

FINAL DRAFT



**DUNGOG LOCAL GOVERNMENT AREA  
SITUATION ANALYSIS**

Prepared for  
**DUNGOG SHIRE COUNCIL**

**planning workshop australia**

11 Bond Street Newcastle PO Box 810 NSW 2300  
Tel: +612 4929 6388 Fax: 02 4929 3188  
ABN 35 068 238 826

A Division of Lyneham Planning &  
Management Consultants Pty. Limited A.B.N. 35 068 238 826

September 2008

# planning workshop australia

FINAL DRAFT



**DUNGOG LOCAL GOVERNMENT AREA  
SITUATION ANALYSIS**

Prepared for  
**DUNGOG SHIRE COUNCIL**

**planning workshop australia**

A Division of Lyneham Planning &  
Management Consultants Pty Limited ABN 35 068 238 826

11 Bond Street Newcastle PO Box 810 NSW 2300  
Tel: +612 **4929 6388** Fax: 02 4929 3188

Document No.	Issue No.	Description of Issue	Prepared by /date	Verified by Director	Approved by Director
1	1	Draft Situation Analysis	JK, SB, JW, JS	GF	GF
1	2	Final Draft Situation Analysis	JK, SB, JW, JS, PI	GF	GF

Note: This document is preliminary unless it is approved by a Director of **planning workshop australia** Job No. 2070017

© This Publication is copyright. Other than for the purposes and subject to conditions prescribed under the Copyright Act, no part of it may, in any form nor by any means (electric, mechanical, microcopying, photocopying, recording or otherwise), be reproduced, stored in a retrieval system or transmitted without prior written permission. Inquiries should be addressed to the company in writing.

# planning workshop australia

## TABLE OF CONTENTS

1	EXECUTIVE SUMMARY	1
2	INTRODUCTION	10
	2.1 Overview	10
	2.2 Methodology for Compiling Situation Analysis	12
3	PLANNING CONTEXT	14
	3.1 General Description of LGA	14
	3.2 Rivers, Water Catchments & Regional Administration Boundaries	15
4	COMMONWEALTH FRAMEWORK	24
	4.1 Environment Protection and Biodiversity Conservation Act, 1999	24
5	NSW STATE FRAMEWORK	26
	5.1 Environmental Planning and Assessment Act, 1979	26
	5.1.1 State Environmental Planning Policies	26
	5.1.2 Draft State Environmental Planning Policies	31
	5.1.3 Section 117 Directions	31
	5.2 NSW Native Vegetation Act 2003	35
	5.3 NSW Threatened Species Conservation Act 1995	36
	5.4 NSW Protection of the Environment Operations Act, 1997	36
	5.5 NSW Local Government Act, 1993	37
6	REGIONAL FRAMEWORK	38
	6.1 Hunter Regional Environmental Plan, 1989	38
	6.2 Lower Hunter Regional Strategy	38
	6.3 Williams River Catchment Regional Environmental Study, Regional Environmental Strategy and Regional Environmental Plan	39
	6.3.1 Williams River Catchment Regional Environmental Study	39
	6.3.2 Williams River Catchment Regional Environmental Plan and Regional Planning Strategy	41
	6.4 Hunter – Central Rivers Catchment Action Plan	42
7	LOCAL FRAMEWORK	44
	7.1 Standard Instrument (Local Environmental Plans) Order 2006	44
	7.2 Local Environmental Plans	45
	7.3 Dungog Local Environmental Plan 2006	46
	7.3.1 Existing LEP Considerations: Proposed Tillegra Dam	46
	7.4 Dungog Shire Rural Strategy 2003	52
	7.5 Dungog LGA Local Area Plans	52
	7.6 Dungog LGA Development Control Plan	55
	7.7 Dungog LGA Section 94 Contributions Plan	55
8	PROFILE	56
	8.1 Overview of Data Availability and Organisation	56
	8.2 Demographic profile	56
	8.2.1 Current population	58

