Appendix O

Social impact assessment and addendum

Environmental impact statement

watersecurity
MAJOR PROJECTS

Murrumbidgee to Googong Water Transfer

Social Impact Assessment

June 2009

ACTEW
CORPORATION

Contents

1 Introduction

1.1 Purpose of this report

ACTEW Corporation Limited (ACTEW) proposes to undertake the Murrumbidgee to Googong Water Transfer Project (referred to in this report as 'the project'). This report has been prepared to provide an assessment of the social impacts of the project as an input to the environmental impact assessment. The environmental impact assessment is being prepared in accordance with the requirements of Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and the ACT *Planning and Development Act 2007.*

The report 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 & Land Authority (the Scoping Document) dated 16 December 2008.

1.2 Project overview

In recent years the Australian Capital Territory (ACT) region has been experiencing severe drought conditions coupled with increased demand for water. Canberra and Queanbeyan have been subject to level three water restrictions since 2006. The current drought, together with predicted climate change and population growth, is driving the search for a more reliable water supply for the ACT. In response to this need, the ACT Government developed the Water Security Program, which identified a range of new water supply projects.

The project is one of the preferred options for delivering improved security to the ACT's water supply. It involves pumping water from the Murrumbidgee River (within the ACT) and transferring it via a pipeline to the Googong Reservoir via Burra Creek (in NSW). The Googong Reservoir supplies water treated to drinking quality standards to the ACT.

The project involves construction and operation of infrastructure required to transfer approximately 100 ML/day of water a distance of approximately 13 km from the Murrumbidgee River to Burra Creek.

The infrastructure required to transfer the water includes an intake/low lift pump station; a high lift pump station; an underground pipeline; a discharge structure and a power supply.

1.3 The location of the project

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

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

The pipeline would cross rural land in an east/north-east direction for approximately 13 km. It is located in the vicinity of Williamsdale and Burra Roads, within the districts of Williamsdale and Burra. The majority (approximately 10.2 km) of the pipeline would be located in NSW, with approximately 2.8 km located in the ACT.

The pipeline would discharge to the discharge structure, located on the banks of Burra Creek, just downstream of an existing flow measuring station approximately 10 km south of Googong Reservoir. The discharge structure is located within land know as the Googong Foreshores, which is Commonwealth land within NSW.

1.4 Scope, approach and methods of the SIA

This social impact assessment has been developed to identify and manage both positive and negative impacts of the project.

Impacts on primary, secondary and broader receptors have been identified for construction and operation phases of the project, as well as of the project overall.

These have been identified through a site visit and consultation with various individuals and community groups, as well as by issues raised during the ongoing consultation activities that ACTEW have engaged in.

The various specialist reports and studies that inform the environmental assessment have been used to inform assessment of the social impacts.

1.5 Limitations of the study

Some impacts depend on final construction methods (eg choice of plant and equipment) and details that are either not currently known or finalised. In these instances, consideration has been made of the draft methodology and assumptions and generic possible impacts and mitigations have been offered for issues not covered therein.

Impacts would vary from individual to individual, and property to property. Impacts have been listed at a broader user-group scale, not on a case by case basis for individual properties or land-holders. However, some of the mitigation measures would need to be at an individual level – it is proposed that ACTEW would continue its community engagement practices and landholder negotiations to account for this.

2 Project description

2.1 Overview

The project would consist of the following infrastructure:

- An intake structure in combination with a low lift pump station;
- A high lift pump station;
- A pipeline;
- A discharge structure; and,
- Power supply.

Construction is expected to be completed within an eighteen month period, with both immediate and ongoing rehabilitation.

The project crosses three jurisdictions, ACT, NSW and the Commonwealth. Lands are owned by private individuals, local councils, corporations and Governments.

2.2 Structural components and their physical impacts

The project would include an intake and low lift pump station (LLPS) on the banks of the Murrumbidgee River and a high lift pump station (HLPS) located approximately 300m to the east of the intake and LLPS. A power supply (switchyard and transformer) would be adjacent to the HLPS. These would all be located in an area known as Angle Crossing, approximately 30 km south of Canberra in the ACT.

An underground pipeline would cross rural land in an east/north-east direction for approximately 13 km before discharging into Burra Creek approximately 10 km south of the Googong Reservoir. The first 2.8 km of the pipeline would be located within the ACT, with the remaining 10.2 km located within NSW. The discharge structure would be located within Googong Foreshores, which is on Commonwealth owned land.

2.2.1 Intake structures

The intake/low lift pump station (LLPS) would take the form of a box-in-bank structure. Low lift refers to the head or physical vertical distance the pump station is designed to lift water. The structure would basically comprise an open sided concrete box structure built into the riverbank. The box-in-bank would house all the modules of the intake/LLPS. Most of the structure would be underground. It would have a grill across the front.

2.2.2 High lift pump station

The high lift pump station would be located adjacent to Angle Crossing Road, approximately 290 m east of the intake/low lift pump station. This pump station would 'lift' the water to the geographical high point at Gibraltar Range, from where it would run under gravity in the pipeline to the discharge point. The high lift pump station would consist of two sections, the pump hall and an electrical services/amenities building, described below. The building would be approximately 8 m high, and would be designed with input by an architect to ensure that it integrates as much as possible with the surrounding environment. The building would be located within a fenced compound with an access gate.

The High Lift Pump Station would be visible to drivers along Angle Crossing Road, and partially visible from the causeway and river.

2.2.3 Power supply

The power supply for the pump stations would be taken from a proposed 132kV Southern Canberra feeder. The connection to the 132kV transmission line would involve the construction of a high voltage switchyard and a transformer installation adjacent to the transmission line. An underground 11kV power line would be laid to transfer the power to the high lift pump station.

The underground power line would generally follow the route of Angle Crossing Road and would terminate at another switchyard and transformer located adjacent to the high lift pump station. This switchyard and transformer would be housed within a 10 m square enclosure, which as a minimum would be fenced but may have walls.

2.2.4 Pipeline

The pipeline would be a 13 km long 1016 mm pipe of mild steel and/or glass reinforced plastic located beneath ground level. Air valves and scour valves would be located at regular intervals along the pipeline to provide pressure relief and to allow cleaning. The pipeline would be laid in shallow continuous trench to depths of approximately 1.8 m to 3 m below ground level.

A 40 m easement for the length of the pipeline would be acquired.

Three crews would be working on construction of the pipeline concurrently, with construction completed within twelve months. A construction corridor of 40m is required during the construction period, and an easement of 15m would be maintained during operation.

The pipeline would cross both public and private lands. There has been considerable discussion and negotiation with private landowners along the proposed route to date. These discussions would continue during the construction and operational phases of the proposal. Some sections of the pipeline would be under Williamsdale Road and would require the road to be. At one point the pipeline would be laid, and the road realigned over this. At this point the road would be sealed for 760 m. A 650 m section of road at another location would also be sealed.

2.2.5 Discharge structures

The discharge structure would take the form of a weir box arrangement. This comprises a rectangular concrete box built into the creek bank with a weir located on the sidewall closest to the creek. Water would flow into the weir box from the pipeline and would discharge over the weir and run down the creek bank to the creek. This method of discharge is designed to minimise scouring of the creek bed.

2.3 Maintenance activities

An operational plan (yet to be developed) would set out maintenance and access activities.

Generally in operation, small vehicle access is required to inspect air valves, scour valves and any above ground infrastructures, every 6-12 months. The timing is negotiable subject to operational needs. During the first years of operation the whole route would probably need to be driven along every 3-6 months.

Larger vehicle access may be required anywhere along the route if any significant repair work is necessary. This should be an extremely rare event.

3 Project area context

The areas of potential impacts from the project have been broadly categorised in the following as:

- Primary impact area (Burra and Williamsdale in NSW and Angle Crossing in ACT);
- Secondary impact area (Royalla and The Angle (Smiths Road residents) in NSW, Googong Reservoir (Commonwealth land), Tharwa in ACT and downstream Murrumbidgee in both ACT and later NSW); and
- Regional impact area (ACT and Queanbeyan, NSW).

These localities are described in more detail below, and broadly illustrated in Figure 1 and Figure 2 below.

