> <p>Function: download</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |
| Unique resource identifier                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |                                                                                                                                                             |                                                   |                                                                                                                                                                                                                             |                                                     |                                                                                                                                                                                                                       |                                           |                                                                                                                                                                                 |                                           |                                                                                                                                                                                   |                                  |                                                                                                                                                           |

|                                               |                                                                                                                                                                                                                  |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Code                                          | 5a5e08fd-6ed5-497a-9403-3356f5e229c0                                                                                                                                                                             |
| Presentation form                             | mapDigital                                                                                                                                                                                                       |
| Edition                                       | Not known                                                                                                                                                                                                        |
| Dataset language                              | eng                                                                                                                                                                                                              |
| Metadata standard                             |                                                                                                                                                                                                                  |
| Name                                          | ANZLIC Metadata Profile: An Australian/New Zealand Profile of AS/NZS ISO 19115:2005, Geographic information - Metadata                                                                                           |
| Version                                       | 1.1                                                                                                                                                                                                              |
| Dataset URI                                   | <a href="https://datasets.seed.nsw.gov.au/dataset/5a5e08fd-6ed5-497a-9403-3356f5e229c0">https://datasets.seed.nsw.gov.au/dataset/5a5e08fd-6ed5-497a-9403-3356f5e229c0</a>                                        |
| Purpose                                       | Legislative and Regulatory requirements                                                                                                                                                                          |
| Status                                        | onGoing                                                                                                                                                                                                          |
| Spatial representation                        |                                                                                                                                                                                                                  |
| Type                                          | vector                                                                                                                                                                                                           |
| Spatial reference system                      |                                                                                                                                                                                                                  |
| Authority code                                | GDA94 Geographic (Lat\Long)                                                                                                                                                                                      |
| Code identifying the spatial reference system | 4283                                                                                                                                                                                                             |
| Equivalent scale                              | 1:None                                                                                                                                                                                                           |
| Additional information source                 | Refer to the NSWLanduse CodesVersion53.htm, NSWLandusemapping_3_systemmetadata.pdf,FINAL_ALUM_Version7_classificationREVISION_16May2010.pdf and FINAL_ALUM_Version7_detailedclassificationREVISION_19May2010.pdf |
| Topic category                                |                                                                                                                                                                                                                  |

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Keyword set</b>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| keyword value                                    | LAND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Originating controlled vocabulary                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Title                                            | ANZLIC Search Words                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Reference date                                   | 2008-05-16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Geographic location</b>                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| West bounding longitude                          | 141                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| East bounding longitude                          | 153.63882                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| North bounding latitude                          | -37.498524                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| South bounding latitude                          | -28.157007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Vertical extent information</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Minimum value                                    | -100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Maximum value                                    | 2228                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Coordinate reference system                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Authority code                                   | urn:ogc:def:cs:EPSG::                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Code identifying the coordinate reference system | 5711                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Temporal extent</b>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Begin position                                   | 1999-10-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| End position                                     | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Dataset reference date</b>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Date type                                        | publication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Effective date                                   | 2010-07-23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Date type                                        | revision                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Effective date                                   | 2011-04-08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Resource maintenance</b>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Maintenance and update frequency                 | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Contact info                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Organisation name                                | NSW Department of Climate Change, Energy, the Environment and Water                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Full postal address                              | NSW<br>Australia<br>data.broker@environment.nsw.gov.au                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Telephone number                                 | 131555                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Email address                                    | <a href="mailto:data.broker@environment.nsw.gov.au">data.broker@environment.nsw.gov.au</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Responsible party role                           | pointOfContact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Lineage</b>                                   | <p>The data set is a new series of land use maps prepared by DNR for eastern and central New South Wales.</p> <p>Line work is prepared in two different ways depending upon the complexity of the land use patterns. For more complex land use patterns, the line work is drawn on 1:25 000 or 1:50 000 plots of satellite imagery.</p> <p>For map sheets with less complex land use patterns, line work is created digitally. Existing digital data sets are imported using ArcGIS 9.1 and a composite land use polygon layer built. Where new line work is required this is digitised directly on to screen.</p> <p>Information plotted onto the satellite imagery prior to mapping comprises: * the cadastral layer from the NSW Digital Cadastral Database * boundaries of State Forests, National Parks and Nature Reserves from the NSW Digital Cadastral Database * Property Agreements and Management Contracts funded under the NSW State Government's Native Vegetation Management Fund * clearing consents issued by the NSW Department</p> |

of Infrastructure, Planning and Natural Resources for the establishment of hardwood, softwood or tea-tree plantations \* land use information prepared as part of the mapping of native vegetation.

The ALUM classification defines three levels of land use description - primary, secondary and tertiary. For the majority of the land use descriptions is down to the tertiary level.

Mapping was undertaken directly onto the satellite imagery or rectified aerial photograph mosaics using the satellite imagery, aerial photography, existing data sets, local knowledge and field checking as the main data sources.