# planning workshop australia

8.2.2	<i>Past Population Change</i>	61
8.2.3	<i>Population Projections</i>	62
8.2.4	<i>Age structure</i>	65
8.2.5	<i>Household Access to Motor Vehicles and Journeys to Work</i>	72
8.2.6	<i>Population Mobility (Changes of Address)</i>	73
8.2.7	<i>Country of Birth</i>	75
8.2.8	<i>People of Indigenous Origin</i>	75
8.2.9	<i>Social and Economic Indicators of the Population</i>	75
8.3	Employment profile	84
8.3.1	<i>Summary</i>	84
8.4	Development Statistics	100
8.5	Tillegra Dam and S94 catchments (special interest planning precincts)	101
8.5.1	<i>Demographics</i>	102
8.6	Economic characteristics and trends	108
8.7	Infrastructure and settlement structure	109
8.7.1	<i>Land use and settlement</i>	109
8.7.2	<i>Agriculture</i>	110
8.7.3	<i>Forestry</i>	119
8.7.4	<i>Employment land</i>	120
8.7.5	<i>Tourism</i>	124
8.7.6	<i>Housing</i>	125
8.7.7	<i>Access and Transport</i>	141
8.7.8	<i>Utility Services</i>	143
8.7.9	<i>Community and Social Infrastructure</i>	145
8.8	Biodiversity and Natural Ecosystems	149
8.8.1	<i>General Description of Characteristics</i>	149
8.8.2	<i>Review of Plans, Studies and Knowledge</i>	149
8.8.3	<i>EPBC Act Matters of National Environmental Significance</i>	150
8.8.4	<i>TSC Act and FM Act – Threatened Species and Endangered Ecological Communities</i>	151
8.8.5	<i>Protected Conservation Areas</i>	151
8.9	Climate, land and water	152
8.9.1	<i>Climate</i>	152
8.9.2	<i>Geology and Landscape</i>	154
8.9.3	<i>Soils, Land Capability and Land Degradation</i>	155
8.9.4	<i>Hydrology, Water Availability and Quality</i>	156
8.9.5	<i>Flooding</i>	157
8.9.6	<i>Bushfire</i>	166
8.9.7	<i>Contaminated Land</i>	166
8.10	Design Issues	169
8.10.1	<i>European Heritage</i>	169
8.10.2	<i>Indigenous Heritage</i>	169
8.10.3	<i>Air Quality</i>	170
8.10.4	<i>Acoustic Environment</i>	171
8.10.5	<i>Landscape Issues</i>	171
8.11	Planning Administration	172
9	SUMMARY OF REGIONAL CONSTRAINTS AND OPPORTUNITIES, AND IDENTIFICATION OF POTENTIAL KEY ISSUES	173
9.1	Consultation	175
10	REVIEW OF OPTIONS	176

# planning workshop australia

## TABLES

Table 1:	Dungog LGA, Regional Area and Population	15
Table 2:	Dungog LGA Situation Analysis Planning Districts and Precincts	21
Table 3:	SEPPs and their relevance to the LGA	27
Table 4:	Draft SEPPs and their relevance to the LGA	31
Table 5:	Section 117 Directions and their relevance to the LGA	32
Table 6:	Dungog LGA - Summary of Important Demographic Characteristics	57
Table 7:	Population by Planning Precinct, 2006	59
Table 8:	Population Growth 1996-2006	61
Table 9:	Average Annual Growth Rates	61
Table 10:	Projected population by NSW Government, 2001 to 2031	62
Table 11:	Projected average annual population growth rate by NSW Government, 2001- 2031	63
Table 12:	Hunter Valley Research Foundation 'Medium Growth' Population Projections 2006- 2026	63
Table 13:	Age Distribution, 2006	66
Table 14:	Median Age 1996 – 2006	68
Table 15:	Change in percentage of persons aged 65 and over 1996 – 2006	68
Table 16:	Projected Population Aged 65 years and over as a % of Total Population, 2001-2031	69
Table 17:	Change in % of persons aged under 15 years 1996 – 2006	70
Table 18:	Projected population aged 0-14 as a % of total population, 2001 – 2031	70
Table 19:	Dependency ratio, (persons aged 0-14 or 65+ per 100 people aged 15-64) 2001 – 2031	71
Table 20:	Address 1 Year Ago	73
Table 21:	Address 5 Years Ago	74
Table 22:	Weekly Household Income, 2006	76
Table 23:	Weekly Household Income, 2006 by Planning District	78
Table 24:	Proportion of households with income below \$500 per week by planning precincts, 2006	81
Table 25:	Proportion of households with income over \$1400 per week by planning precincts, 2006	81
Table 26:	Educational level attained, 2006	82
Table 27:	Socio-economic indexes for areas (SEIFA), 2006	83
Table 28:	Percentage of employed persons in industry sectors 1996-2006	85
Table 29:	Industry of employed persons, 2006 by planning precincts and districts	90
Table 30:	Percentage of employed persons by occupation 1996 – 2006	95
Table 31:	Occupation of employed persons, 2006 by planning precincts and districts	97
Table 32:	Unemployment 1996 – 2006	99
Table 33:	Unemployment rate, 2006 by planning precincts and districts	99
Table 34:	Dungog LGA development statistics, 2002 – March 2007	100
Table 35:	Weekly household income by special interest planning precinct, 2006	105
Table 36:	Proportion of households with lower incomes (below \$500 per week) and higher incomes (above \$1,400 per week) by special interest planning precinct, 2006	106
Table 37:	Industry of employed persons by special interest planning precincts, 2006	106
Table 38:	Occupation of employed persons by special interest planning precincts, 2006	107
Table 39:	Summary of key economic data indicators (Dungog LGA)	108
Table 40:	Department of Primary Industries – Holding Data	114
Table 41:	Dungog LGA key agricultural statistics, 2000-2001	114
Table 42:	The importance of agriculture in Dungog LGA to the Hunter Region, 2001	115