Figure 1 Project regional impact area

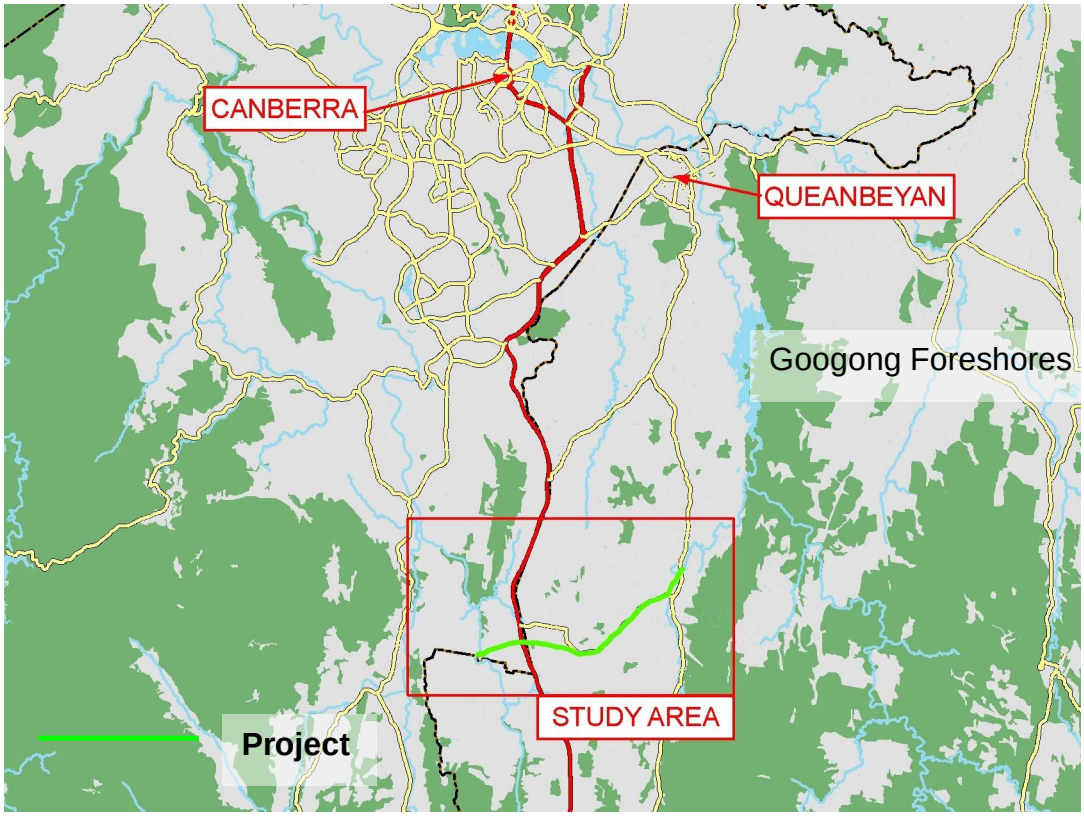
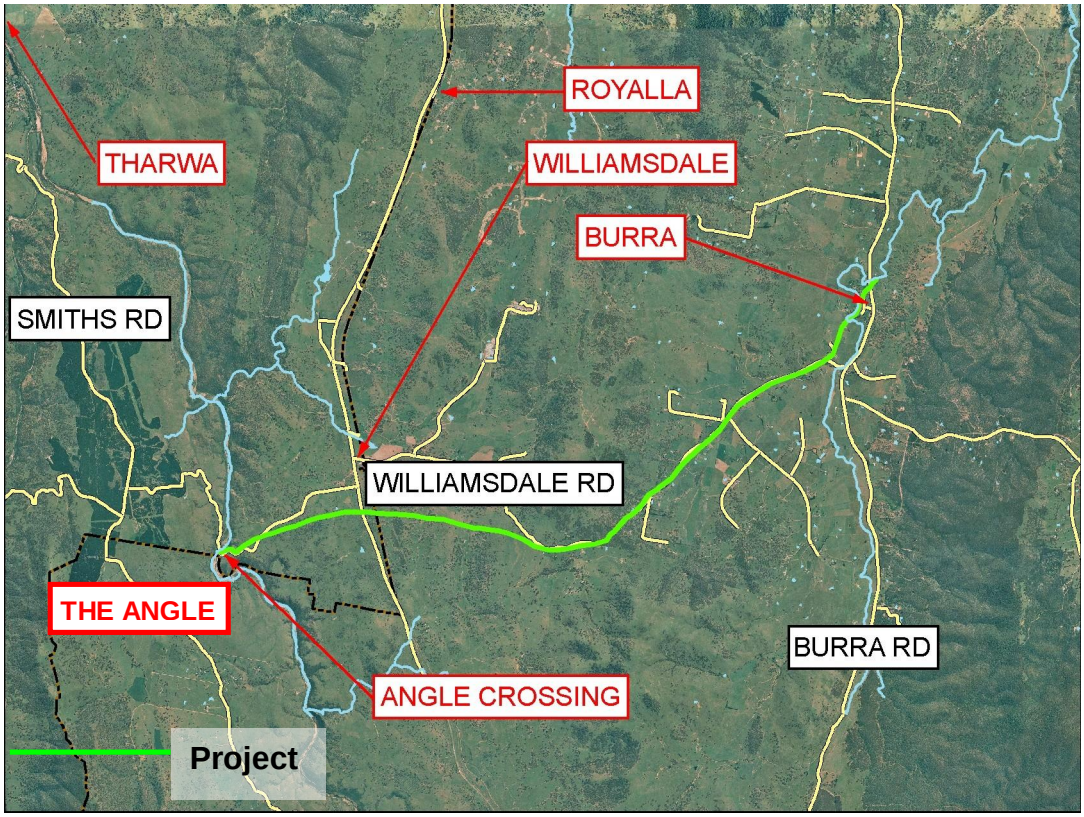


Figure 2 Project primary and secondary impact area



3.1.2 Population

At the time of the 2006 Census[1], ACT's population was approximately 324,000, and the population of Queanbeyan was approximately 34,000. The State Suburb (SS) of Michelago had 795 residents, Royalla (SS) had 834 residents, Burra (SS) had 480 residents and Tharwa (SS)'s population was 109.

The occupations of about over 60% of the workforce in the Michelago, Royalla and Burra State Suburbs were Professionals, Clerical and Administrative Staff, or Managers. Approximately 10 per cent of people listed Central Government Administration as their industry of employment. Tharwa's population was too small to break down into this detail. Unemployment rates for these areas ranged from 1.5 to 2.7 per cent.

3.2 Primary impact area

The primary impact area has been defined as those areas directly affected, such as:

- Land-owners directly impacted by the pipeline;
- Communities hosting construction activities including land-owners near the pipeline;
- Localities that would experience increased traffic and noise from construction activities and the outflow;
- Users of Angle Crossing road as a main access-way (including people and businesses on Smith's road); and
- Users of Angle Crossing beach for recreational purposes.

These areas are primarily Williamsdale, Burra and Angle Crossing.

[1] *Quickstats, ABS website, http://abs.gov.au/websitedbs/D3310114.nsf/home/Census+data, accessed December 2008.*

3.2.1 Williamsdale

Williamsdale is 24 km south of Tuggeranong on the Monaro Highway in NSW. The locality consists of a service station and (at the time of the site visit for this assessment in November 2008) a road-side van selling cherries. There is a newly opened quarry on the edge of Williamsdale. As an area, it is rural with scattered farmhouses, with sheep grazing a predominant activity. Turnoffs to Burra (12 km east, via Williamsdale Rd) and Tharwa (13 km north-west via Angle Crossing) are both within 200m of the service station. Access to Canberra is via the Monaro Highway, with Tuggeranong being a 15-20 minute drive. Williamsdale does not have reticulated water.

3.2.2 Burra

Burra is a widespread community of people, many of whom work in Canberra or Queanbeyan, are hobby farmers or retirees. It is situated in NSW near the ACT border. Until recently, the minimum lot size was 20 acres. There is a community hall in Burra, maintained by the residents, as well as an oval and tennis courts. There are no shops or reticulated water, with properties self-sufficient in terms of water and sewerage. If water supply on a property runs out, 3000 L can be purchased and delivered for between $120-$180.

Local estimates suggest that there are approximately 350 houses in the Burra and Urila region, with most families including at least one member who commutes to Canberra or Queanbeyan for work. In the 2006 census, the State Suburb of Burra had a population of 480 people in 188 dwellings and 138 families[2].

3.2.3 Angle Crossing

Angle Crossing is a waterhole on the Murrumbidgee River about 3 km from the Monaro Highway, where the Angle Crossing Road crosses the river by means of a causeway downstream of a natural river pool.

Angle Crossing Road is the gravel road that runs between the Monaro Highway at Williamsdale and Smith's Rd (which continues to Tharwa). It is an access route between Tharwa/Smith's road and the Monaro Highway, and is used by local residents and businesses as well as by tourists travelling to Tidbinbilla Nature Reserve or Namadgi National Park. Businesses include farming enterprises and the Commercial Truck Body Builders (who use the road regularly but not on a daily basis).

The Angle Crossing pool is bounded on the north side by a sandy beach, and to the west by the Angle Crossing Road causeway. The beach area is an important recreation area as defined in the National Capital Plan. The pool is a popular location for swimming, fishing and picnics, and the site of frequent evening social and anti-social behaviour including parties, high levels of vandalism, littering etc. The site has a gravel access road, car park and toilet.

