

WATER FOR GOULBURN

Highlands Source Project

PART A



Introduction and Context



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1. Introduction

1.1 Overview

The Goulburn Mulwaree region has faced severe drought and water restrictions since 2002. By mid 2007 Goulburn had less than 12 months water supply available and were subject to Level 5 water restrictions. Goulburn Mulwaree Council (GMC), in conjunction with a State Government Task Force, identified an Emergency Pipeline from Wingecarribee Reservoir as the best means of overcoming the emergency and securing Goulburn's water supply for the future (GMC & DoC, 2007). The proposed pipeline is referred to as the Highlands Source Project (referred to as the 'Project' for the purposes of this assessment). Subsequent rains in June 2007 and the water saving efforts of the community removed the emergency aspect of the Project; however the need for improved water security remains.

GMC has prepared an Integrated Water Cycle Management (IWCM) Evaluation Strategy that will outline actions for improving long term water sustainability. The Project is an integral part of this Strategy. Additionally, GMC has undertaken a Goulburn Water Supply Strategy Review, in which the Project was identified as the best solution for improving the city's water security. The proposed additional water would supplement the existing Goulburn water supply system.

This Environmental Assessment has been prepared in accordance with the requirements of Part 3A of the New South Wales (NSW) *Environmental Planning and Assessment Act 1979* (EP&A Act). The assessment has been prepared to support an application to the NSW Minister for Planning for Project to construct and operate the Project. The assessment addresses the requirements of the Director-General of the NSW Department of Planning (the Director-General's Requirements) dated 14 December 2009.

1.2 The Proponent

GMC is a local government body that was formed in 2004 by the amalgamation of Mulwaree Shire Council and Goulburn City Council. GMC's role is to provide the functions and services that are listed in the *Local Government Act 1993* (LG Act) to the communities within its jurisdiction. As outlined in the LG Act, the provision of water supply services to country towns in New South Wales is the responsibility of local government.

Situated in the Southern Tablelands of NSW, GMC covers an area of 3 232 km² and is home to 27 277 people² most of whom would be directly or indirectly benefitted by the improvement in water security in the region. The GMC area includes the regional service centre of Goulburn and the surrounding rural villages and localities of Marulan, Tallong, Bungonia, Windellama, Tirrannaville, Lake Bathurst, Tarago and Towrang.

1.3 Objective of the Project

The overall objective of the Project is to improve the security of the water supply to the Goulburn Mulwaree region.

Water security would be improved by the transfer of water from the Wingecarribee Reservoir to the Goulburn water supply network. The proposed transfer would be undertaken in a manner, which:

² This information was current at 12 October 2009 according to the GMC website: <http://www.goulburn.nsw.gov.au/about.html>



- ▶ Protects the health and ecology of the Wingecarribee Reservoir, the Wollondilly River and the existing Goulburn water supply;
- ▶ Does not cause significant impact in the pipeline corridor, or to the broader natural and cultural environment;
- ▶ Is acceptable to the local communities; and
- ▶ Ensures safety during construction and operation.

1.4 Summary of the Project

1.4.1 Key features of the Project

The Project involves construction and operation of a pipeline and associated infrastructure with the capacity to transfer up to 5 ML/day of water a distance of approximately 83 km from the Wingecarribee Reservoir to the Goulburn water supply system. Two pumping scheme options for supplying water to Goulburn are currently under investigation:

- ▶ A Raw Water Transfer Option, whereby Goulburn would draw untreated water from Wingecarribee Reservoir and deliver it to Goulburn Water Treatment Plant (WTP) prior to distribution; and
- ▶ A Treated Water Transfer Option whereby treated water from Wingecarribee WTP would be supplied directly into the water reticulation system in Goulburn. This connection could be achieved in two ways:
 - Direct connection to the existing treated water reticulation network on the north side of Goulburn; or
 - Direct feed into a proposed reservoir on Governor's Hill in east Goulburn. If a connection into a proposed reservoir on Governor's Hill occurs, the reservoir and its associated connection works would not form part of this project.

There are only relatively minor differences in the infrastructure required for both options. The Project infrastructure includes a pump station, an underground pipeline and an outlet structure or connections to existing infrastructure.

The Project is expected to commence in September 2010 with the pipeline commissioned and operational by the end of June 2011.

Further information on the project is provided in Chapter 6.

