

1 Introduction

1.1 Overview

In recent years the Australian Capital Territory (ACT) region has experienced severe drought conditions which have resulted in a substantial reduction of inflows into regional storages. As a result, Canberra and Queanbeyan have been subject to water restrictions for six years. Permanent Water Conservation Measures were introduced in 2005. Level three water restrictions have applied for the last three years. The current drought, together with predicted climate change and long term population growth, is driving the implementation of a more reliable water supply for the ACT. In response to this need, ACTEW developed the Water Security Program, which identified a range of new water supply projects.

The Murrumbidgee to Googong Water Transfer (referred to as 'the preferred project' for the purposes of this document) is one of the recommended options for delivering improved security to the water supply for the ACT and Region. It involves pumping water from the Murrumbidgee River (within the ACT) and transferring it via a pipeline to Burra Creek (in NSW), from where it will flow for approximately 13.2 km to the Googong Reservoir. The proposed transfer of water will supplement natural inflows to the reservoir, which have decreased by about 85% from 2001 to 2009. Googong Reservoir supplies water to Queanbeyan and the ACT following treatment at the Googong Water Treatment Plant.

This Environmental Impact Statement (EIS) referred to as 'the assessment' for the purposes of this document) has been prepared in accordance with the requirements of Part 3A of the NSW *Environmental Planning and Assessment Act 1979* and section 216(2) of the ACT *Planning and Development Act 2007*. The assessment has been prepared to support an application to the NSW Minister for Planning and the ACT Planning and Land Authority for planning approval 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 7 October 2008 and the Final Scoping Document prepared by the ACT Planning and Land Authority (the Scoping Document) dated 16 December 2008.

This EIS has been prepared following the public exhibition of a draft EIS/EA in August 2009. The EIS has been modified in response to submissions from government agencies and the community and includes details of the preferred project.

1.2 The proponent

1.2.1 Who is the proponent

ACTEW Corporation Limited (ACTEW) is the proponent for the project. ACTEW is an ACT Government owned company with assets and investments in water, wastewater, electricity, gas and telecommunications. ACTEW owns the water and wastewater assets and business in the ACT; and supplies water and wastewater services to the region through its partnership with ActewAGL.

ACTEW was corporatised on 1 July 1995 and has reporting and compliance obligations under the Commonwealth *Corporations Act 2001* and other legislation.

ACTEW strives to optimise its water and wastewater utility services, and in doing so maintains a leadership role of a multi-utility operating in the public-private partnership model. ACTEW aims to manage its assets and business in a sustainable manner to provide quality service to its customers, while building value for its owners.

1.2.2 Proponent's environmental policy and planning framework

ACTEW is subject to environmental regulation by both NSW and the ACT Governments in respect of the operation of water treatment plants, by the ACT *Water Resources Act 2007* and the ACT *Public Health Act 1997*. ACTEW provides performance indicators within its Annual Report and a statement of compliance.

Environmental management of ACTEW's water and wastewater business is undertaken by its joint venture ActewAGL. ActewAGL is committed to ecologically and environmentally sustainable development and continues to seek initiatives that will protect the environment.

ActewAGL's five-year Environment Management Plan 2005–2010 addresses the water, wastewater and electricity aspects of ActewAGL's operations. The plan sets out environment policy directions and priorities.

ActewAGL's annual Environment Action Program, identifies specific tasks in line with the directions set out in the Environment Management Plan (2005–2010).

1.2.3 Proponent's commitment to sustainability

As a provider of essential services in the ACT and surrounding region, ACTEW has a long-term view of its operations. Providing these services and maintaining growth cannot be done while overburdening the environment.

ACTEW has a commitment to make sure that its operations do not harm communities and that it safeguards the environment to ensure future generations can enjoy its benefits.

ACTEW is governed by the operation of the *Territory-Owned Corporations Act 1990* which establishes a main objective for ACTEW as being to operate in accordance with the object of ecologically sustainable development. This is defined in the *Territory-Owned Corporations Act 1990* as meaning the effective integration of environmental and economic considerations in decision-making processes. This is achieved through implementation of the following principles:

- The precautionary principle;
- The inter-generational equity principle;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

Throughout the planning and development of this project ACTEW has sought to maintain the balance between economic, social and environmental interests. This report describes how the project will be delivered to meet ACTEW's long-term commitment to sustainability.

It is this commitment which has led to ACTEW aiming to offset all aspects of construction and operation of its water security projects. Section 6.16 details how ACTEW will incorporate sustainability across all aspects of the project and its operation.