ACT Parks, Conservation and Lands (ACT PCL) are responsible for management of the area, and estimate visitor numbers to range from 10,000 to 35,000 per year, with the higher number recorded in the hot dry summer of 2000/01. These visitor levels are less than those for similar nearby recreation resources at Smith's Road near the Namadgi visitor centre and Pine Island. Visitors are understood to come predominantly from southern Canberra, with some local visitors from Burra, Williamsdale and Royalla. (Although local residents reported that many locals have access to swimming holes/dams on their own properties).

Interestingly, in addition to Canberra visitors, domestic and international tourists are also understood to commonly stop and fish for trout at Angle Crossing en-route to fishing expeditions in the Snowy Mountains, as the site is listed in many fishing guidebooks. The river is closed to fishing June to September. Angle Crossing is also reportedly an unofficial caravan camp site.

Angle Crossing is seen to be a quieter and safer (particularly for children) alternative to swimming spots on the Cotter or Casuarina Sands because of the sandy beach and lack of rocks, and easier to access (lower incline) than the Cascades at the Googong Dam. Swimming occurs primarily during summer.

[2] *Boundaries for census data do not clearly align with administrative localities due to low population density.*

Angle Crossing and the nearby area has historical and spiritual connections for local indigenous people, including relating to the Bogong Moth festivals[3], fishing, and at Angle crossing, opposite sides of the Murrumbidgee River having varied significance for Men and Women [4].

The Mogo Local Aboriginal Land Council owns land a few hundred meters upstream of Angle Crossing. To date they have raised no concerns about visual or other non-heritage related issues.

3.2.4 Development context of the primary impact area

In addition to the Murrumbidgee to Googong Water Transfer project, a number of other, unrelated developments have been proposed for the Burra or Williamsdale areas. These include:

Confirmed

- TransGrid land in Williamsdale (Block 1653, District of Tuggeranong) would be the site of a 330,000/132,000V **substation** to provide a second point of electricity supply into the ACT. ActewAGL would construct 132,000V transmission lines from this substation some 16 km through to Theodore. Works associated with the first stage have been initiated and are due for completion in 2009[5].

Proposed

- ActewAGL intends to conduct a pre-feasibility study for a **gas-fired power station**, with the Williamsdale property above as one of three potential sites[6];
- Acciona Energy was considering plans to build a **wind farm** on the nearby Molonglo Ridge. Community opposition was high, and several years after the initial proposal, Acconia deemed the site did not meet their standards[7]; and
- Proposed **Williamsdale General Aviation Airfield** – an airfield is proposed to host many small general aviation flights.

Most of these projects are commonly associated with noise, visual amenity and traffic impacts, and a number have or would involve easements on private land. Burra residents see these projects as Canberra externalising the impacts of their developments to nearby NSW rural areas where residents have no voting power to influence ACT decision makers[8].

3.3 Secondary impact area

This area is defined by those people most likely indirectly affected in Royalla, Tharwa, users of Googong Dam for recreational or business activities and downstream impacts on the Murrumbidgee River.

3.3.1 Royalla

Royalla is a new peri-urban development in NSW on the eastern side of the Monaro Highway, about 20 km south of Tuggeranong. Subdivisions of 5-10 acres have been opening in stages since 2000, with about 250 houses at present. There are no shops at Royalla, however people use the service station at Williamsdale, the Calwell shops in the ACT (10-15 minutes to the north-west), and Queanbeyan (15-20 minutes drive to the north-east).

Royalla borders Burra in the east, little Burra in the north, Williamsdale to the south, and the Monaro highway to the west. Rural residential developments also exist in Mount Campbell, and Little Burra. Royalla straddles the Queanbeyan and Palerang Council areas.

Most students attend school in Canberra, and many people commute to Canberra or Queanbeyan for work. The quarry in Williamsdale to the south means many semi-trailers drive through Royalla each day.

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[3] *Wally Bell, Buru Nganawal Aboriginal Corporation, Pers Comm 4/12/2008*

[4] *Tony Boye, Ngarigu Currawong Clan, Pers. Comm. 4/12/2008.*

[5] *Transgrid Strategic Development Plan 2008 p 45*

[6] *ACTEW media release, Williamsdale_info_sheet-update1-2July08_FINAL.pdf, undated*

[7] www.burra.org.au, 12/2008

[8] *B.U.R.R.A. Pers Comms 3/12/08*

3.3.2 Tharwa

Tharwa is a small town near the southern border of the ACT, and according to the 2006 census, has a population of 109 people (at a State Suburb level).

Tharwa accesses Tuggeranong to the North via Tidbinbilla Road or via Tharwa Drive. Tidbinbilla Road crosses the Murrumbidgee at Point Hut (ford), while Tharwa Drive crosses it at Tharwa Bridge. Access to the Monaro Highway is via Tuggeranong in the north, and Angle Crossing to the South.

3.3.3 The Angle (including Smith's Rd residents)

The Angle is the locality in NSW west of Angle Crossing, and south of Tharwa. Smith's Road is the main road through The Angle, linking Angle Crossing Road and Tharwa Road. Primary (most direct) access from The Angle to Queanbeyan and south is via Angle Crossing.

3.3.4 Googong Dam and Burra Creek

The Googong Foreshores is an area of 5089 ha which was acquired by the Commonwealth from New South Wales in 1973 to create the Googong Dam (Reservoir) and protect its immediate catchment. The primary purpose of the reservoir is the supply of potable water to the ACT and Queanbeyan, with secondary values for recreation, biodiversity and cultural heritage[9].

Googong Dam is fed by the Queanbeyan River and Burra Creek, and has the capacity to store about 121GL. In late 2008 the reservoir was at 51% capacity. The dam wall is at the northern end of the reservoir which is about 1.5 km wide near the dam wall and extends southward for about 11 km. When full, it covers approximately 680 ha.

There are two public access points to the reservoir, the northern access via Googong Dam road is a sealed road, the southern access (London Bridge Road) is only partly sealed. This road leads to the London Bridge limestone arch (upstream of the reservoir) and the London Bridge Homestead group, both of which are listed on the Register of the National Estate. These are both popular destinations within the Googong Foreshores.

Average annual visitor numbers are recorded as 53,000[10]. In the drought year of 2003, the lowest levels of visitor numbers were recorded as 23,000, when boat access was limited. The highest visitation was in 1996, with 72,000 recorded[11].

Recreational activities include bush walking, mountain bike riding, fishing, bird watching, picnics, and boating, while regular open days are held at the London Bridge Homestead. Fishing is the most popular recreational activity at Googong foreshores, (mostly from un-powered or electric motor boats). Activities which allow primary contact with the water (eg swimming) are prohibited within the reservoir, as a water quality measure, however swimming downstream of the dam wall on the Queanbeyan River is popular (at the Cascades, and from a carpark further downstream).

Visitors come primarily from Canberra and Queanbeyan, with visitor numbers expected to increase if nearby residential developments proceed. Facilities include a ranger station, car parks, picnic facilities (tables, barbeques), toilets, boat ramps, bird hides, walking tracks (including a wheelchair-accessible boardwalk) and lookouts. There are tracks for fire trails, and some tracks for walkers only.

A range of groups are involved in the environmental management of the upper Murrumbidgee River Catchment. Some of the local groups that relate to the dam include the Molongolo Catchment Group, ACT Park Care volunteers, the Burra Landcare Group, and the Friends of Googong. The area's management plan includes an action to "involve local aboriginal communities in the identification of ways in which recognition of prior Aboriginal occupation might be incorporated into management of the foreshores"[12]. The Murrumbidgee Catchment Management Authority (CMA) has prepared a Catchment Action plan.

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[9] *Gogoong Foreshores Draft Plan of Management, Territory and Municipal Services, September 2007. www.tams.act.gov.au*

[10] *Dean Darcy, Head ranger, Googong Foreshores, pers comms 3/12/08*

[11] *Gogoong Foreshores Draft Plan of Management, Territory and Municipal Services, September 2007*

[12] *Gogoong Foreshores Draft Plan of Management, Territory and Municipal Services, September 2007. www.tams.act.gov.au (p 69 and p80)*

3.4 Regional impact areas

3.4.1 Downstream Murrumbidgee users

The NSW Department of Water and Energy and the ACT Department of Territory and Municipal Services have responsibility for water resources, legislation and the granting of Water Licences for removal of water from the Murrumbidgee.

Licences can be granted for a number of reasons including water conservation, irrigation, and water supply for domestic, irrigation, stock, mining, or industrial uses. Water Allocation Entitlements and Water licences can be traded in some circumstances.