For map sheets so far completed, details of the aerial photography are: \* Albury NSW4298 Runs 1-3, Flown 14.02.1996, Scale 1:50 000 \* Araluen NSW 4461, 4463 & 4464, Runs 1-6, Flown 12.12.1998-06.01.1999, Scale 1:50 000 \* Ardlathan NSW 4753 & 4754, Flown 06-07.01.2003, Scale 1:50 000 \* Armidale NSW 4556, 4557, 4561 & 4562, Runs 1-13, Flown May-June 2001, Scale 1:25 000 \* Arumpo NSW 4382 Runs 1-6, Flown 03.12.1997, Scale 1:50 000 \* Ashford NSW 4517, 4519 & 4520 Runs 1-7, Flown 03-12.08.2000, Scale 1:50 000 \* Baan Baa NSW 4778, 4779 & 4794 Runs 1-6, Flown 27.07.2003-14.09.2003, Scale 1:50 000 \* Baden Park NSW 4926, 4927 & 4929 Runs 1-7, Flown 02-13.11.2005, Scale 1:50 000 \* Ballina 4523, 4524 & 4525 Runs 1-7, Flown 10-22.09.2000, Scale 1:50 000 \* Balranald NSW 4155 & 4156 Runs 1-6, Flown 28.08.1993, Scale 1:50 000 \* Baradine NSW 4778, 4779 & 4794 Runs 1-6, Flown 27.07-14.09.2003, Scale 1:50 000 \* Bare Point NSW 4519, 4520, 4522 Runs 1-6, Flown August-September 2000, Scale 1:50 000 \* Barmedman NSW 4818 Runs 1-3, Flown 10.01.2004, Scale 1:50 000 \* Barnato NSW 4929 Runs 1-6, Flown 13.11.2005, Scale 1:50 000 \* Bateman's Bay NSW 4345 Runs 1-7, Flown January 1997, Scale 1:50 000 \* Bathurst NSW 4438, 4439, 4446, 4447 & 4448 Runs 1-13 Flown 18.06.1998-29.08.1998 Scale 1:25 000; \* Bega NSW 4421, 4422, 4423 & 4426 Runs 1-13, Flown 19-24.02.1998, Scale 1:25 000 \* Bellata NSW 4568, 4569 4573 & 4574, Runs 1-6 Flown 04.07.2001-15.08.2001, Scale 1:50 000 \* Bendemeer NSW 4350, 4353, 4355 & 4356 Runs 1-6, Flown 24.03.1997-05.03.1997 Scale 1:25 000 \* Bendemeer NSW , 4736 & 4737, Runs 1-13, Flown 03.01.2002-02.09.2002, Scale 1:50 000 \* Bendock NSW 4803 & 4805 Runs 1-4, Flown 13-14.11.2003, Scale 1:25 000 \* Berrigan NSW 4759, 4760 & 4773 Runs 1-6, Flown 18.01-04.05.2003, Scale 1:50 000 \* Berridale NSW 4414, 4415 & 4417, Runs 1-13, Flown 09-17.02.1998, Scale 1:25 000 \* Bidura NSW 4383, Runs 1-7, Flown 10-25.12.1997, Scale 1:50 000 \* Bingara NSW 4564, 4565 & 4566 Runs 1-13, Flown 17-23.06.2001, Scale 1:25 000 \* Blackville NSW 4527, 4533, 4543, 4544 & 4545 Runs 1-13 Flown 12.10.2000-28.03.2001, Scale 1:25 000 \* Blayney NSW 4469, 4474, 4475, 4476, 4477 & 4478 Runs 1-13, Flown 06.02.25.04.1999, Scale 1:25 000 \* Bobadah NSW 4842 7 4844 Runs 1-6, Flown 12-20.05.2004, Scale 1:50 000 \* Bogan Gate NSW 4362 Runs 6-7, Flown 05.07.1997, Scale 1:50 000 \* Bogan Gate NSW 4592, 4593 & 4721 Runs 1-6, Flown 31.12.2001-05.03.2002, Scale 1:50 000 \* Boggabri NSW 4574, 4575, 4577 & 4580 Runs 1-13 Flown 15.08-06.09.2001, Scale 1:25 000 \* Bombala NSW 4421, 4422, 4423, 4426 & 4428 Runs 1-13 Flown 19-24.02.1998, Scale 1:25 000 \* Bonalbo NSW 4358, 4359, 4360, 4361, 4366, 4367 & 4372, Runs 1-13, Flown April-August 1997, Scale 1:25 000 \* Bono NSW 4284, Runs 1-6, Flown 10.09-23.11.1995, Scale 1:50 000 \* Boolaboolka NSW 4284, Runs 1-6, Flown 10.09-23.11.1995, Scale 1:50 000 \* Booligal NSW 4914 & 4915 Runs 1-6, Flown 17-19.07.2005, Scale 1:50 000 \* Boomi NSW 4870 Runs 1-6, Flown 16.09.2004, Scale 1:50 000 \* Boona Mount NSW 4843 Runs 1-6, Flown 11.05.2004, Scale 1:50 000 \* Booroondarra NSW 4930 & 4931 Runs 1-7, Flown 13-27.11.2005, Scale 1:50 000 \* Boorowa NSW 4384, 4394, 4398, 4406, 4429 & 4430, Runs 1-13, Flown 20.12.1997-26.02.1998, Scale 1:25 000 \* Braidwood NSW 4532 & 4533, Runs 1-7, Flown 17.10-17.12. 2000, Scale 1:50 000 \* Brindabella NSW 4418, 4419 & 4420, Runs 1-13, Flown 17.02.1998, Scale 1:25 000 \* Broken Hill NSW 4281, Runs 1-6, Flown 03.09-07.12.1995, Scale 1:50 000 \* Buckalow NSW 4283, Runs 1-6, Flown 09-26.09.1995, Scale 1:50 000 \* Bulahdelah NSW 4370, 4374 & 4375, Runs 1-13, Flown August 1997, Scale 1:25 000 \* Bunarba NSW 4563, 4566, 4567 & 4568 Runs 1-7, Flown 15.06-26.06.2001, Scale 1:50 000 \* Bunda NSW 4376 & 4277, Runs 1-6, Flown 18-21.08.1995, Scale 1:50 000 \* Bundarra NSW 4582, 4587 & 4588, Runs 1-13, Flown 19.09-01.11.2001, Scale 1:25 000 \* Bundemar NSW 4872 & 4876 Runs 1-6, Flown 22.09-06.10.2004, Scale 1:50 000 \* Bunna Bunna NSW 4568, 