1.3 Objective of the project

The overall objective of the project is to secure a water supply for the ACT region that can account for the more frequent, longer, drier droughts that are predicted to occur without having to go into high-level water restrictions for extended periods. The project will assist in securing the ACT and surrounding region's water supply by transferring water from the Murrumbidgee River to Googong Reservoir via Burra Creek in a sustainable manner, which:

- Protects the health and ecology of the Murrumbidgee River, Burra Creek and Googong Reservoir;
- 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 Key features of the project

The project involves construction and operation of infrastructure with the capacity to transfer up to 100 ML/day of water a distance of approximately 12 km from the Murrumbidgee River to Burra Creek. Once water from the Murrumbidgee River is discharged into Burra Creek, the water will flow along the creek for approximately 13.2 km to Googong Reservoir, which is located northeast of the outlet structure.

Although the project will be designed with the capacity to transfer up to 100 ML/day (up to 36.5 GL/year), projections indicate that initially, the average amount of water transferred will be 8 to 10 GL/year due to environmental and operational parameters. This figure could increase to 10 to 15 GL/year if water releases from Tantangara, a separate but closely related project, occur in the future (the link between the project and Tantangara Transfer is discussed further in section 5.3.5). The volume transferred will result in a 1% change in average flows leaving the ACT via the Murrumbidgee River and less than 5% of the average flow at Angle Crossing. Water transfer will be limited or ceased during periods of low river flow, to protect the environmental values of the Murrumbidgee River.

Water will only be transferred when the following conditions are met:

- Googong Reservoir is less than 80% of its total operating capacity; and
- The flow left in the Murrumbidgee River at Angle Crossing is not less than the required environmental flow.

The infrastructure required to transfer the water includes an intake/low lift pump station, a high lift pump station, an underground pipeline, an outlet structure, ancillary infrastructure (power supply) and mini-hydro power generator. These features are described briefly in Table 1.1. Further information on the project is provided in Chapter 6.

Table 1.1 Key features of the project

Infrastructure	Description
Intake/low lift pump station	The intake/low lift pump station will comprise a concrete box structure built into the riverbank. The low lift pump station will include a screen, grit collection and removal, pumps and valves and filtration to prevent fish transfer..
High lift pump station	The pump station will pump water to a high point at Gibraltar Range, from where it will run under gravity to the discharge point. The high lift pump station will consist of a building enclosing a pump hall and electrical services and an amenities area.
Pipeline	The pipeline will transfer the water from the low lift pump station to the high lift pump station, then onto the outlet structure. It will be constructed of 1016 mm diameter steel pipe. The pipeline will be approximately 12 km long, with the pipe located approximately 1.8 m to 4 m below ground level. Air valves and scour valves will be located at regular intervals along the pipeline to provide pressure relief and to allow cleaning.
Outlet structure	The outlet structure will take the form of a weir box arrangement located on the bank of Burra Creek. It will comprise a rectangular concrete box approximately 12 m long the creek bank with a 250 mm grated opening along the west bank of Burra Creek. Water will flow into the weir box from the pipeline and will discharge over the weir and run down the creek bank to the creek, which flows to Googong Reservoir. This method of discharge is designed to minimise scouring of the creek bed near the outlet.
Electric power supply	The electrical infrastructure will comprise a 132 kV/11 kV substation in Williamsdale and a single 11 kV cable to the high lift pump station.
Mini-hydro power generator	Electricity provided by the grid will be supplemented by electricity generated by a mini-hydro electric power facility which will be constructed as part of the project. The mini-hydro power generator will have the capacity to recover approximately 18% (without Tantangara flows) and 20% (with Tantangara flows) of the 1,138 kWh/ML of electricity required for pumping activities.

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1.5 The location of the project

The project location is shown in 0.

The intake/low lift pump station will be located on the east bank of the Murrumbidgee River, within the ACT, approximately 34 km south of Canberra. It will be located in an area known as Angle Crossing, located on Angle Crossing Road, approximately 4 km west of the Monaro Highway.

The high lift pump station will be located within the ACT, approximately 290 m to the east of the intake/low lift pump station.

The pipeline will cross rural residential land in an east/northeast direction for approximately 12 km. It is generally located in the vicinity of Angle Crossing, Williamsdale and Burra Roads, within the districts of Williamsdale and Burra. The majority (approximately 9.2 km) of the pipeline will be located in NSW, with approximately 2.8 km located in the ACT.