3.4.2 Regional impacts and water supply beneficiaries

Beneficial impacts accrue primarily to the users of water supplied from Googong Dam. This is primarily residents and business in Queanbeyan and Canberra. Some of the costs associated with funding the project would also accrue to these reticulated water supply users. Burra and Williamsdale do not receive reticulated water.

Googong Dam itself is a recreational venue used by local residents, ACT and Queanbeyan residents, and tourists.

Many residents in Burra, Williamsdale and Royalla commute to ACT and Queanbeyan for work, commerce, services and facilities, and benefit from the Canberra economy, which is in part underpinned by a secure water supply. Additionally, a strong economy and population in Canberra supports high land values in the area.

3.4.3 Indigenous groups

Aboriginal people in the area, including around Canberra and Queanbeyan, come from a variety of different groups and nations. This Social Impact Assessment considers only the current values and uses by indigenous groups. Navin Officer Consultant Archaeologists are conducting a separate Cultural Heritage Assessment including Subsurface Testing Program as part of the environmental assessment, which looks particularly at archaeological and historical significance. The groups they have consulted are detailed below.

There are four Representative Aboriginal Organisations (RAOs) within the ACT that have been consulted on the project. They are: Buru Ngunawal Aboriginal Corporation, Consultative Body Aboriginal Corporation on Indigenous Land and Artefacts in the Ngannawal area, Little Gudgenby River Tribal Council, and Ngarigu Currawong Clan. These RAOs have been consulted in relation to the entire project (ie all three governmental jurisdictions).

The Mogo Local Aboriginal Land Council (LALC), Ngambri Local Aboriginal Land Council (formerly the Ngunnawal Local Aboriginal Land Council), the Ngunnawal Elders Corporation, the Ngarigu Currawong Clan, and Jerrinja Consultants Pty Ltd are organisations that have registered their interest as stakeholders in cultural heritage affected by the project. These organisations have been consulted in relation to the NSW segment of the project, and in accordance with respective Land Council boundaries and jurisdictions. The Mogo LALC were also involved in the Angle Crossing section (in the ACT), as they own land nearby. The Yukembruk Merung Ngarigo Consultancy Pty Ltd has also expressed interest in involvement.

3.5 Community values

A community visioning session in Burra in 2005 facilitated by Palerang Council was attended by about 50 residents and reflects the ongoing values of the community[13]. The highest responses to the question “What do you value (about Burra)” were:

- Privacy/seclusion (26);
- Beautiful natural environment (26);
- Rural lifestyle (24);

[13] http://www.burra.org.au/issues/visioning.htm

- Views (23); and
- Ability to farm (20).

In response to the question "What changes have we seen in our community?" the most common responses were; smaller land holdings compromising the positive rural living values (50), greater demand on water/water shortage (25), destruction of roads through greater use (19), and suburbanisation, more barking and roaming dogs (19). In response to their vision for the community's future, Burra residents identified a desire for:

- Undeveloped ridges (26) / Green space for recreation and wildlife corridors (20);
- Local community hub (18) / meeting place (16);
- Sensitive planned development (19); and
- All roads tar sealed & upgraded (17).

A further session in 2006 for the Council's Social plan concluded similar values[14].

Although the communities of Royalla, Williamsdale and Burra vary in their structure, lifestyles and livelihoods, these values area also expected to be held to a lesser extent by residents of Royalla and Williamsdale.

The value of Angle Crossing to the ACT is also recognised in the National Capital Plan, as a source of domestic, irrigation and stock water supply, and for primary water contact recreation (including swimming, sailboarding and boating).

[14] *Palerang Social and Community Development Plan 2006/07-2010/11*

4 Stakeholder engagement

4.1 Consultation to date

The aim of community consultation for this project is to achieve a high level of awareness about the project, community understanding of the operational aspects and benefits of the project, and incorporate community feedback into decision-making process and the Environmental impact assessment.

Since the options identification process began, community engagement and stakeholder management activities have been undertaken and captured in a consultation database. Over 300 instances of communication with stakeholders have been recorded. Government stakeholders, community organisations and individuals including directly impacted landholders have been involved.

Members of the project team have also met or held discussions with a number of agencies during preliminary stages planning for the project and particularly during preparation of the environmental assessment to identify issues for consideration in the environmental assessment. Liaison with Government stakeholders has been across local council, state, territory and Commonwealth Governments. An overview of these activities is outlined below.

- Regular briefings to ACT Government agencies, including ACT Planning and Land Authority and Territory and Municipal Services, and indirectly through the ACT Senior Executive Water Group;
- In addition to meetings in February 2008, a group of ACT Government agency representatives were taken on bus tour of the general route, including Angle Crossing and Googong Dam;
- Commonwealth liaisons through the Department of Environment, Water, Heritage and the Arts and the National Capital Planning Authority;
- Department of Planning managed NSW Government liaison directly, for which a Planning Focus Meeting was held on 26 August 2008;
- A regular coordination meeting has been established involving the planning agencies from ACT, NSW and Commonwealth. At the time of this report this group has met twice and will continue to meet throughout the planning approvals phase of the project;
- At a local government level, both Palerang Local Council and to a lesser extent Queanbeyan City Council have also been involved and consulted. A presentation to Palerang Councillors was held on Thursday 11 December 2008 with subsequent meetings planned during 2009 the first of which was held on 16 February 2009;
- A community drop in session held at Burra Community Hall on 26 March 2008 enabled approximately 35 local residents to view maps of the proposed route, raise questions and comments with representatives of the project group;
- A community information session was held at Burra on 9 December 2008 attended by approximately 70 community members. The session included a presentation by project representatives and the opportunity for attendees to ask questions;
- A “Burra Stakeholder and Community Roundtable” was held at Burra Community Hall, 2pm – 4.30pm, 20 January 2009. This was convened and chaired by Mike Kelly, Federal Member for Eden Monaro, in response to community representations. It followed a question and answer format. There were approximately 20 community attendees; as well as four Palerang Shire councillors and Acting General Manager Bill Elliso; and four ACTEW attendees;
- Presentations have also been given to community groups and information has been sought about the project on the information line. These concerns and questions have been monitored and recorded using the Consultation Manager software program. Information about the Murrumbidgee to Googong project and

the broader Water Security – Major Projects were distributed at drop in sessions and other information activities included Fact Sheets and Corridor maps; and

- Meetings with directly impacted landholders have been ongoing. As the project corridor has been further refined and detailed survey and assessment work has been undertaken, personalised letters and property visits took place in relation to all directly impacted landholders along the pipeline route. Approximately 30 landholders are directly impacted. Meetings with these landholders, often in small groups, have been periodic as the route alignment has been finalised.

Ongoing communications have been maintained with a range of community groups:

- Australian Railway Historical Society;
- Building Science Forum of Australia;
- B.U.R.R.A (Burra-Urila Residents' and Ratepayers' Association);
- Burra Community Association;
- Burra Rural Fire Bridge;
- Community Alliance Party;
- Conservation Council of South East Region and Canberra;
- Indigenous groups;
- Landcare groups;
- Molonglo Catchment Group;
- Queanbeyan Business Council;
- RSPCA;
- Palerang Council;
- Southern ACT Catchment Group; and
- Tuggeranong Community Council.

In November 2008 a brief presentation to B.U.R.R.A and an on site walk with representatives of the Molonglo Catchment Group were conducted.

Information on the project continues to be available on the ACTEW website as well as on many local community websites.

4.2 Issues raised

Issues that have been raised at the public meeting and during this consultation period can be summarised as follows:

- Pipe route;
- Planning and other options;
- EIS;
- Consultation;
- Land acquisition;
- Environmental river flows;
- Impact on Burra Creek;

- Spread of noxious weeds;
- Staff behaviour;
- Cost;
- Drought; and
- Noise/dust and odour.

4.3 Stakeholder engagement in the social impact assessment

The issues and stakeholders identified during this ongoing process has informed and guided the scoping and assessment of social impacts. Key stakeholders related to these issues have been contacted and data explored to better understand the social impacts.

4.3.1 Perceived impacts

During the course of project consultations, the project and understanding of the impacts of the project have developed, and as a result, some of the perceived impacts of concern to the community have been better addressed and evidenced to not be actual impacts for the project. These concerns are listed below.

During Construction:

Recreational Access to Burra Creek and environs – Access to Burra Creek would only be restricted where construction is occurring around the outlet area. There is currently no reported recreational use of this area and as such no negative impact is anticipated.

During Operation:

Loss of privacy and disturbance to stock and animals – Residents are concerned for potential disruption to stock and loss of privacy resulting from maintenance activities. These are anticipated to be minor, as these activities are usually of low frequency, with few attendants, and primarily in a monitoring and surveillance role.

