For Your Notes — Times Bold Italic 14 point

BADGE: will be supplied
COPYRIGHT: Date will be supplied
Times Italic 7 point Line Spacing 2.8 mm
Wording will change if the contour interval is varied
eg: Elevation in metres:
40 metres contour interval with selected 20 metre auxiliary contours
HEADINGS: Times Bold Italic 12.5 point
IMAGERY: Date will be supplied
REVISION: Date will be supplied
See Appendix B 'Grid Reference'
HEADING RULINGS: Green (C 100% M 0% Y 86% K 0%)
Lineweight 0.4 mm
See Appendix B 'Grid Reference'
TEXT BLOCKS: Times Italic 9.5 point
Line spacing 3.7mm
See Appendix B '100 000 metre Square Identification'
See Appendix B 'Climate Graph'
Times Italic 9.5 point
Optima Bold 10 point
BARCODE: Number will be supplied
Zurich Cn BT 10 point
REVISION: Date will be supplied
Zurich Extra Bold 20 point
Zurich Extra Bold 10 point
Times Bold Italic 40 point
Times Bold Italic 30 point
Times Bold Italic 13 point
See Appendix B 'Map of Australia'
See Appendix B 'Locality Diagram'

Australian Government
Geoscience Australia

Map Reliability

Topographic information checked from 1:25 000 satellite imagery, and supplemented using other sources in[2004].
This map was not field checked and some information may not be accurate.

About the NATMAP Series

There are over 3000 maps at 1:100 000 scale, of which some 1600 have been published. They are used by a wide range of professional and recreational users and are available both flat and folded. For more information contact Geoscience Australia.

Your Feedback is Welcome

If you discover errors or omissions on the map, please let us know via the map amendments page on our web site or send your annotated map to us. We will replace your map with the corresponding current edition. We value your assistance for the next edition.
e-mail: mapfeedback@ga.gov.au

Acknowledgments

Geoscience Australia gratefully acknowledges contributions to map content. Information is supplied by the Australian Government, State and local governments, private sector agencies and individuals. A comprehensive list is available from our web site.

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The Australian Government agency providing SPATIAL INFORMATION FOR THE NATION

9 314231 125025

9029
1:100 000 EDITION 2

NATMAP 2006
TOPOGRAPHIC MAP
1: 100 000 SCALE (1cm to 1km)

Wollongong Special

NEW SOUTH WALES

About this Map

Projection: Universal Transverse Mercator on GRS80 ellipsoid
Horizontal Datum: Geocentric Datum of Australia 1994 (GDA94) equivalent to WGS84
Vertical Datum: Australian Height Datum (AHD)
Horizontal Accuracy: +/- 50 metres
Vertical Accuracy: +/- 10 metres
Elevations in metres; 20 metre contour interval

True North (TN), Grid North (GN) and Magnetic North (MN) are shown diagrammatically for the centre of the map

MN is correct for 1999 and moves easterly by 0.1° in about 1 year

How to Quote a Grid Reference for a Particular Point

1. Draw numbers on the map grid lines are 1 000 metre intervals
Example: - COLLEEN HILL
2. Quote this map....Wollongong Special
3. Read letters identifying 100 000 metre square containing the point.....LL
4. Locate the vertical grid line to the left of the point.....50
5. Estimate tenths from the grid line to the point.....5
6. Locate the horizontal grid line below the point.....02
7. Estimate tenths from the grid line to the point.....2
Thus the reference for - COLLEEN HILL
is.....Wollongong Special LL555026

Climatic Graph

Wollongong
Wollongong
J F M A M J J A S O N D
Average temperature range
Average rainfall
Source: Australian Bureau of Meteorology