4569, 4573 & 4574 Runs 1-6, Flown 04.07-15.08.2001, Scale 1:50 000 \* Bunnerungee NSW 4379, Runs 1-6, Flown 04.11.1997, Scale 1:50 000 \* Buraja NSW 4759, 4760 & 4773 Runs 1-6, Flown 18.01-04.05.2003, Scale 1:50 000 \* Burragorang NSW 4593, 4594, 4597 & 4731, Runs 1-13, Flown 13.01-09.04.2002, Scale 1:25 000 \* Burrenbar NSW 4870 Runs 1-6, Flown 16.09.2004, Scale 1:50 000 \* Camberwell NSW 4479, 4480, 4494, 4495, 4496 & 4516, Flown May 1999-July 2000, Scale 1:25 000 \* Camden Haven NSW 4346 & 4347, Runs 1-13, Flown February-August 1997, Scale 1:25 000 \* Canbelego NSW 4846 & 4867 Runs 1-6, Flown 11.06-24.08.2004, Scale 1:50 000 \* Canberra NSW 4888 & 4889, Runs 1-13, Flown 19-21.01.2005, Scale 1:25 000 \* Canonba NSW 4829 & 4835 Runs 1-7, Flown 08-19.03.2004, Scale 1:50 000 \* Cargelligo NSW 4834 & 4839 Runs 1-7, Flown 23.03-08.04.2004, Scale 1:50 000 \* Carinda NSW 4901, 4903 & 4907, Runs 1-7, Flown 26.03-22.04.2005, Scale 1:50 000 \* Carrai NSW 4365, 4368 & 4369, Runs 1-13, Flown July - August 1997, Scale 1:25 000 \* Cessnock NSW 4514 & 4516, Runs 1-13, Flown July 2000, Scale 1:25 000 \* Clive NSW 4512, 4513, 4520, 4521 & 4524, Flown 07.06-14.09.2000, Scale 1:25 000 \* Coaldale NSW 4511, 4512, 4513 & 4519, Runs 1-13, Flown May-August 1997, Scale 1:25 000 \* Cobar NSW 4867, 4868 & 4871 Runs 1-7, Flown 24.08 - 20.09.2004, Scale 1:50 000 \* Cobargo NSW 4399, 4404, 4405, 4420 & 4421, Runs 1-13, Flown 12.01-19.02.1998, Scale 1:25 000 \* Cobargo NSW 4734, 4735 & 4736 Runs 1-13, Flown 07.05-19.08.2002, Scale 1:25 000 \* Cobbadah NSW 4516, 4581 & 4588Runs 1-13, Flown 02.09-01.11.2001, Scale 1:25 000 \* Cobbora NSW 4840 Runs 1-7, Flown 16-22.04.2004, Scale 1:50 000 \* Coffs Harbour NSW 4520, 4521 & 4523, Runs 1-4, Flown August-September 2000, Scale 1:50 000 \* Cohuna NSW 4756 & 4757, Runs 1-6, Flown 11.01-17.03.2003, Scale 1:50 000 \* Coleambally NSW 4754 & 4755, Runs 1-6, Flown 07-09.01.2003, Scale 1:50 000 \* Collarenebri NSW 4917, 4918 & 4919, Runs 1-7, Flown 29.07.2005, Scale 1:50 000 \* Conargo NSW 4756, 4758 & 4759 Runs 1-6, Flown 11.01-17.03.2003, Scale 1:50 000 \* Condobolin NSW 4591, 4592, 4593 & 4723, Runs 1-7, Flown 28.12.2001-11.03.2002, Scale 1:50 000 \* Conoble NSW 4925 & 4926 Runs 1-6, Flown 27.10-02.11.2005, Scale 1:50 000 \* Coolabah NSW 4925 & 4926 Runs 1-7, Flown 27.10-02.11.2005, Scale 1:50 000 \* Coolah NSW 4475, 4476, 4479, 4480 & 4490 Runs 1-13, Flown 25.03.1999-21.08.1999, Scale 1:25 000 \* Cooma NSW 4808, 4810 & 4811 Runs 1-13, Flown 28.11.-9.12.2003, Scale 1:25 000 \* Coolamon NSW 4819 Runs 1-6, Flown 11-12.01.2004, Scale 1:50 000 \* Coombie NSW 4925 & 4926 Runs 1-6, Flown 27.10-02.11.2005, Scale 1:50 000 \* Coonabarabran NSW 4434 & 4435, Runs 1-7, Flown 06.04.-10.05.1998, Scale 1:50 000 \* Coonamble NSW 4901 Runs 1-7, Flown 26.03.2005, Scale 1:50 000 \* Cootamundra NSW 4390, 4391,4393, 4399 & 4400 Runs 1-13, Flown 26.12.1997-13.01.1998, Scale 1:25 000 \* Cootamundra NSW 4816 & 4819 Runs 1-6 Flown 04-12.01.2004, Scale 1:50 000 \* Corryong NSW 4417 Runs 1-3, flown 17.02.1998, Scale 1:25 000 \* Cowarral NSW 4357, 4369 & 4370, Runs 1-13, Flown April-August 1997, Scale 1:25 000 \* Cowra NSW 4431, Runs 1-6, Flown 29.03.1998, Scale 1:50 000 \* Craigie NSW 4464, 4474 & 4487 Runs 1-6 Flown 15.01-07.08.1999, Scale 1:25 000 \* Croppa Creek NSW 4514, 4517, 4518, 4519, Runs 1-7, Flown 12.06-12.08.2000, Scale 1:50 000 \* Crookwell NSW 4499, 4502 & 4505, Runs 1-7, Flown 07.12.1999-22.04.2000, Scale 1:50 000 \* Culpataro NSW 4914, 4915 & 4916 Runs 1-6, Flown 17-20.07.2005, Scale 1:50 000. \* Cumborah NSW 4800 & 4801, Runs 1-6, Flown 14-21.10.2003, Scale 1:50 000 \* Curlew NSW 4446 Runs 1-13 Flown 24.08.1998 Scale 1:25 000 \* Cuthero NSW 4283 & 4379, Runs 1-7, Flown 10.09-04.11.1997, Scale 1:50 000 \* Dandaloo NSW 4840 & 4841 Runs 1-6, Flown 03-10.05.2004, Scale 1:50 000 \* Darnick NSW 4284, Runs 1-6, Flown 10.09-23.11.1995, Scale 1:50 000 \* Dorriggo NSW 4197, 4198 & 4200, Runs 1-13, Flown May 1994, Scale 1:25 000 \* Dorriggo NSW 4520, 4521 &