Safety – Angle Crossing – Residents are concerned that currents or flows into the intake would be a safety hazard for small children or poor swimmers. The design of the intake has reduced inflow to 0.2 m^3/sec to prevent swimmers and small fish being drawn in, and the intake is angled and covered to allow swimmers in the vicinity to easily walk on and over the intake to exit the river.

Amenity downstream from Googong Dam – The same regime of environmental flows would continue from Googong Dam, therefore there would be no impact on swimming or fishing activities downstream of the Dam wall (eg at the Cascades). The only change in flow regime would occur if a large rain event caused water levels in the Dam to reach 100% resulting in spilling through the spillway, better mimicking the natural flow regimes.

Indigenous values and use – Current and recent historical land uses, land transfer and landscape and river modifications have already diminished the cultural value and significance of the area and specific sites within the project area. Additional modification brought about by the project in the short and long term is not expected to have significant impact on these values, or indeed to the areas continued use by the Indigenous population.

Scouring at London Bridge – Residents and visitors value London Bridge as an attractive geological formation, and an example of the karsts within the Canberra area, and are concerned there may be long-term scouring of London Bridge. The report from Optimal Karst Management, *Potential implications for the London Bridge natural arch and karst,* concludes “The proposed pumped flows to Burra Creek would not significantly impact physically upon the geomorphology, archaeology, zoology and other values of the London Bridge natural arch”.

Access to Burra Creek – Burra Creek would only be fenced around the outlet point, which is not generally accessed by the public. Access to the rest of Burra Creek would not be restricted.

Helicopter use – Residents were concerned that ACTEW might use helicopters to monitor the pipeline. While ActewAGL does use helicopters to monitor overhead power lines, they are not used to monitor water pipelines and easements.

5 Social impacts

The social impacts of a project refer to the impacts on people, as individuals, as groups, and as a society as a whole. These impacts can be financial, emotional, values-related (often reflecting the social values attributed to the physical and social environment), physical or related to the social fabric and networks of communities and individuals.

Impacts have been broadly broken into temporary impacts (during the 1-2 year construction period) and ongoing/long term impacts (during project operation).

5.1 Construction impacts

The potential social impacts generated by construction of the project are listed below.

- Disturbance to stock and animals;
- Access to recreational areas;
- Construction workforce presence;
- Loss of land and land use;
- Noise and dust;
- Traffic and access (including road closures); and
- Lifestyle and privacy.

5.1.1 Disturbance to stock and animals

Many residents of Burra and Williamsdale own animals, either as pets or for hobby farms or farms. There are a wide variety of animals, from horses and ponies to Alpaca, Angora Goats, sheep and cattle. Given the rural nature of the areas and low traffic numbers, stock are generally not accustomed to unfamiliar people or vehicles on/near their properties, and Burra residents noted that in the past their stock have been susceptible to stress caused by noise or human disturbance. Burra residents are concerned this could result in animals being injured by running into fences, avoiding feeding and watering areas or times, or bad parenting (eg lambs being abandoned).

Disturbance to stock could have social and financial impacts, by causing extra time to be expended (eg if needing to change hand-feeding locations, or locking stock up), and cause emotional distress to the owners.

5.1.2 Recreational Access to Angle Crossing recreational area

Recreational access to Angle Crossing would be limited in this area for the period of construction of the intake structure and low level pump station. A storage compound and site facility would also be located at the low level pump station (above Angle Crossing, including and extending the current car park) which is proposed to be operational for 12 months from commencement of the project. Although Angle Crossing recreation area and beach may remain open, its use would not be encouraged due to the movement of construction vehicles in the vicinity and the restricted access to areas expected near the intake structure and site compound.

The reduced amenity likely to be experienced at the site as a result of these activities would most likely deter potential recreational users for the duration of construction. An exception to this may be fishermen who generally fish a short distance upstream from the crossing. For those wishing to continue to use the area, alternative parking arrangements are as yet undetermined, but would likely be on the opposite side of the river.

5.1.3 Construction Workers and workforce

Construction would cover an sixteen-month period, and during pipeline construction, up to 100 workers could be employed at once. About half of the construction workforce is expected to be sourced locally, although most likely more would be from Canberra and Queanbeyan than from Burra and Williamsdale.

It is unlikely that any non-local workers would stay in Burra or Williamsdale, particularly given the lack of facilities in the area. Any benefits or pressures on accommodation with therefore fall on Canberra or Queanbeyan. Similarly, the service station at Williamsdale is the only food retail business in that area, which would benefit somewhat from the additional population, however most benefits of worker spending would be in the ACT or Queanbeyan.

The presence of construction workers is often perceived to have potential to impact on the local community, particularly in relation to road traffic and landowner relations. However, it is expected that workers would stay (and seek entertainment) outside of the Williamsdale-Burra-Royalla district, and that adoption of codes of behaviour would guide landowner and community relations to avoid any negative impacts.

5.1.4 Loss of land/use of land

An easement of 40m would be required along the extent of the pipeline during construction. Temporary fences would be put up where required, to keep stock out of the pipeline corridor, for the duration of the works. Stock may need to be relocated, as paddocks closer to the pipeline may be unsuitable due to noise or disturbance. The impact of this would vary from property to property, depending on the overall size of the property, it's normal uses and access routes, the type of stock, the availability of alternative agistment on the property or nearby, and whether the pipeline bisects a paddock or is adjacent to an existing fence or boundary. Impacts would also depend on the length of time that construction occurs, the length of time that access is limited, and the length of time before rehabilitation is complete. This would require ongoing consultation and management with landholders. ACTEW will be liaising with individual landholders to establish individual property plans that would guide the construction team with respect to the specifics of each property. These plans would detail specific information and requirements such as livestock, gates, fence location, timing of access etc.

5.1.5 Noise and dust

Residents identified noise as a particular concern due to the normally quiet nature of the area, and weather conditions (inversion layer) that contribute to sounds being heard (or noticed) at greater distances than in cities. Tranquillity is one of the values that the Burra residents value highly.

GHD's Noise and Vibration Assessment suggests that during construction of the pipeline and at the discharge point, noise levels may be above noise criteria for anyone within about 600m, and therefore mitigation measures have been recommended. Even with the mitigations proposed in the Noise and Vibration Assessment, there would be some residual noise impact typical of any project. Dust issues would be controlled by standard construction methodology and implementation of mitigation measures.

5.1.6 Traffic and access issues

Traffic

Current traffic counts on Williamsdale and Burra roads show low levels of vehicle movement. Increased car and heavy vehicle traffic during construction could lead to greater risk of road accidents, impacting on the safety of current road users. Williamsdale Road is a main route into Burra. Regular activities where drivers use these roads include Playgroup (carers and children), Social Club, Burra Scouts, Burra District Pony Club, Tindery Trekkers (a horse riding group), the Quilters association and the Rural Fire Service.

Events for which this could be a particular concern include:

- The Burra Pony Club Annual Gymkhana, which is generally held in October or November, and attracts about 150 entrants over the weekend, with commensurate numbers of cars and horse floats entering the region; and,
- The Queanbeyan Lions Club' annual, charity Open Gardens event in Spring. Hundreds of visitors from Canberra, Queanbeyan and districts travel to visit the gardens which are "open" for the weekend. Many people in the Burra district participate by opening their gardens, some of whom are on Williamsdale Road.

Construction activities may also increase local travel times when traffic flow is interrupted or regulated. Given the multiple locations where the proposed pipeline would cross the road, and the operation of up to three construction crews concurrently, there is a possibility that at one, and perhaps up to three sites along the

road may be partially closed and result in traffic delays. Periods of closure are expected to be within 1 to 2 days.

Access – Temporary closure to Angle Crossing.
Angle Crossing provides an access route across the Murrumbidgee, between the Monaro Highway and Smiths Road, Tharwa and the mountains. Alternative routes are via Tharwa Bridge or Point Hut. Closure of Angle Crossing would mean additional trip times of 15-30 minutes each way, presuming access via Tharwa Bridge or Point Hut is available. Despite being sealed, Point Hut Road is seen by local road users as more dangerous than Angle Crossing road, particularly for transporting large loads.

The construction of pumping stations may require road closures of Angle Crossing Rd for short periods when, for example, large pieces of equipment such as the pumps are being delivered and unloaded by crane. Such closures will be a last resort and will only be used when lane closures and traffic management would not be adequate to ensure public safety. When closures are needed ACTEW will provide adequate notice via all media outlets and will re-route traffic via Tharwa Bridge. Warning signs will be in place and there will be arrangements for emergency access.

Horse rider safety
Pony club members and other horse riders use the verges of roads in the Burra Area to ride on. Weekends, holidays and summer evenings (ie after school) are the most common riding times. Potential dangers to riders include loud truck traffic that would frighten horses, the need to negotiate any construction material, vehicles or cleared vegetation left on the roadside, and safety relating to trenches in the ground. Construction is not anticipated on Sundays or in the evenings, so these impacts would generally be felt on Saturdays and holiday periods.