1.4.2 Location of the Project

The pipeline would be located within the local government areas (LGAs) of Wingecarribee Shire Council (WSC) and GMC and would cross rural and rural residential land in a west/south-westerly direction for approximately 83 km. It is generally located to the south of the Illawarra Highway and to the north of the Hume Highway and for most of its length is situated directly adjacent to the existing gas pipeline easement containing both the Moomba to Sydney natural gas pipeline operated by APA and an ethane gas pipeline operated by Gorodok Pty Ltd (Gorodok). The pipeline route runs through districts of Glenquarry, Werai, Sutton Forest, Exeter, Paddys River, Marulan, Towrang, Murrays Flat and Goulburn.

The pump station would be located on the north west bank of the Wingecarribee Reservoir approximately 7 km east of Moss Vale, NSW. It would be located adjacent to the existing raw pump station which



supplies the Wingecarribee WTP, located on Sheepwash Road, approximately 3 km north of the Illawarra Highway.

The location of the Project is presented in Figure 1.1.

1.5 Key Project principles

The Project has been developed based on a number of key principles as follows:

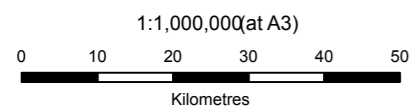
- ▶ Minimising as far as practicable the area of disturbance, particularly the clearing of native vegetation;
- ▶ Any endangered ecological communities (EECs) removed during construction would be offset by GMC;
- ▶ Construction environmental management controls would be implemented throughout the construction of the Project to protect the natural and cultural environment outside the disturbance area; and
- ▶ Rehabilitation would be progressively implemented throughout construction.

1.5.1 Native vegetation clearing and offsetting

Approximately 70 per cent of the pipeline will be installed parallel and adjacent to an existing Gas Pipeline Easement – the main Moomba to Sydney pipelines.

In areas where the easement is passing through forested areas or environmentally sensitive areas, it is anticipated that the additional clearing for the pipeline can be minimised by using an 8 – 10 m wide corridor within the gas pipeline easement for construction access. This would result in only an additional 6 m of vegetation clearing adjacent to the gas pipeline easement and the fibre optic cables. From field inspections it also appears that some over clearing of the gas pipeline easement corridor has occurred which may further minimise the extent of the clearing that will be required for the proposed water pipeline.

Where clearing of native vegetation, particularly endangered ecological communities is unavoidable, compensatory native vegetation would be provided. Native vegetation offsetting would be undertaken primarily within Council land. Sites for offsetting are being investigated at present and would be designated prior to the commencement of construction of the pipeline.



Map Projection: Lambert Conformal Conic
Horizontal Datum: Geocentric Datum of Australia (GDA)



LEGEND			
—	Proposed Pipeline Alignment	 	Built Up Area
 	Prohibited Areas	 	Forestry Reserve
 	Nature Conservation Reserve	 	Lake, Reservoir, Dam



Goulburn Mulwaree Council
Highlands Source Project

Location of the Project

Job Number	23-13312
Revision	0
Date	24 DEC 2009

Figure 1.1

1.5.2 Construction environmental controls

Erosion and sediment control prevention measures would be implemented as part of all project construction activities. Significant effort and attention would be given to preventing soil erosion and sedimentation of surface water runoff.

Standard controls to prevent erosion and sedimentation would be implemented for each construction activity. The practices and controls are based on the practices described in the following guidelines:

- ▶ *Managing Stormwater: Urban Soils and Construction Vol 1* (Landcom, 2004);
- ▶ *Managing Stormwater: Urban Soils and Construction Vol 2A Installation of Services* (DECC, 2008a); and
- ▶ *Managing Stormwater: Urban Soils and Construction Vol 2C Unsealed Roads* (DECC, 2008b).

All erosion and sediment control measures would be designed, implemented and maintained in accordance with the above guidelines.

The guiding principles for effective soil and water management that would be adopted during project construction and post construction periods include:

- ▶ Prioritise the prevention of erosion rather than controlling sediment and capturing sediment laden stormwater;
- ▶ Phasing and conducting work within the construction corridor to minimise the area of soil disturbance and vegetation removal;
- ▶ Managing topsoil so that it is excavated and temporarily stockpiled separately from sub soils and reused on site during rehabilitation; and
- ▶ Progressively rehabilitating disturbed areas and maintaining these areas until the agreed rehabilitation outcomes are achieved.