Legend

Dual carriageway; Distance in kilometres — sealed, unsealed
Principal road; Locality; Built-up area
Secondary road; Bridge; Causeway
Minor road (access 8 condition not assured)
Vehicle track (access 8 condition not assured)
Route marker: National, State
Gate; Stock grid
Embankment; Cutting
Airport; Heliport
Multiple track railway; Station or siding
Single track railway; Bridge; Tunnel
Powerline (66kV and over)
Homestead; Buildings; Ruin
Chimney; Silo; Tower
Fence; Levee; Open cut mine
Mine; Windpump; Yard
Contour with value; Depression contour
Horizontal control point; Spot elevation
Sand; Sand dunes
Sand ridges; Pinnacle; Cliff
Orchard or vineyard; Windbreak
Rainforest; Urban recreation parkland
Plantation: Hardwood, Softwood
Forest, wood or shrubland: Sparse, Dense, Closed
Bore or well; Spring; Tank or small dam
Watercourse (presence of water not implied)
Subject to inundation; Swamp
Lake: Perennial, Non-perennial; Waterhole
Wreck: Submerged, bare or awash
Foreshore flat; Lighthouse
Shoal; Tidal ledge or reef; Mangrove
Rock: Submerged, bare or awash; Breakwater
Jetty or pier; Wharf; Saline coastal flat
State or Territory border
Reserved area boundary
Prohibited area boundary

Zurich 7 point Line Spacing 3.5 mm
Zurich 7 point Line Spacing 3.5 mm
Zurich Condensed 7 point
Zurich Condensed 6 point Line Spacing 2/5 mm
Zurich 7 point
Zurich 8 point Line Spacing 4.0 mm
Zurich 8 point
Bounding rectangle in alignment with marginalia panel (from bottom of box to top of text)
Zurich 7 point Line Spacing 3.5 mm
Zurich Bold Italic 8 point
Zurich Bold Italic 6 point
Note: 'Ladmaland' will only appear on those maps where the station is identified as estimated on the project instruction.
Zurich 7 point
Zurich 7 point
Zurich 6 point
Zurich 8 point Line Spacing 6 mm
Zurich 7 point
Zurich 6.5 point
Zurich 6.5 point
Zurich BT 8 point Line spacing 4 mm

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COPYRIGHT date and GEOCAT number will be supplied with project file for each work unit

Maximum size of 100K sheet 550 mm x 555 mm

An example of 100 000 metre Grid Square Identifier positioning of letters when the 100 000 metre grid zone boundary coincides with the map neatline

Arial Narrow 8 point
Arial Narrow 5 point
Arial Narrow 5 point B 8 point Process Blue
Arial Narrow 8 point Process Black
An example of 100 000 metre Grid Square Identifier positioning of letters when the 100 000 metre grid zone boundary coincides with the map neatline

Zurich BT 10.5 point
Zurich BT 6.5 point

SCALE 1:100 000

Zurich Extra Bold 14 point — WOLLONGONG SPECIAL 9029
Zurich Bold 10 point — NEW SOUTH WALES, EDITION 2

MAP WINDOW

Standard sheet extents:
- 30 minutes by 30 minutes.
- The map, legend and scale bar will be centred within the six panels to the right of the cover.
- Distance from the northerly trim to the graticule will be 60mm.

MAP NAMES ON COVER

Map names will not be hyphenated.
Map names are shown on Annex C Map Index.

Length of Name in Times Bold Italic at 46 point	Point Size	Example
< 79 mm	46pt	Nangabbitt
79 to 91 mm	40pt	Nangabbittaj
91 to 106 mm	34pt	Nangabbittajar
> 106 mm	30pt	Nangabbittajarra

Note: All map names should be <105mm. If a longer name is found its treatment should be referred to Geoscience Australia.

Multiple word names
Multiple word names: Wrap onto a second line before reducing in point size. Long single word names to be reduced in point size.

Placement of Text
Horizontal alignment: Text for the title and the state reference will start 20mm from the trim line.
Vertical alignment: One and two line names, the base of the first line will be 210mm from the bottom trim.

STATE NAMES: The base of the state name will be 8mm from the base of the preceding line. The base of the second line of state names (if required) will be 6mm from the base of the first line.
Where a map falls in more than one state or territory, the state which constitutes the largest portion of the map will take precedence eg: *QUEENSLAND and NEW SOUTH WALES*

SPECIAL MAP SHEETS

For those sheets specified in Appendix H with the term 'Special' appended to the name, the map name will include the word 'Special' in Times Bold Italic 30 point as shown below.
The sheet name and number will be that of the map area within which the greater part of the sheet lies.