5.1.7 Lifestyle and privacy impacts
Burra residents are concerned that increases in noise, local activities (construction workforce and traffic) and incursions onto private properties would cumulatively reduce the quiet, rural lifestyle they value highly. Concerns are also for the privacy that would be affected whilst pipeline development occurs on and near private properties. Consultation will be ongoing during the construction period to provide timely information to local residents and to anticipate and respond to local issues.

5.2 Operational impacts
The potential social impacts generated during operation of the project are listed below.

- Aesthetic and recreational amenity at Angle Crossing (ACT and NSW users);
- Vandalism (Primarily at Angle Crossing – ACT);
- Visual (ACT and NSW);
- Noise (ACT and NSW);
- Property impacts (NSW);
- Local Water Supply Benefits (ACT and Queanbeyan, NSW);
- Downstream Murrumbidgee users (ACT and NSW);
- Access to recreational areas on Burra Creek (Commonwealth land, but ACT and NSW users); and
- Access to Googong Reservoir (Commonwealth land, but ACT and NSW users).

5.2.1 Aesthetic and recreational amenity of Angle Crossing
Angle Crossing is one of several river recreational spots in the region. Given its already altered state, the assessment of low anticipated visual impact from the intake and LLPS structure and the absence of safety concerns or noise from operation, the project is not expected to significantly reduce its aesthetic or recreational amenity in the long term.

5.2.2 Vandalism – Angle Crossing

Vandalism is an issue in the area[15], with stolen cars known to have been torched around Williamsdale, and vandalism of the existing toilet is common. There is a high likelihood that attempted vandalism of the intake structure and the pump station would occur.

5.2.3 Visual impacts

Angle Crossing intake structure

The intake structure and low lift pump station would be set into the ground, with the intake grill being the most visible aspect. It would be visible from the opposite side of the river, but would be screened from the beach by vegetation. Design features would assist to minimise the visual impact, which overall are considered to be low.

High level pump station

The high level pump station and communications tower would be visible when descending the road on the Northern side of the crossing, and from the river. The top of the hill would be removed, so there would be earthworks scars visible until landscaping and revegetation is completed. The Landscape and Visual Impact Assessment has assessed this as a moderate adverse visual and landscape impact.

Pipeline route

There would be a 15m wide corridor that would not have any trees, and only low grass. Standard rehabilitation practices should avoid the growth of weeds, which otherwise would pose both noxious vegetation threats and visual amenity decline.

Outflow at Burra Creek

There would be minimal visual impact of the outflow of Burra Creek, as this area is not in view of any sensitive receivers, and is rarely seen by bushwalkers.

Visual impacts would be larger in the construction phase than the operational phase.

5.2.4 Noise

The GHD Noise and Vibration Assessment states that there would be little noise from the LLPS given that most of it would be underground. There would be some noise at the HLPS, but due to its distance from Angle Crossing (300m), this would be unlikely to affect the amenity of Angle Crossing.

Noise models for the outlet structure are based on the assumption that it would be similar to a sluice gate outlet. These models suggest that the noise would be undetectable at the nearest receiver (residence).

Operation of air release valves on the pipeline itself have the potential to exceed noise goals at four residences. Mitigations including selection of low velocity valves and relocation of the valves has been proposed by the report to avoid these noise impacts.

5.2.5 Property impacts

An easement of 15m is required to allow for ongoing operation and maintenance of the pipeline. The impact this has on landowners would depend on the overall size of the property, the pre-construction usage of the easement area, the location of the easement with regard to the rest of the property (eg bisecting a paddock, or on a boundary), the landform in the area, and any permanent restrictions on use and attendant loss of production value of the land. The clearing and restrictions on use may affect the visual amenity of the property. This would depend to an extent on the success of rehabilitation practices.

Compensation will be provided in accordance with legislative requirements to address these impacts. The Land Use Section of the Environmental impact assessment addresses these issues in further detail.

Palerang Council proposes to realign and seal Williamsdale Road. Where Council's proposal coincides with road restoration to be undertaken as part of the project, the project will restore the road in accordance with Council's proposal for road upgrading. It is expected that such a realignment may impact on two properties.

[15] *pers Comm. Darren Rosso Ranger, ACT Parks, Land and Conservation*

Palerang Council is currently undertaking all necessary arrangements and negotiations with property owners in this regard.

5.2.6 Local water supply benefits

The pipeline design is proposed to incorporate two hydrant outlets for use by local Rural Fire Services. As Burra and Williamsdale are not on reticulated water, this is an important continuation of the viability and capacity of the local emergency services.

5.2.7 Murrumbidgee downstream impacts

Water being removed from the Murrumbidgee means it is no longer available to downstream users. While environmental flow requirements would be maintained, and the amounts proposed for extraction are relatively small in comparison with available water from the river, there would be a reduction in the total flows and high flows downstream of Angle Crossing.

In addition, depending on the rate at which the water extracted is returned to the Murrumbidgee downstream, an overall reduction in flows further downstream from the ACT would also result. Considered on a regional level, this reduction represents a social equity issue common to basin management issues across the country.

5.2.8 Access to recreational areas on Burra Creek, including London Bridge

Flow rates in Burra Creek would increase, and some residents are concerned this may mean that some of the quiet ponds would no longer be suitable for children to swim in, as currents may be too strong. There would be no sudden start-ups of flow, and flow velocities through pools are estimated to increase from those of the typical low flow discharge of 5 ML/day from less than 0.1 m/s to between 0.2 and 0.5 m/s [16]. The Fluvial and Geomorphic Assessment suggests that these flow rates would not significantly change sediment transfer. It is therefore unlikely to impact swimming safety.

The raised water levels in Googong Dam would mean raised water levels at the lower end of Burra Creek. Water levels in Burra Creek would raise only 0.4 m on average. Currently access to London Bridge includes a road ford across the creek, with a wire walkway beside it, above the creek[17]. The project has committed to maintaining access across the creek.

5.2.9 Improved access for fishing at Googong foreshores

Increased water levels in Googong Dam could improve access to fishing locations. When water levels reach the pier off the boardwalk at the main carpark, it would again provide a disabled (wheelchair) accessible fishing location[18].

Given that tourism numbers have frequently aligned with dam levels, significant average increases in fishing and other recreational visitors are to be expected as a result of the project operation when this results in higher reservoir levels.

5.3 Social risks

Development projects may generate social impacts even before their planning stages. Often these are social risks which can be managed to avoid long term detrimental impacts. Current risks on the project are described below.

5.3.1 Aggravate inter-jurisdictional issues

For this project, one of the risks is the disparity between those who are negatively impacted compared to those who are beneficiaries. Residents of Williamsdale and Burra Creek in NSW “pay the price” of the activity, without being able to access the benefits, as they are unable to use the water that would be piped. ACT and Queanbeyan residents benefit, without having to exercise the water-related economies that the Williamsdale and Burra Creek residents do, or be inconvenienced by many of the construction or operational impacts.

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16 ACTEW (2008b) Changes in hydraulic conditions in Burra Creek upstream of and through London Bridge resulting from pumped discharges of 50 and 100 ML/d. M2G Project, Preliminary Report.

[17] Molongolo Catchment Group, pers comm., 8/12/08

[18] Ranger, ACT Parks, Conservation and Lands, Pers Comm 18/11/08

This disparity must be considered in the context of other projects which have occurred or been proposed in close proximity to, or within NSW, for the benefit of Canberra and the ACT, and in the context of the limited political power NSW residents have in influencing the plans of the ACT. However it must also be noted, that these NSW areas have access to services, facilitates and resources available in Canberra which are underpinned by the health of the Canberra economy and populations, where many Burra and Royalla residents work or draw their income, and which influences the high land values of the area.

The Project has adopted various commitments, arising from the ongoing dialogue with stakeholders, which would provide benefits to the communities in the vicinity of the project. These commitments include:

- Provision of access to water in the pipeline for fires services in the Burra/Williamsdale area; and,
- Upgraded parking facilities at Angle Crossing recreation area.

Management of the dialogue and mutual benefit plans for the host communities would be ongoing throughout project development.

5.3.2 Loss of community cohesion

Negotiation of pipeline alignments may reflect existing power relationships within a community and result in inequitable impacts across land owners, with the consequent potential to generate resentment and reduce community cohesion.

It is important that the project execute equitable impact scenarios so that the least powerful (and thus most vulnerable) land holders are not disproportionately affected.

5.4 Targeted beneficial impacts

The Murrumbidgee to Googong Water Transfer Project is one of a number of initiatives proposed by ACTEW to secure future water supply for the Australian Capital Territory (ACT) region and forms an essential component of the ACT Government's Water Security Program. The Water Security Program has been developed in response to severe drought conditions, increased demand for water and predicted climate change, and project selection has considered the net economic benefits that have taken into account the cost of water restrictions to the community of water users.