4523 Runs 1-7, Flown August-September 2000, Scale 1:25 000 \* Drake NSW 4496, 4498 & 4499, Runs 1-13, Flown October 1999, Scale 1:25 000 \* Dry Lake NSW 4756, 4759 & 4760, Runs 1-6, Flown 11.01.-17.03.2003, Scale 1:50 000 \* Dubbo NSW 4288, 4289 & 4290, Runs 1-7, Flown 04-16.12.1995 \* Dubbo NSW 4528, 4532 & 4538, Runs 1-7, Flown 23.11.2000-18.02.2001, Scale 1:50 000 \* Dungalear NSW 4800 & 4801, Runs 1-7, Flown 14-21.10.2003, Scale 1:50 000 \* Dungog NSW 4479, 4480, 4493, 4494 & 4495, Runs 1-13, Flown May-October 1999, Scale 1:25 000 \* Dunumbral NSW 4801 & 4802 Runs 1-6, Flown 21-22.10.2003, Scale 1:50 000 \* Ebor NSW 4559 & 4560, Runs 1-13, Flown May 2001, Scale 1:25 000 \* Echuca NSW 4756 Runs 1-3, Flown 11.01.2003, Scale 1:50 000 \* Eden NSW 4465 Runs 1-7, Flown 15.01.1999, Scale 1:50 000 \* Ellerston NSW 4561, 4562, 4567 & 4573, Runs 1-13, Flown 17.08.2000-11.05.2001, Scale 1:25 000 \* Euchareena NSW 4528, 4532 & 4538 Runs 1-7, Flown 22.11.2000 - 23.02.2001, Scale 1:50 000 \* Geera NSW 4901, 4903 & 4907, Runs 1-7, Flown 26.03-22.04.2005, Scale 1:50 000 \* Gilgandra NSW 4338, 4342 & 4343 Runs 1-6, Flown 25.11-14.12.1996, Scale 1:50 000 \* Gindoono NSW 4844 & 4845 Runs 1-6, Flown 20.05-11.06.2004, Scale 1:50 000 \* Glenariff NSW 4906, 4907 & 4908 Runs 1-6, Flown 19-23.04.2005, Scale 1:50 000 \* Glen Innes NSW 4521, 4526 & 4555, Runs 1-13, Flown August 2000-May 2001, Scale 1:25 000 \* Gongolgon NSW 4907, 4908 & 4909, Runs 1-7, Flown 19-24.04.2005, Scale 1:50 000 \* Goodooga NSW 4433 Runs 1-7, Flown 22-23.03.1998, Scale 1:50 000 \* Goondiwindi NSW 4490, Runs 2-7, Flown 25-30.08.1999, Scale 1:50 000 \* Gosford NSW 4455, 4456, 4457 & 4458 Runs 1-7, Flown 01.10-21.11.1998, Scale 1:50 000 \* Goulburn SAS 402446 Flown October 2001-January 2002, Scale 1:50 000 \* Goulburn NSW 4344 & 4345 Runs 1-7, Flown 20-21.01.1997, Scale 1:50 000 \* Goulburn NSW 4540 Runs 1-5, Flown 26.02.2001, Scale 1:16 000 \* Grafton NSW 4229 & 4531, Runs 1-7, Flown August 1994, Scale 1:25 000 \* Grafton NSW 4519, 4520 & 4522, Runs 1-6, Flown August-September 2000, Scale 1:50 000 \* Gravesend NSW 4777 & 4778, Runs 1-7, Flown 19-28.07.2003, Scale 1:50 000 \* Grenfell NSW 4590 & 4591 Runs 1-6, Flown 18-19.12. 2001, Scale 1:50 000 \* Griffith NSW 4753 & 4773 Runs 1-7, Flown 06.01-04.05.2003, Scale 1:50 000 \* Gulargambone NSW 4872 Runs 1-7, Flown 21-22.09.2004, Scale 1:50 000 \* Gulgong NSW 4502, 4503 & 4505, Runs 1-13, Flown January-May 2000, Scale 1:25 000 \* Gunbar NSW 4754, 4755 & 4768, Runs 1-7, Flown 09.01-23.03.2003, Scale 1:50 000 \* Gunning NSW 4391, 4393 & 4396 Runs 1-13, Flown 26.12.1997-01.01.1998, Scale 1:25 000 \* Guyra NSW 4554, 4555 & 4556, Runs 1-13, Flown May 2001, Scale 1:25 000 \* Gwabegar NSW 4778, 4779 & 4794 Runs 1-7, Flown 27.07-14.09.2003, Scale 1:50 000 \* Hatfield NSW 4382 Runs 1-6, Flown 03.12.1997, Scale 1:50 000 \* Hay NSW 4755, 4756, 4759 & 4768, Runs 1-6, Flown 11.01- 23.03.2003, Scale 1:50 000 \* Hermidale NSW 4846 & 4867 Runs 1-6, Flown 11.06-24.08.2004, Scale 1:50 000 \* Hermidon NSW 4901, Runs 1-6, Flown 25-26.03.2005, Scale 1:50 000 \* Hillston NSW 4834 & 4839 Runs 1-7, Flown 23.03-08.04.2004, Scale 1:50 000 \* Holbrook NSW 4400, 4401 & 4402, Runs 1-13 Flown 16.01.1998, Scale 1:25 000 \* Horton NSW 4589 , 4726 & 4727 Runs 1-13, Flown 01.11.2001-17.03.2002, Scale 1:25 000 \* Howes Valley NSW 4089, 4099, 4104, 4105 & 4108, Runs 1-13, Flown September 1992-February 1993, Scale 1:25 000 \* Innesowen NSW 4930 & 4931 Runs 1-7, Flown 13-27.11.2005, Scale 1:50 000 \* Inverell NSW 4563, 4564 & 4565 Runs 1-13 Flown 16-18.06.2001, Scale 1:25 000 \* Ivanhoe NSW 4925 & 4926 Runs 1-6, Flown 27.10-02.11.2005, Scale 1:50 000 \* Jacobs River NSW 4427 Runs 1-11 Flown 24.02.1998, Scale 1:25 000 \* Jerilderie NSW 4755, 4756 & 4757 Runs 1-7, Flown 09.-13.01.2003, Scale 1:50 000 \* Jervis Bay NSW 4595, 4728 & 4729 Runs 1-8, Flown 20.01-20.03.2002, Scale 1:25 000 \* Junee NSW 4816 & 4819 Runs 4-6, Flown 04-12.01. 2004, Scale 1:50 000 \* Katoomba NSW 4594, 4731, 4732 & 4733, Runs 1-13, Flown 13.01.2002-06.05.2002, Scale 1:25 000 \* Keewong NSW 4926, 4927 & 4929 Runs 1-7, Flown 02-13.11.2005, Scale 1:50 000 \* Kempsey NSW 4346, 4347 & 4348, Runs 1-13, Flown February 1997, Scale 1:25 000 \* Kiama NSW 4597, 4729, 4730 & 4731, Runs 1-13, Flown 28.01.