Manypeaks Special

WESTERN AUSTRALIA

The map name in the Locality Diagram will include the word 'Special' in the same font and type size (ZC 8 pt) as the name and number.

The map names appearing on the south-east and north-east sheet edges will also include the word 'Special' in the same font and type size (Zurich Extra Bold 14 pt) as the name and number.

MANYPEAKS SPECIAL 2528
WESTERN AUSTRALIA, EDITION 1

MAP GRID OF AUSTRALIA 1994 (MGA94)

Intervals: 1000 metre Universal Transverse Mercator on GRS80 ellipsoid
Lineweights: 10 000 metre grid lines 0.15mm
1000 metre grid lines 0.1mm
Colour: Process blue

Numbering external values:
- Full coordinate values are to be shown on the first complete northing and easting grid lines nearest the south west (SW) corner. If the first full northing grid line is within 8.5mm of the southern neatline, the full coordinate value is to be positioned on the next northing grid line. External grid numbers which are multiples of five carry the prefix number designating the 100 000 metre unit.

Numbering internal values:
- Two columns of ladder grid values are shown. One column is centred between the two easting gridlines nearest to one quarter of the east-west extent of the sheet, as measured from the centre of the west neatline. The other column is positioned similarly, as measured from the centre of the east neatline.
- Two rows of ladder grid values are shown. One row is centred between the two northing grid lines nearest to one quarter of the north-south extent of the sheet, as measured from the centre of the north neatline. The other row is positioned similarly, as measured from the centre of the south neatline.
- In areas of dense detail a ladder value may be displaced along the grid line or deleted if it impairs legibility. Displacement is not to be more than one grid square interval in either direction.
- Deletions are to be kept to a minimum.

General Notes:
- Should the grid and neatline coincide, the neatline takes precedence. Should a boundary and a neatline coincide, the boundary takes precedence.
- Grid lines will not be broken.

100 000 Metre Grid Square Identifiers:
- 100 000 metre grid squares will be identified at the intersection of the 100 000 metre grid lines on the face of the map and outside the neatline where the 100 000 metre grid lines intersect the neatline.
- On the face of the map a 2mm gap will be maintained between the grid square identifier and the 100 000 metre grid line.
- Outside the neatline the grid square identifiers will be positioned to avoid other grid and graticule values and a 2mm gap will be maintained between the text and the extension of the 100 000 metre grid line.

EXAMPLE DEFAULT
Default position is longitude value positioned north of the intersection. Latitude value positioned east of the intersection.

EXAMPLE DISPLACED VALUES
Values can be moved to avoid clashes. Longitude value positioned south of the intersection. Latitude value positioned west of the intersection.

GRATICULE

Neatline: Lineweight. 0.2mm.

Curvature:
- East and west sheet edge neatlines are to be straight lines from sheet corner to sheet corner.
- North and south sheet edge neatlines are to indicate curvature by drawing three straight sections of line joining each 10 minutes of longitude.

Internal Graticule Lines: Interval. 10 minutes.
Lineweight 0.2mm.

Numbering:
- On the neatline, full degree and minute values are shown at the 30 minute corners. Between the corners, only the minute value is shown at every 5 minute interval on a standard map.
- Within the map, full degree and minute values will be shown at the graticule intersections.
- Where a geographical value coincides with a grid value, the geographical value is displaced.
- Geographical values on the eastern neatline will be positioned so that there is always a minimum clearance of 1mm to the trim.

Minute Ticks:
- Interval. One minute on internal graticule lines and neatline.
- Lineweight. 0.2mm.
- Ticks. One minute ticks are drawn on the eastern side of the line of longitude and the southern side of the line of latitude.
- Every 5 minute tick will be 2mm on neatline and 4mm centred on internal graticule lines.