Significant social and economic benefits to the community are outlined below:

- Adheres to Canberra's well established sustainability goals[19] including resource efficiency, to maintain water quality, conserving energy and reducing greenhouse emissions;
- Assist ACTEW to secure and manage ACT's water resource and supply;
- Ensuring that a reliable source of high quality water is maintained, in part through the finalisation and implementation of a Water Resources Strategy and lessening the likelihood and impact of water shortage in the ACT and region;
- The potential annual transfer represents in the order of a third of the ACT's annual water use; and
- Maintain water quality for human use and for the condition of rivers, fish and riparian habitats.

Below are key social and economic drivers for the project and possible resultants if the project does not occur:

- *Health and well-being* is a strongly held community value. Individual health and well being can be adversely affected by water shortages, where:
  - Restriction or their impacts contribute to anxiety or stress;
  - Vector-borne or microbial infection occurs through misuse of recycled water or lower levels of cleanliness;

[19] *Chief Minister's Department, Office of Sustainability, Measuring Our Progress: Canberra's journey to sustainability Volume 1 Our Story, 2004, page 12*

– Where physical activity and recreation is significantly reduced; or

– Injuries result.

Levels of anxiety, physical activity and participation in recreational activities are measures identified as health and well-being indicators of Canberra's sustainability.

- *Community cohesion* is a function of how much and how well members of the community join together in pursuits of mutual interest and satisfaction. Demand management, lengthy restrictions and water shortages could work against cohesion in many ways. These include political conflict, reduction in community activities, resistance to demand management, violation of water regulations and crime prevention.
- *Economic opportunity* and confidence in the future is essential for economic investment and employment opportunity. Uncertainty of water reliability would dampen future investment and employment on an ongoing basis; restrictions would impinge upon levels of activity in times of drought. Longer-term water restrictions in the ACT could affect growth.
- *Housing* – Meeting the changing needs of the community for improved access to quality affordable and safe housing are important and key goals of Canberra's Social Plan[20]. Water demand and recycling could have a range of impacts on housing. Housing costs in the future may be difficult to predict and would depend in part on future demand and supply levels for different housing stock. Persistent water shortages or perceptions of future reliability could reduce demand for different types of housing and could increase costs.
- *Access and equity* – Ensuring that a reliable source of high quality water is maintained, in part through the finalisation and implementation of a Water Resources Strategy and lessening the likelihood and impact of water shortage in the ACT and region;
- *Environmental/Conservational and Visual Quality*. The ACT and Queanbeyan community understands and values the importance of protecting the environment and minimising adverse impacts. Canberra is heavily dependent on water for irrigation and could suffer from protracted water restrictions in times of drought. Water shortages may reduce the visual amenity of urban parks, recreational areas and environments. Clear identification of the environmental impacts assist the community to understand, consider and accept the implications of water shortage and demand management.

[20] *Chief Minister's Department, Office of Sustainability, Measuring Our Progress: Canberra's journey to sustainability Volume 1 Our Story, 2004,*

6 Social impact management and mitigation

The tables in this section list the likely impacts of the project and the recommended mitigation measures.

6.1 Construction impacts

Table 1 Construction impacts

Impact	Proposed mitigation
Loss of land / use of land	• Compensation and negotiations to be undertaken in accordance with legislative requirements. • Construction access to be in accordance with the access and construction and easement agreement • Appropriate route selection to minimise impacts
Disturbance to stock and farm animals	Develop procedures that: • Work with landholders (both those directly impacted, and those nearby) to identify, document and manage feeding or breeding schedules (eg start work after feeding completed each day, movement of stock etc); and, • Develop and implement a “driver code” to minimise stock disturbance.
Access to recreational areas – loss of access to Angle Crossing during construction	• Provide alternative parking arrangements in the vicinity of Angle Crossing. • Construction times will be chosen to minimise recreational disruption
Traffic	• Develop a “driver code” for construction staff that promotes safety and generosity on the road, including concern for stock and horse riders. Provide induction to project workers on this. • Grade roads to avoid and repair corrugations.
Traffic – Access – major events – Pony Club Gymkhana, Open Gardens weekend.	• Liaise with Burra District Pony Club and Queanbeyan Lions Club on timing and needs for these two major events. • Where possible, clear verges where event parking would be required (eg no stockpiles, depots or parked construction machinery). • Keep all roads open fully (no Stop-Go lights etc) for these two events (where possible).
Traffic – Access - Temporary closure of causeway at Angle Crossing	• Ensure Tharwa Bridge is open during Angle Crossing closure – liaise with Palerang Council with regard to timing of Tharwa Bridge upgrade works. • Provide sufficient notice of road closure to residents, businesses and tourists. • Minimise length of closure • Provide road signage notifying of closure prior to its closure, and indicate alternate routes.
Traffic – Access - Horse transport & rider safety	• Avoid lengthy delays at Stop-Go lights/signs, especially for horse transport vehicles. • Adhere to truck/vehicle driving protocols (speed, horns, and break/acceleration controls).
Construction workers / workforce	• Provide standard workforce environmental and behaviour induction for all staff.

Impact	Proposed mitigation
Noise, vibration & dust	• Adhere to noise and vibration management plant to be developed based on mitigations described in the Noise and Vibration report.
Local amenity – disturbance to lifestyle, values of residents	• Minimise length of time access is required to each property where possible.

6.2 Operational impacts

Table 2 Operational impacts

Impact	Proposed mitigation
Property impacts	• Any ongoing access to be in accordance with access and easement agreement.
Vandalism – Angle crossing (intake structure, pump stations)	• Minimise accessibility and visibility of structures (locating distant from car park and paths, vegetation barriers, smoothing structure edges etc) • Consider if additional security is required, follow Security through Environmental Design practices.
Noise	Implement appropriate recommendations as described in the Noise and Vibration Assessment.
Safety – Angle crossing	The design criteria already incorporate flow controls, intake design, and spatial separation from the beach to make this issue insignificant.
Visual impacts	Implement appropriate recommendations as described in the Landscape and Visual Impact Assessment.
Downstream impacts – Murrumbidgee amenity	Maintain environmental flows as required under environmental flow guidelines.

6.3 Overall impacts / social risks

Table 3 Overall impacts / social risks

Impact	Proposed mitigation
Aggravate inter-jurisdictional relationships. **Community cohesion lost, individuals disempowered**	• Pipeline would include access for the local Fire Service • Negotiate with Burra and Williamsdale communities to supply a community benefit opportunity that would provide lasting value to the community. • Continue consultation process.

Impact	Proposed mitigation
Community cohesion lost, individuals disempowered	• Provide a clear and open process of consultation, not susceptible to individual lobbying. • Provision of timely and clear information about the project to all stakeholders • Continue meeting with landholders as well as one to one to ensure that the interests of individuals are do not compromise each other
Management of perceived impacts	• Continued community engagement and stakeholder information program to progressively disseminate information about the project, its impacts and management and to receive information from the community about the project and concerns/issues.

7 Conclusions

The social impacts generated by the construction and operation of the project relate to:

- Impacts on people's land and land uses;
- Social values people place on public lands;
- Social values of the character and amenity of their environment; and

The majority of the impacts relate to the social values attached to the physical environment and the impacts on these features. Comprehensive assessments of the extent and mitigation of these physical impacts separately inform the environmental impact assessment, whilst this assessment has explored these impacts with a "social lens", providing another layer for consideration in enhancing the social performance of the project.

7.1 Temporary construction impacts

During the construction phase, the primary potential social impacts would be minimised through careful planning and the adoption of appropriate mitigation measures. In addition to these standard approaches to traffic, noise, land entry and excavation, the following mitigations have also been proposed:

- Consultation with affected and adjacent land holders with farm animals to determine mechanisms to reduce noise and disturbance to animals;
- Timing of construction at Angle Crossing to avoid recreational use issues, including maintaining access to upstream areas for fishermen; and
- Traffic management measures to account for the special needs of the equine owners.

Even with management to acceptable levels, the project during construction would impact negatively on the amenity of the rural ambience of Williamsdale and Burra. The increase in traffic, noise and property access and disturbance would all modify the quiet rural ambience to a moderate degree. These impacts are not expected to be severe, and would be of a limited duration during construction.

While the local community in general would be affected by this altered amenity, those primarily impacted would be landholders where the pipeline runs through or adjacent to their property. Privacy, noise, land use and stock disturbance would be prime issues of concern that would be mitigated. Although these impacts have been independently assessed in the relevant reports as minor or moderate, the social values they hold together is a high priority value to the residents of the area and is thus a significant issue for management during construction.