-09.04.2002, Scale 1:25 000 \* Kilfera NSW 4914, 4915 & 4916, Runs 1-7, Flown 17-20.07.2005, Scale 1:50 000 \* Kilparney NSW 4844 & 4845 Runs 1-6, Flown 20.05-11.06.2004, Scale 1:50 000 \* Kooroongal NSW 4753, Runs 1-7, Flown 06-07.01.2003, Scale 1:50 000 \* Kosciuszko NSW 4414, 4415, 4416 & 4417, Runs 1-13 Flown 09-17.02.1998, Scale 1:25 000 \* Lachlan Downs NSW 4842 & 4844 Runs 1-7, Flown 12-20.05.2004, Scale 1:50 000 \* Lake Macquarie NSW 4455, 4456, 4457 & 4458 Runs 1-8, Flown 01.10-21.11.1998, Scale 1:50 000 \* Lake Tandou NSW 4283, Runs 1-6, Flown 09-26.09.1995, Scale 1:50 000 \* Lake Victoria NSW 4379, Runs 1-6, Flown 04.11.1997, Scale 1:50 000 \* Lightning Ridge NSW 4433 Runs 1-7, Flown 22.03.1998, Scale 1:50 000 \* Lindsay NSW 4379, Runs 1-4, Flown 29.10-04.11.1997, Scale 1:50 000 \* Lismore NSW 4523, 4524 & 4525, Runs 1-7, Flown 10-22.09.2000, Scale 1:50 000 \* Lockhart NSW 4405, 4407, 4410, 4411 & 4416, Runs 1-13, Flown 27.01-15.02.1998, Scale 1:25 000 \* Macksville NSW 4356 & 4357, Runs 9-13, Flown April-July 1997, Scale 1:25 000 \* Macksville NSW 4522, 4523 & 4525, Runs 1-6, Flown September 2000, Scale 1:50 000 \* Manfred NSW 4284 & 4382 Runs 1-7, Flown 10.09-03.12.1997, Scale 1:50 000 \* Manilla NSW 4576, 4577, 4580 & 4581 Runs 1-13 Flown 06.09.2001-17.09.2001 Scale 1:25 000 \* Marsden NSW 4362 & 4364 Runs 1-6, Flown 05-20.07. 1997, Scale 1:50 000 \* Marsden NSW 4590 & 4591 Runs 1-6, Flown 18-19.12. 2001, Scale 1:50 000 \* Mathoura NSW 4756 & 4758 Runs 1-6, Flown 11-16.01.2003, Scale 1:50 000 \* Mendooran NSW 4434 Runs 1-6, Flown 04.04.1998, Scale 1:50 000 \* Menindee NSW 4283, Runs 1-7, Flown 07-27.09.1995, Scale 1:50 000 \* Merriwa NSW 4458 & 4459, Runs 1-13, Flown November 1998, Scale 1:25 000 \* Merriwagga NSW 4331 & 4332 Runs 1-7, Flown 27.09.1996, Scale 1:50 000 \* Michelago NSW 4821 & 4822 Runs 1-13, Flown 18-19.01.2004, Scale 1:25 000 \* Middle Camp NSW 4283, Runs 1-6, Flown 09-26.09.1995, Scale 1:50 000 \* Mildura NSW 4379, Runs 1-4, Flown 04.11.1997, Scale 1:50 000 \* Moggumbil NSW 4755, 4756, 4759 & 4768, Runs 1-6, Flown 11.01-23.03.2003, Scale 1:50 000 \* Mogil Mogil NSW 4919, Runs 1-7, Flown 06.09.2005, Scale 1:50 000 \* Molong NSW 4431, Runs 1-7, Flown 29.03.1998, Scale 1:50 000 \* Mossgiel NSW 4913 & 4914 Runs 1-7, Flown 11-17.07.2005, Scale 1:50 000 \* Moss Vale NSW 4597, 4729 & 4730 Runs 1-13, Flown 28.01-09.04.2002, Scale 1:25 000 \* Moree NSW 4919, 4922 & 4924 Runs 1-7, Flown 26.08-10.10.2005, Scale 1:50 000 \* Moulamein NSW 4756, 4757, 4758 & 4759 Runs 1-7, Flown 11.01-17.03.2003, Scale 1:50 000 \* Mount Allen NSW 4844 & 4845 Runs 1-6, Flown 20.05-11.06.2004, Scale 1:50 000 \* Mount Harris NSW 4829 & 4835, Runs 1-7, Flown 08.03-19.03.2004, Scale 1:50 000 \* Mount Lindesay NSW 4524, 4525 & 4528, Runs 4-7, Flown September-October 2000, Scale 1:50 000 \* Mount Pomany 4089, 4099, 4104 & 4105, Runs 1-10, Flown October-November 1992, Scale 1:25 000 \* Mount Pomany NSW 4572, 4582, 4583 & 4585 Runs 5-13, Flown 10.08.-29.10.2001, Scale 1:25 000 \* Muckerumba NSW 4914, 4915 & 4916 Runs 1-6, Flown 17-20.07.2005, Scale 1:50 000 \* Mudgee NSW 4501 & 4505, Runs 1-4, Flown January-April 2000, Scale 1:25 000 \* Mulurulu NSW 4284 & 4382 Runs 1-7, Flown 10.09-03.12.1997, Scale 1:50 000 \* Murrurundi NSW 4532, 4533, 4539, 4540 & 4544, Runs 1-13, Flown December 2000-March 2001, Scale 1:25 000 \* Muswellbrook NSW 4440, 4449 & 4451, Runs 1-13, Flown July-September 1998, Scale 1:25 000 \* Nambucca NSW 4357 & 4366, Runs 9-13, Flown April-July 1997, Scale 1:25000 \* Nambucca NSW 4522 & 4523, Runs 1&6, Flown September 2000, Scale 1:50 000 \* Narooma NSW 4734, 4735 & 4736 Runs 1-13, Flown 07.05-19.08.2002, Scale 1:25 000 \* Narrabri NSW 4776, 4777, 4778 & 4779 Runs 1-7, Flown 18-29.07.2003, Scale 1:50 000 \* Narran NSW 4433 Runs 1-6, Flown 22-23.02.1998, Scale 1:50 000 \* Narrandera NSW 4386 & 4392 Runs 1-4 Flown 22-29.12.1997, Scale 1:50 000 \* Narrandera NSW 4423, 4424 & 4428 Runs 7-13, Flown 21-24.02.1998, Scale 1:25 000 \* Narromine NSW 4334 & 4335, Runs 1-7, Flown 21-22.10.1996, Scale 1:50 000 \* Narromine NSW 4542, 4544, 4545 & 44546 Runs 1-7, Flown 07-29.03.2001, Scale 1:50 000 \* Nartooka NSW 4277 & 4284, Runs 1-7, Flown 21.08.-23.11.1995, Scale 1:50 000 \* Neckarboo NSW 4926, 4927 & 4929 Runs 1-7, Flown 02-13.11.2005, Scale 1:50 000 \* Nelyambo NSW 4930 & 4931 Runs 1-7, Flown 13-27.11.2005, Scale 1:50 000 \* Newcastle NSW 4534, 4535 & 4562, Runs 1-13, Flown January-June 2001, Scale 1:25 000 \* Newton Boyd NSW 4358, 4366 & 4367, Runs 1-13, Flown April-August 1997, Scale 1:25 000 \* Nowingi NSW 4390 Runs 1-6, Flown 11-28.12.1997, Scale 1:50 000 \* Numbla NSW 4421, 4422, 4423, 4426 & 4428 Runs 1-13 Flown 19-24.02.1998, Scale 1:25 000 \* Nundle NSW 4352, 4353, 4354 & 4355 Runs 1-13 Flown 20.03 1997-25.03 1997, Scale 1:25