ROAD DESTINATION ARROWS

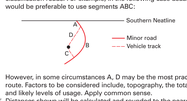
Only principal, secondary and selected minor roads will have kilometric distances indicated alongside the town destination at the neatline and placed to avoid ambiguity.

Choice of suitable roads and destinations
The selection should be based on a judgement of the most commonly used routes across the sheet. The selected roads will depend on the significance of the centres they connect within the context of the map and its surrounding area.

All the following guidelines should be taken into account:

- Destinations and roads on the locality diagram should be given preference. However, the importance of any intervening destinations should be taken into account. For example, if going south there is a place on the locality diagram nearly a full map sheet away but another place of similar size is closer to the edge of the map sheet, choose the closer place.
- The relationship of the destinations to the rest of the road network should be considered, for example, a destination with good connectivity is preferable to a destination with poor connectivity.
- Use the 1:2.5 million General Reference Map as a guide to what constitutes a significant destination.
- Preference should be given to destinations on higher classification roads. For example, if there are only minor roads and vehicle tracks crossing the neatline, preferences should be given to destinations along the minor roads. In remote and isolated areas where only vehicle tracks cross the neatline, a destination to a homestead may be shown, particularly where the feature has a landing ground.
- Destinations identified in the AAA maps as having petrol available should be given preference, again, this should be tempered by the relative location of possible choices.
- Look at the surrounding map sheets to see how the distance and destination arrows should be applied. For example, what is the most direct route of the highest classification road? Generally, if there is a suitable place available, the destination should be on an adjacent map sheet. However, if there is no suitable destination on the adjacent sheet, destinations further away should be used. Judgement should be used as to whether such destinations are sufficiently important. The likelihood of travel on that particular route being one factor to be taken into account.
- The destination shown may not necessarily be the first destination along the particular road. This is most likely to be an issue in the more densely settled areas. For example, where a locality place name or small populated place is the next destination but a short distance further on, there is a substantial town, then that town should be given as the destination.

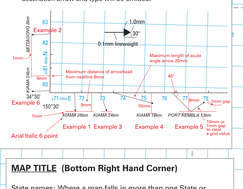
Distances
- The distance given should usually be the most practicable route.
- This would usually be the shortest distance on the highest classification roads. For example, in the following case usually it would be preferable to use segments ABC:



However, in some circumstances A, D may be the most practicable route. Factors to be considered include, topography, the total length and likely levels of usage. Apply common sense.
- Distances shown will be calculated and rounded to the nearest kilometre.

Arrows
- The road destination arrows will be shown on each side of the map and commence at the end of the feature.
- The arrow will point at the destination on the adjoining map. The distance will be measured to the nearest kilometre from the neatline of the map. The existence of destination arrows on adjoining sheets should be taken into consideration when placing destination arrows for the map.

Specifications
- Maximum distance from neatline: 9mm (see examples 1 and 2).
- Acute angle arrows: Maximum length of 20mm (see example 4).
- Bent arrows (where the direction of the destination does not allow the arrow to be shown as a straight line): A line, drawn at 45° to the neatline out to 9mm perpendicular to the neatline; the second line, 10mm long in the direction of the destination (see example 5).
- Arrow clash with grid value: Type may be moved off-centre. The line will have a minimal gap either side of the grid type (see example 3).
- Destination type placement to arrow: 1mm gap to the top or bottom of the type. For most cases type will be centred on the arrow head. However, for example 5 it will be centred on the 'elbow' or, offset if there is a clash with a graticule value. See example 6 where the graticule value is displaced.
- Type on the western neatline is positioned to read from the lower sheet edge to the top. Type on the eastern neatline is to read from the top sheet edge to the lower.
- Arrow clash with a graticule value: Arrow will be omitted.
- Insufficient space between the road and the neatline: The roads destination arrow and type will be omitted.



MAP TITLE (Bottom Right Hand Corner)

State names: Where a map falls in more than one State or Territory, the State or Territory which constitutes the largest portion of the map will take precedence eg:

QUEENSLAND and NEW SOUTH WALES, EDITION 2