# planning workshop australia

Table 43:	Key agricultural commodities in the Dungog LGA, 2000/ 2001	115
Table 44:	Dungog LGA agricultural trends, 1994-2001 and 1996-2001	116
Table 45:	Change in average farm sizes within Dungog LGA, 1993/4-2000/1	117
Table 46:	Dwelling occupancy rate, 1996 – 2006	136
Table 47:	Structure of occupied private dwellings, 2006	136
Table 48:	Tenure type of occupied private dwellings, 2006	137
Table 49:	Educational Facilities in the Dungog LGA 2008	146
Table 50:	Availability of biodiversity information in Dungog LGA	150
Table 51:	Protected conservation areas in the Dungog LGA managed by the NPWS	151
Table 52:	Number of listed heritage items within the Dungog LGA	169
Table 53:	Aboriginal archaeological site features recorded in the Dungog LGA	170
Table 54:	Dungog Land Use Strategy – Key Themes	177

## MAPS

Map 2.1:	Location Map (Fig 1)	11
Map 3.1:	Main River Catchments (Fig 2)	16
Map 3.2:	Tillegra Dam Catchment (Fig 3)	17
Map 3.3:	Interim Biogeographic Regionalisation for Australia – IBRA Regions (Fig 4)	19
Map 3.4:	Aboriginal Land Council Boundaries & IBRA Boundary (Fig 5)	20
Map 3.5:	General Planning Precincts & Districts (Fig 6)	22
Map 3.6:	Special Interest Precincts (Fig 7)	23
Map 6.1:	Williams River Catchment (Fig 8)	40
Map 7.1:	Zoning of Tillegra Catchment (Fig 9)	47
Map 7.2:	Transition Zones (Fig 10)	54
Map 8.1:	Population Distribution (Fig 12)	60
Map 8.2:	Broad Land Use / Tenure / Rural Land Capability (Fig 13)	111
Map 8.3:	Property Holdings – Size and Distribution (Fig 11)	113
Map 8.4:	Dungog Town – Existing Land Uses 2008 (Fig 13)	128
Map 8.5:	Dungog Town Centre – Land Use 2008 (Fig 14)	129
Map 8.6:	Clarence Town – Existing Land Uses 2008 (Fig 15)	130
Map 8.7:	Paterson Town – Existing Land Uses 2008 (Fig 16)	131
Map 8.8:	Vacy Town – Existing Land Uses 2008 (Fig 17)	132
Map 8.9:	Martins Creek Town – Existing Land Uses 2008 (Fig 18)	133
Map 8.10:	East Gresford Town – Existing Land Uses 2008 (Fig 19)	134
Map 8.11:	Gresford Town – Existing Land Uses 2008 (Fig 20)	135
Map 8.12:	Infrastructure & Flooding – Dungog (Fig 1)	159
Map 8.13:	Infrastructure & Flooding – Clarence Town (Fig 2)	160
Map 8.14:	Infrastructure & Flooding – Paterson (Fig 3)	161
Map 8.15:	Infrastructure – Gresford (Fig 4)	162
Map 8.16:	Infrastructure & Flooding – Vacy and Martins Creek (Fig 5)	163
Map 8.17:	Flooding – Paterson River (south) (Fig 6)	164
Map 8.18:	Flooding – Paterson River (north) (Fig 7)	165
Map 8.19:	Bush Fire Prone Areas (Fig 100)	167
Map 8.20:	Contaminated Land (Fig X)	168