000 \* Nundle NSW 4742, 4743, 4745, 4746 & 4747 Runs 1-13, Flown 13.09.2002-21.09.2002 Scale 1:25 000 \* Nyah NSW 4756, 4757, 4758 & 4759 Runs 1-7, Flown 11.01-17.03.2003, Scale 1:50 000 \* Nymagee NSW 4842 7 4844 Runs 1-6, Flown 12-20.05.2004, Scale 1:50 000 \* Nyngan NSW 4829 Runs 1-6, Flown 21.02-08.03.2004, Scale 1:50 000 \* Oberon NSW 4469, 4474, 4475, 4477 & 4478 Runs 1-13, Flown 06.02.-25.04.1999, Scale 1:25 000 \* One Tree NSW 4754, 4755 & 4768, Runs 1-7, Flown 19.01-23.03.2003, Scale 1:50 000 \* Orange NSW 4438, 4439, 4446, 4447 and 4448 Runs 1-13 Flown 18.06.1998-29.08.1998, Scale 1:25 000 \* Oxley NSW 4754, 4755 & 4760 Runs 1-7, Flown 19.01-18.01.2003, Scale 1:50 000 \* Paika NSW 4383, Runs 1-7, flown 10-25.12.1997, Scale 1:50 000 \* Para NSW 4379, Runs 1-6, Flown 04.11.1997, Scale 1:50 000 \* Parkes NSW 4591, 4592, 4593 and 4721 Runs 1-7, Flown 28.12.2001-05.03.2002 Scale 1:50 000 \* Peak Hill NSW 4841 & 4843 Runs 1-7, Flown 10-11.05.2004, scale 1:50 000 \* Penrith NSW 4721, 4724 & 4727, Runs 1-13, Flown 27.02-18.03.2002, Scale 1:25 000. \* Pilliga NSW 4775, 4776, 4777 & 4779 Runs 1-7, Flown 11.05-29.07.2003, Scale 1:50 000 \* Poongcarie NSW 4284 & 4382 Runs 1-7, Flown 10.09-03.12.1997, Scale 1:50 000 \* Popiltah NSW 4283 & 4379, Runs 1-7, Flown 10.09-04.11.1997, Scale 1:50 000 \* Port Hacking NSW 4939, Runs 1-6, Flown 18.12.2005, Scale 1:25 000 \* Port Stephens NSW 4535 & 4562, Runs 1-8, Flown January-June 2001, Scale 1:25 000 \* Quambone NSW 4901 Runs 1-7, Flown 25-26.03.2005, Scale 1:50 000 \* Rankins Springs NSW 4331 & 4332, Runs 1-6 Flown 27.09.1996, Scale 1:50 000 \* Redan NSW 4283, Runs 1-7, Flown 07-27.09.1995, Scale 1:50 000 \* Robinvale NSW 4383, Runs 1-7, Flown 10-25.12.1997, Scale 1:50 000 \* Rosewood NSW 4400, 4401 & 4402, Runs 1-13, Flown 16.01.1998, Scale 1:25 000 \* Saint Albans NSW 4545 & 4553, Runs 1-7, Flown 27.03-27.04.2001, Scale 1:50 000 \* Scotia NSW 4283 & 4379, Runs 1-7, Flown 10.09-04.11.1997, Scale 1:50 000 \* Stanthorpe NSW 4524 & 4525 Runs 1-4, Flown 14-29.09.2000, Scale 1:25 000 \* Sussex NSW 4867, 4868 & 4871 Runs 1-7, Flown 24.08 - 20.09.2004, Scale 1:50 000 \* Swan Hill NSW 4756, 4757, 4758 & 4759 Runs 1-7, Flown 11.01-17.03.2003, Scale 1:50 000 \* Tallangatta NSW 4398 & 4402 Runs 1-3, Flown 16.01.1998, Scale 1:25 000 \* Tambar Springs NSW 4434 & 4435 Runs 1-7 Flown 06.04-10.05.1998, Scale 1:50 000 \* Tamworth NSW 4442 Runs 1-13 Flown 01.08.1998 Scale 1:25 000 \* Tantangara NSW 4403, 4407, 4408 & 4409, Runs 1-13, Flown 17.01-30.01.1998, Scale 1:25 000 \* Taralga NSW 4530, 4531, 4533 & 4534 Runs 1-13, Flown 28.11-20.12.2000, Scale 1:25 000 \* Tarcutta NSW 4815 & 4816, Runs 1-7, Flown 03.01.2004, scale 1:50 000 \* Temora NSW 4818 Runs 1-7, Flown 10-11.01.2004, Scale 1:50 000 \* Tenandra NSW 4872 Runs 1-7, Flown 21-22.09.2004, Scale 1:50 000 \* Tenterfield NSW 4510 & 4512, Runs 1-13, Flown May-June 2000, Scale 1:25 000 \* Teryaweynya NSW 4277 & 4284, Runs 1-7, Flown 21.08.-23.11.1995, Scale 1:50 000 \* Texas NSW 4490 & 4492 Runs 4-7, Flown 25.08-12.09.1999, Scale 1:50 000 \* Thackaringa NSW 4283, Runs 1-7, Flown 07-27.09.1995, Scale 1:50 000 \* The Meadows NSW 4929 Runs 1-6, Flown 13.11.2005, Scale 1:50 000 \* Tottenham NSW 4840 7 4841 Runs 1-7, Flown 03-10.05.2004, Scale 1:50 000 \* Tullamore NSW 4333 Runs 4-6, Flown 14.10.1996, Scale 1:50 000 \* Tullamore NSW 4542 & 4546 Runs 1-3, Flown 07-28.03.2001, Scale 1:50 000 \* Tullibigeal NSW 4834 & 4839 Runs 1-7, Flown 23.03-08.04.2004, Scale 1:50 000 \* Tumut NSW 4817, Runs 1-8, Flown 09.01.2004, Scale 1:40 000 \* Turlee NSW 4382 Runs 1-5, Flown 10.12.1997, Scale 1:50 000 \* Tweed Heads-Murwillumbah NSW4523 & 4524, Runs 3-7, Flown 10-12.09.2000, Scale 1:50 000 \* Ulladulla NSW 4595, 4728 & 4729, Flown 20.01.