The outlet structure will be located in the Burra Creek bank, within NSW, just upstream of the low level crossing on Williamsdale Road near the junction of Burra and Williamsdale Roads. The outlet structure is located in the Williamsdale Road reserve which is managed by Palerang Shire Council.

In NSW, the project is located within the Palerang and Cooma-Monaro local government areas.

- Further information on the study area in which the project is located is provided in Chapter 3.

1.6 Summary of planning approval process

As the project is located in NSW and the ACT and impacts on Commonwealth owned land, different planning approval processes apply to the parts of the project located in each jurisdiction.

NSW requirements apply to:

- Approximately 9.2 km of pipeline;
- The outlet structure and the release of water into Burra Creek ; and
- The mini-hydro power facility.

ACT requirements apply to:

- The intake/low lift pump station;
- The high lift pump station;
- Approximately 2.8 km of pipeline; and
- The 11 KV power supply infrastructure.

Commonwealth requirements apply to the project overall, as well as to specific parts of the project that are located in designated areas under the National Capital Plan.

The planning approvals required for the project are described briefly below. The approval process, and other approvals and licences required are described in more detail in Chapter 2.

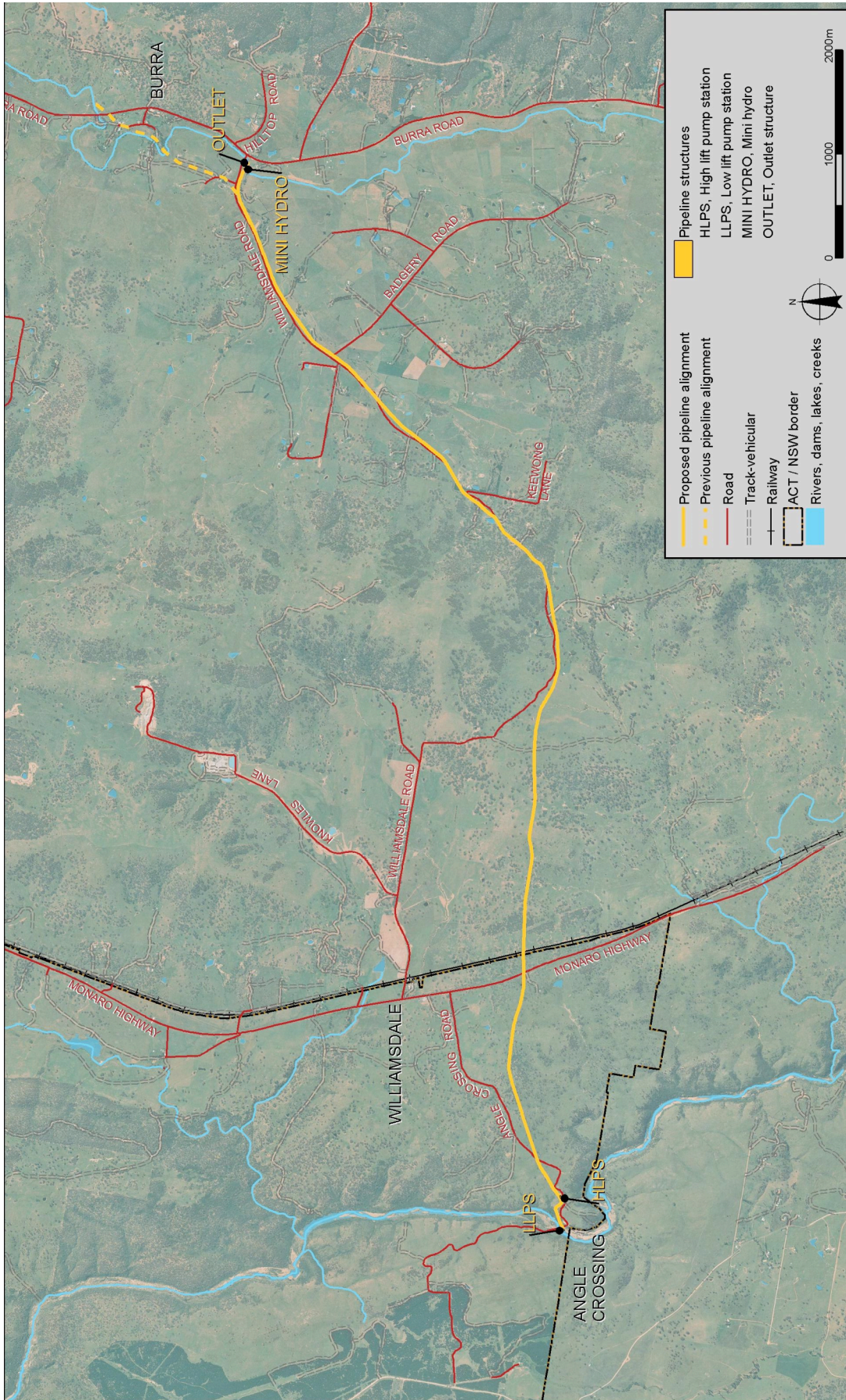


Figure 1.1 Location of the project

1.6.2 NSW planning approval requirements

Part 3A of the NSW *Environmental Planning and Assessment Act 1979* applies to those parts of the project located in NSW. The project meets the definition of a pipeline listed in Schedule 1 Clause 26A of *State Environmental Planning Policy (Major Projects) 2005*, as the proponent has made an application for a pipeline licence under the NSW *Pipelines Act 1967*. The application of Part 3A and the critical infrastructure status were confirmed by the Director General of the NSW Department of Planning on 14 August 2008. The project was declared 'critical infrastructure' under section 75C of the *Environmental Planning and Assessment Act 1979* on 10 July 2009.

The NSW Minister for Planning is the approval authority for those parts of the project located in NSW, and an environmental assessment was required to support the application for project approval in accordance with the requirements of the NSW *Environmental Planning and Assessment Act 1979*. The environmental assessment was exhibited to the public in August 2009. This EIS is an updated assessment to reflect feedback received from government agencies and the community and includes a preferred project description and a submissions report.

1.6.3 ACT planning approval requirements

The ACT *Planning and Development Act 2007* applies to those parts of the project located in the ACT. Section 123(b) of the ACT *Planning and Development Act 2007* states that the 'impact track' provisions of the Territory Plan applies to a proposal of the kind mentioned in Schedule 4. The project is considered to meet these definitions, and as such, an EIS is required.

Chapter 2.3 of the EIS (this document) outlines the ACT statutory framework and approvals process in detail.

This final EIS has been prepared in accordance with the ACT *Planning and Development Act 2007* (specifically Part 8.2) and Section 50 of the ACT *Planning and Development Regulations 2008* and includes a response to comments received during public exhibition.