A site Sediment and Erosion Management Plan (SEMP) would be prepared and incorporated into a Construction Environmental Management Plan (CEMP).

1.5.3 Rehabilitation

The rehabilitation principles would guide the preparation of land access agreements and property plans developed for the construction of the pipeline and the maintenance of the easement. All disturbed ground would be rehabilitated in general accordance with the following principals:

- ▶ Rehabilitation objectives would be agreed with the landholder prior to construction;
- ▶ The basis of the rehabilitation objectives would be to establish stabilised ground of a nature similar to the pre-construction condition, over approximately 70 per cent of the disturbed area;
- ▶ Rehabilitation of the disturbed areas would be undertaken progressively, immediately after a section of pipeline trench has been backfilled or a crossing has been constructed;
- ▶ Erosion and sediment controls would remain in place until the rehabilitation objectives are achieved. GMC would remove all controls once the rehabilitation objectives are achieved; and
- ▶ Rehabilitated areas would be periodically inspected, reinstated (if required) and maintained by GMC on an on-going basis until the rehabilitation objectives are achieved.



1.6 Purpose and rationale

1.6.1 Purpose

This assessment supports Project Approval application to the NSW Department of Planning (DoP) under Part 3A of the *Environment Planning and Assessment Act 1979*. It provides:

- ▶ Information on the Project, including the Project need and alternatives considered;
- ▶ An assessment of the potential environmental impacts of the Project in accordance with the Director General's Requirements (DGRs); and
- ▶ Information on the management and mitigation of impacts identified, including the proponent's commitments in terms of measures to minimise and manage potential environmental impacts.

1.6.2 Rationale

The Environmental Assessment has been prepared in conjunction with the completion of the preliminary design for the Project. Therefore, the Environmental Assessment has been prepared on the following basis:

- ▶ The NSW State Government has committed funding via a special grant of up to \$20 million. The Commonwealth Government is providing funding via the Water Smart Australia Program of up to \$20 million. GMC has applied a special levy on water customers towards loan for its contribution and have accumulated \$14.5 million for the Project;
- ▶ The Project is required to be constructed, commissioned and operational by the end of June 2011; and
- ▶ Two water transfer options have been included as the final method of operation will not be determined until the completion of detailed design. It is likely in the future that each of the proposed options could be implemented.

As such, the assumptions made in the Environmental Assessment are inherently conservative and provide a "worst case scenario" of construction and operation of the pipeline. This relates in particular to the potential ecological, heritage, soils, water quality and visual impacts and the subsequent extent of vegetation offsetting and other mitigation measures required. Efforts would be made during construction in particular to reduce the potential impacts through minimisation of work areas and other measures provided in the Statement of Commitments.

1.7 Structure of the Environmental Assessment report

The Environmental Assessment is structured as follows:

Volume 1 – Main Report

- ▶ **Part A** Introduction and context – provides an introduction to the Environmental Assessment (Chapter 1); information on the assessment requirements under relevant legislation and environmental planning instruments and the methodology for the assessment (Chapter 2); a description of the location and existing environmental features of the study area (Chapter 3); and a summary of the consultation that occurred during the assessment process and planned consultation (Chapter 4).



- ▶ **Part B** The Project – describes the strategic context and need for the Project (Chapter 5), and includes a detailed description of the Project (Chapter 6) and includes a description of the alternatives considered as part of the Project development process (Chapter 7).
- ▶ **Part C** Environmental values and impacts – based on the Project described in Part B, this part provides an assessment of the potential environmental impacts of the Project. It includes an environmental risk analysis identifying key potential environmental issues (Chapter 8); and describes the results of the assessment of environmental issues identified by the NSW Director General's Requirements (Chapters 9-26).
- ▶ **Part D** Conclusion and justification – for the Project described in Part B, and considering the results of the assessment summarised in Part C, this part provides information on proposed environmental management and monitoring practices including a statement of commitments made by the proponent in relation to mitigation (Chapter 28), management and monitoring of potential environmental impacts (Chapter 27); and the Project justification and conclusion to the Environmental Assessment (Chapter 29).

Volumes 2, 3 and 4– Appendices

Volumes 2, 3 and 4 contain the specialist reports prepared during Project development and as part of the Environmental Assessment.