-20.03.2002, Scale 1:25 000 \* Ungarie NSW 4331 & 4332, Runs 1-7, Flown 27.09.1996, Scale 1:50 000 \* Upper Manning NSW 4561, 4563 & 4573, Runs 1-13, Flown May-August 2001, Scale 1:25000 \* Urana NSW 4755 Run 1, Flown 09.01.2003, Scale 1:50 000 \* Wagga Wagga NSW 4815 & 4816 Runs 1-7, Flown 03.01.2004, Scale 1:50 000 \* Walbundrie NSW 4294 & 4298 Runs 1-6, Flown 14.02.1996, Scale 1:50 000 \* Walgett NSW 4903 & 4907 Runs 1-7, Flown 03-22.04.2005, Scale 1:50 000 \* Wallerawang NSW 4545 & 4553, Runs 1-7, Flown 27.03-27.04.2001, Scale 1:50 000 \* Wanganella NSW 4756, 4758 & 4759 Runs 1-7, Flown 11.01-17.03.2003, Scale 1:50 000 \* Warren NSW 4829 Runs 1-6, Flown 21.02-08.03.2004, Scale 1:50 000 \* Warwick NSW 4496 Runs 1-7, Flown October 1999, Scale 1:25 000 \* Wee Waa NSW 4775, 4776, 4777 & 4778, Runs 1-7, Flown 11.05-27.07.2003, Scale 1:50 000 \* Weimby \* Wellington NSW 4528, 4532 & 4538 Runs 1-7, Flown 22.11.2000 - 18.02.2001, Scale 1:50 000 \* Wentworth NSW 4379, Runs 1-4, Flown 04.11.1997, Scale 1:50 000 \* Wilcannia NSW 4376 & 4277, Runs 1-6, Flown 18-21.08.1995, Scale 1:50 000 \* Wild Dog NSW 4383, Runs 1-7, Flown 10-25.12.1997, Scale 1:50 000 \* Willandra NSW 4913 & 4914 Runs 1-7, Flown 11-17.07.2005, Scale 1:50 000 \* Wingham NSW 4373 & 4375, Runs 1-13, Flown August 1997, Scale 1:25 000 \* Wollongong NSW 4599, 4600 & 4723 Runs 1-13 Flown 22.02-15.03.2002, Scale 1:25 000 \* Woodburn NSW 4554 & 4557, Runs 4-7, Flown May 2001, Scale 1:50 000 \* Woolakulkra NSW 4929 Runs 1-6, Flown 13.11.2005, Scale 1:50 000 \* Wrightville NSW 4846 & 4867 Runs 1-6, Flown 11.06-24.08.2004, Scale 1:50 000 \* Wyalong NSW 4362 & 4364 Runs 1-7, Flown 05-20.07.1997, Scale 1:50 000 \* Yallaroi NSW 4517, 4519, 4520 & 4525, Runs 1-7, Flown 03.08-29.09.2000, Scale 1:50 000 \* Yanco NSW 4754 & 4755, Runs 1-6, Flown 07-09.01. 2003, Scale 1:50 000 \* Yarrangobilly NSW 4403, 4404, 4408 & 4409, Runs 1-13, Flown 17-30.01.1998, Scale 1:25 000 \* Yarrawitch NSW 3687, 3727 & 3732, Runs 1-11, Flown September 1989 - April 1990, Scale 1:25 000 \* Yarrawitch NSW 4352, 4353, 4354 & 4356 Runs 1-13, Flown March-April 1997, Scale 1:25 000 \* Yass NSW 4823, 4824 & 4825, Runs 1-13, Flown 4-17.02.2004, Scale 1:25 000 \* Yetman NSW 4490 & 4492, Runs 3-7, Flown 25.08-12.09.1999, Scale 1:50 000 \* Young NSW 4818 Runs 1-7, Flown 10.01.2004, Scale 1:50 000. Patterns and spectral signatures in the Landsat 7 imagery, which comprise band combinations of 453 RGB multispectral merged with 12.5 metre pixel panchromatic provide specific recognition of a range of agricultural activities, namely cereal and fodder cropping, vegetable production (mostly potatoes), sugar cane and mature tree plantations. For other land use features such as newly established plantation (softwood, hardwood, tea-tree), intensive animal industries, farm dams, fish farms, extractive industries and coastal features including previously mined areas, barrier dunes, swamps and estuarine marshes, the main data sources are the aerial photographs, supplemented by field checking and local knowledge.