1.6.4 Commonwealth planning approvals

Part of the project where the pipeline crosses the Monaro Highway is located within a designated area under the National Capital Plan. Approval from the National Capital Authority is therefore required under the Commonwealth *Australian Capital Territory (Planning and Land Management) Act 1988*.

- The project has been referred to the Commonwealth for consideration under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. The Commonwealth Department of Environment, Water, Heritage and Arts has assessed the project as a controlled action requiring assessment and approval by the Minister for the Environment. The project will be assessed by a Public Environment Report against the following controlling provisions:
- Listed threatened species and communities (sections 18 and 18A); and
- Commonwealth Land (sections 26 and 27A).

Guidelines for the preparation of the Public Environment Report were issued by the Commonwealth in December 2009.

Other approvals that may be required are listed in Chapter 2.

1.6.5 A single environmental assessment document

To provide the context of the project as a whole, one environmental assessment document (this document) has been prepared to assess the overall environmental impacts of the project. This document was prepared as a draft to meet the requirements of an environmental assessment under Part 3A of the NSW *Environmental Planning and Assessment Act 1979*, and a draft environmental impact statement under section 216(2) of the ACT *Planning and Development Act 2007*. After a period of public exhibition in August 2009 this final EIS has been prepared to meet the NSW requirements of a preferred project description and submissions report and the ACT requirements for a final EIS.

Matters that are affected by the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* are also considered.

1.7 Purpose and structure of the environmental impact statement

This assessment supports an application to the planning approval authorities for approval of the project. 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 NSW Director General's Requirements and the ACT final Scoping Document;
- Consideration and response to submissions received from government agencies, community organisations and individuals on the draft EIS/EA; 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.

The environmental assessment is structured as follows:

1.7.1 Volume 1 – main report

Volume 1 includes:

- **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 exhibition of the draft EIS/EA (Chapter 4);
- **Part B** The project – describes the strategic context and need for the project, and the alternatives considered as part of the project development process (Chapter 5); and includes a detailed description of the project (Chapter 6);
- **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 and the ACT final Scoping Document (Chapters 9-26); and
- **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 (Chapter 27); a statement of commitments made by the proponent in relation to mitigation, management and monitoring of potential environmental impacts (Chapter 28); and the project justification and conclusion to the environmental assessment (Chapter 29).

1.7.2 Volume 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 as well as the Consultation and Submissions Report (Appendix S).