## FIGURES

Figure 1:	Comparison of population projections- Dungog LGA	64
Figure 2:	Age structure of the Dungog LGA- population pyramid	65
Figure 3:	Age Distribution, 2006	67
Figure 4:	Dependency ratio 2001 – 2031	71
Figure 5:	Weekly Household Income, 2006	77
Figure 6:	Employment by sector in the LGA, 2006	89
Figure 7:	Employment by occupation in the LGA, 2006	96
Figure 8:	Dungog LGA development statistics, 2002 – 2007	101

# planning workshop australia

Figure 9:	Age structure of the Tillegra Dam catchment in 2006 – population pyramid	102
Figure 10:	Age structure of the Vacy S94 catchment in 2006 - population pyramid	103
Figure 11:	Age structure of the Martins Creek s94 catchment in 2006 - population pyramid	103
Figure 12:	Age structure of the Paterson Urban s94 catchment in 2006 - population pyramid	104
Figure 13:	Percentage of housing rental stock that is affordable for low income earners, 2005- 2007	138
Figure 14:	Percentage of housing purchase stock that is affordable for low income earners, 2005- 2007	139
Figure 15:	Average temperatures within Dungog LGA	152

## APPENDICES

Appendix 1:	Standard Lep Zones
Appendix 2:	Economic Profile, Dynamics And Potential Impacts Paper
Appendix 3:	Age Pyramid For Each Planning Precinct
Appendix 4:	Dungog Social Issues Paper
Appendix 5:	Recreation And Tourism Potentials Report

## ACRONYMS USED IN THE ANALYSIS

AAG	- AVERAGE ANNUAL GROWTH
ABS	- AUSTRALIAN BUREAU OF STATISTICS
BASIX	- NSW BUILDING SUSTAINABILITY INDEX
CAP	- CATCHMENT ACTION PLAN
CSIRO	- COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION
DCP	- DEVELOPMENT CONTROL PLAN
DoP	- DEPARTMENT OF PLANNING
DSC	- DUNGOG SHIRE COUNCIL
DUAP	- FORMER DEPARTMENT OF URBAN AFFAIRS AND PLANNING (NOW DoP)
EPBC ACT	- ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999
EP&A ACT	- ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979
FM ACT	- FISHERIES MANAGEMENT ACT 1994
HCRCMA	- HUNTER-CENTRAL RIVERS CATCHMENT MANAGEMENT AUTHORITY
HNEAHS	- HUNTER NEW ENGLAND AREA HEALTH SERVICE
HRC	- HEALTHY RIVERS COMMISSION
HVRF	- HUNTER VALLEY RESEARCH FOUNDATION
LAP	- LOCAL AREA PLAN
LEP	- LOCAL ENVIRONMENTAL PLAN
LGA	- LOCAL GOVERNMENT AREA
LHRS	- LOWER HUNTER REGIONAL STRATEGY
NPWS	- NSW NATIONAL PARKS AND WILDLIFE SERVICE
REP	- REGIONAL ENVIRONMENTAL PLAN
SEIFA	- SOCIO-ECONOMIC INDEXES FOR AREAS
SEPP	- STATE ENVIRONMENTAL PLANNING POLICY
SLA	- STATISTICAL LOCAL AREA
S94	- SECTION 94 OF THE EP&A ACT
TSC ACT	- THREATENED SPECIES CONSERVATION ACT 1995
WRCREP	- WILLIAMS RIVER CATCHMENT REGIONAL ENVIRONMENTAL PLAN
WRCRES	- WILLIAMS RIVER CATCHMENT REGIONAL ENVIRONMENTAL STUDY