For the Bonalbo, Coaldale, Woodburn, Bare Point, Grafton, Dorrigo, Coffs Harbour, and part of the Macksville 1:100 000 map sheets, land use data from an existing data set was plotted onto the 2000 satellite imagery. This data set carries the title of 'Land Condition'. The land use data are based upon 1990-1 aerial photography and field checking between in 1997 and 2000. Land use classes were updated using the most recent aerial photography, the satellite imagery and land use data from other DECC data sets. In some areas, the data are remapped to conform to ALUM standards.

The DECC spatial database for Property Agreements and Management Contracts was used to identify the class 'other conserved areas' which are primarily private conservation agreements (Class 1.1.7). The same database for Clearing Consents was used to identify areas recently cleared and planted to softwood, hardwood or tea-tree in a well-defined plantation. The spectral signatures in the satellite imagery for these areas are the same as cultivated areas (if completely bare), grassland or young woody vegetation. Aerial photographs taken in 2000 or thereafter are used to confirm a satellite pattern that indicated the plantation is established.

Irrigation developments were identified from an existing DECC data set being prepared by staff at Inverell Resource Centre and Albury. Foreshore lands adjoining major dams previously owned and managed by DECC or its former organisations are identified from existing data held by the department.

Local knowledge is used for specific commodity types in orchards or on cultivated lands, specialised industries such as plant nurseries, local urban features and crops grown under irrigation.

Local information is obtained from the following sources:

- district DECC, catchment management authority and Landcare officers
- local landholders
- officers of the NSW Department of Primary Industries
- rural extension officers and/or managers with private stock and station agencies at Coolah, Dunedoo and Moonbi
- internet advertising for specific industries and districts.

Field verification is carried out after the interpretation of the satellite imagery and aerial photographs. This is designed to confirm specific land uses such as: \* rural residential lands \* effluent disposal systems \* vineyards, orchards, truffle plantings and olive groves and if they are irrigated on a permanent basis \* specific commodity types in orchards \* dairies, piggeries and poultry sheds \* eucalyptus oil plantations \* fish and yabby farms \* evidence of previous cropping activities using the presence of stubble as an indicator \* pasture improvement activities.

As part of the checking process a number of landholders are interviewed to provide further checks on the land use classification.

#### Decision Rules

- In this project, the date of the land use data set is set as the date of the satellite imagery. The patterns and shapes of land use activities shown in the satellite imagery set the boundaries of the land use classes. Where the aerial photography post-dates the satellite imagery, specialised industries such as poultry farms and horticultural blocks that are newly established are determined by the date of photography;
- A number of dairies are still in production in the project area. They were confirmed during the field inspections. The currency of this land use class is therefore set at the date of field inspection. Dairies are not visible in the satellite imagery and the older aerial photographs of 1998 are not reliable, even for 2000, as many dairies have ceased production over the last few years. Gate notices for tankers are the easiest way to confirm that the dairies are still producing.
- Mapping of remnant native vegetation raises particular problems because of the differing perceptions of such terminology to potential users of the data. For this project, a number of criteria have been used to distinguish the different categories of native vegetation.

Blocks of trees where the canopy cover is greater than 50% are classified as 'grazing modified pastures' when the following circumstances apply:

- the blocks are less than 100 ha in size and occur within a paddock or landscape where clearing is widespread
- the sites are not fenced allowing livestock to move at random into the forested areas
- tracks leading to or within the blocks can be observed
- the blocks were previously burned or cut over and may now include extensive regeneration
- dams have been constructed within these blocks as watering points for livestock
- there is a complete absence of lower canopy and understorey species and ground litter.

Blocks of trees where the canopy cover is greater than 50% are classified as 'remnant native cover' when the following circumstances apply:

- the blocks are greater than 100 ha in size
- there is no apparent disturbance of the site, either by burning or previous logging, cutting over or thinning
- the crowns of the trees are large and mature
- very steep, broken or rocky terrain, offering very low to nil grazing capacity
- absence of constructed dams
- it is part of a contiguous unit classified as a forest or National Park.

Sites less than 100 ha in size are classified as 'remnant native cover' if field observations confirm that the understorey and ground cover species and/or ground litter are intact, with relatively low levels of disturbance.

#### Limitations on public access

| Scope | dataset |
|-------|---------|
|-------|---------|

#### Responsible party

|                        |                                                                                                                             |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|
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| Responsible party role | pointOfContact                                                                                                              |

## Metadata point of contact

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| Responsible party role | distributor                                                                                |

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|---------------|------------|
| Metadata date | 2007-10-01 |
|---------------|------------|

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| Metadata language | eng |
|-------------------|-----|