7.2 Ongoing operational impacts

Social impacts as a result of operation are largely beneficial to the ACT/Queanbeyan water supply customers for whom increased water security means increased security for beneficial uses of water and to fuel growth. Indirectly, the majority of Burra residents also benefit from this security as it also underpins a prosperous and stable Canberra economy, where many Burra residents work or draw their income.

For the operational phase, project features at Angle Crossing would need to be designed to address the social risk of vandalism. The visual amenity at Angle Crossing would be adversely impacted, particularly due to the visual prominence of the High Lift Pump Station.

The long term positive impacts generated by operation relate to securing water supply and thus the foundation for continued growth of the region.

Appendix A Stakeholder consultation list

Key informant interviews

Name	Organisation	Location	Date
Gavin Morrison	ACTEW	Stromlo	02/12/2008
Ray Ryan	Cherry sellers	Williamsdale	02/12/2008
Duck and Terry	Residents	Ballona (Williamsdale)	02/12/2008
Unknown	Man serving in petrol station	Williamsdale	02/12/2008
Unknown	Angle crossing user - man with two young children	Angle Crossing	02/12/2008
Cliff Stevens	Ranger, Googong Reservoir (ACT PCL)	Googong Visitor Centre	02/12/2008
Simon Holloway	Palerang Council, Bungendore	By phone	1/12/03 and 2/12/08
Wendy Bell	President, B.U.R.R.A	By Phone	3/12/08
Phillipa Moss	Queanbeyan City Council	By Phone	4/12/08
Richard Sharp	Pony Club	By Phone	5/12/08
Maryke Booth	Chair, Royalla Landcare Association	By phone	4/12/08
Dean Darcy	Head Ranger, Googong	By Phone	3/12/08
Greg Lonergan	Commercial Truck Body Builders	By Phone	3/12/08
Wally Bell	Buru Ngunawal Aboriginal Corporation	By phone	4/12/08
Joe House	Little Gudgenby River Tribal Council	By phone	4/12/08
Carl Brown	Consultative Body Aboriginal Corporation on Indigenous Land and Artefacts in the Ngunnawal Area	By Phone	4/12/08
Tony Boye and Ellen Mundy	Narigu Currawong Clan	By phone, and email.	4 and 9/12/08
David Carrs	Queanbeyan Council	Strategic Development	4/12/08
Andy Westacott	Coordinator, Molongolo Catchment Group	By phone and email	5/12/08
Sandy Lloyd	Burra Landcare	By phone and email	8/12/2008

Name	Organisation	Location	Date
	Note: felt had too little time to be able to comment properly.		9/12/2008
Peter Donnelly	Water Resources, (ACT) Department of the Environment, Climate Change, Energy and Water	By email	11/12/2008

watersecurity
MAJOR PROJECTS

Murrumbidgee to Googong Water Transfer

Social Impact Assessment Addendum

December 2009

ACTEW
CORPORATION

Contents

1 Introduction

1.1 Background

ACTEW Corporation Limited (ACTEW) proposes to transfer water from the Murrumbidgee River through an underground pipeline to Burra Creek in NSW which flows into Googong Reservoir. This proposed project is known as the Murrumbidgee to Googong Water Transfer.

In order to obtain community feedback and satisfy statutory approval requirements a series of community meetings and a period of public exhibition of the Environmental Assessment (NSW) and Draft Environmental Impact Statement (ACT) (referred to as the EA/Draft EIS) were undertaken. In response to community feedback received before and during the public exhibition period ACTEW has modified the location at which the pipeline would discharge into Burra Creek.

This report addresses the impacts associated with the proposed upstream outlet location into Burra Creek.

1.2 Upstream outlet overview

The project involves construction and operation of infrastructure required to transfer approximately 100 ML/day of water a distance of approximately 12 km from the Murrumbidgee River to Burra Creek which flows into Googong Reservoir. 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 and a power supply.

The original outlet location outlined in the EA/Draft EIS proposed that the pipeline would discharge just downstream of an existing flow measuring station near Burra Road, approximately 10 km south of Googong Reservoir. The original outlet structure was located east of Burra Road within land known as the Googong Foreshores, which is Commonwealth owned land within NSW.

The modified outlet location is 3.2 km upstream from that previously proposed in the EA/Draft EIS. The new outlet location is located in the vicinity of the low level crossing on Williamsdale Road near the junction of Burra and Williamsdale Roads.

The transferred water would discharge through a concrete structure located on the banks of Burra Creek. The outlet structure has been modified to suit this alternative Burra Creek location where the channel is only approximately 1 m deep. It would be a concrete topped structure stretching approximately 12 m along the creek bank with a 250 mm grated opening.

A mini-hydro power generation facility would be located close to the Burra Creek discharge location, but above flood level. The mini-hydro power generation facility would largely be housed underground and would recover almost 20% of the total electricity used for the pumping of the water.

The upstream outlet proposed by the community submissions would reduce a number of adverse environmental and social impacts of the original project including:

- Project footprint reduced as follows:
  - Pipe length reduced by one km;
  - One less pipeline creek crossing;
  - Five landholders no longer affected by easement requirements;
  - An estimated 10 landholders no longer indirectly impacted by construction works;
  - An estimated five air valves, four scour valves and associated potential impacts reduced;
  - Four less road crossings;
  - Less disruption to flora and fauna (habitats within this area are mostly highly disturbed but includes a small area of box-gum grassy woodland close to the original proposed outlet site;

– Outlet location not on Commonwealth land;

– Greenhouse gas emissions would be reduced by at least 3% during construction.

Additional targeted consultations are also underway with major stakeholders and those landholders located near the new outlet location or abutting the additional length of creek that would be affected by increased flows.

1.3 Purpose and scope of the report

The purpose of this study is to discuss:

- The existing condition of Burra Creek at the upstream outlet point;
- The existing condition of Burra Creek from the upstream outlet location downstream to Googong Dam;
- Potential impacts associated with the outlet; and
- Mitigation recommendations.

1.4 Structure of the report

This report will address:

- The impact of the upstream structure; and
- Submissions received as a result of the public exhibition period.

This report should be read in conjunction with the Social Impact Assessment.

2 Social implications of the preferred project

The revised pipeline alignment, outlet location and incorporation of a mini hydro power facility may alter the nature and extent of social impacts generated by the project. This section reassesses the impacts previously identified in light of these project modifications and identifies any additional impacts.

2.1 Construction impacts

The potential social impacts modified by upstream discharge location include;

- Potential land use / value;
- Recreational areas;
- Amenity, lifestyle and privacy; and
- Construction workforce presence.

Potential land use / value

With a reduction in pipeline length of approximately 1km, less land and land use would be affected by the project during construction. The revised alignment would avoid land impacts along Macdiarmid Road, and the new alignment of approximately 400m will be largely contained within the unused road reserve of Williamsdale Road as it heads east from it's junction with Macdiarmid Road. As a result, land use impacts to at least five properties along Macdiarmid Road would be avoided. One property will be impacted more as a result of the pipeline alignment change where the pipeline deviates from Williamsdale Road to the new outlet location.

As the mini hydro facility will be located in an unused road reserve, and substantially underground, no additional significant land and land use impacts are expected.

Recreational areas

The proponent has been in close discussions with ACT Parks Conservation and Lands (PCL) regarding temporary impacts of construction at Angle Crossing on recreational users of the area. As a result of concerns about public safety, it is has been agreed that Angle Crossing beach and parking area be temporarily closed for the duration of construction – a period of approximately 16 months.

It has also been agreed that an alternate recreational area be utilised during construction, and that the site of Tharwa Sandwash, located downstream, and approximately 9km by road would be a suitable site for recreational users during construction of the project.

It has been agreed that;

- Visible fencing is constructed following the road from the crossing up to the access gate of the beach area to discourage people from entering. Fencing should be placed to limit potential areas for parking which could encourage use of the beach;
- Signage is installed to direct recreational users to an alternate beach area, Tharwa Sandwash (approx 9 kms downstream by road), and that toilet facilities are available at Tharwa.

In addition, a detailed plan for restoration of Angle Crossing would be developed and would include upgrading existing facilities as well as rehabilitation of the Angle Crossing area post-construction.

Amenity, lifestyle and privacy

As the pipeline terminates at Burra Creek upstream of Burra village, construction impacts in the village and at properties along Macdiarmid and Burra Roads would be avoided. Construction impacts including noise and dust will be avoided in these areas and the reduced traffic interventions (as a result of four less road crossings) will result in less travel inconvenience and greater road safety. As a consequence there will be less disturbance, and impacts to the lifestyle, privacy and rural ambience which is, highly valued by the local community,.

Construction workforce
The change in project is unlikely to significantly affect the predicted workforce arrangements. Predicted employment generation may alter marginally, however the nature of workers and their interaction with the community is not expected to vary, and thus no significant impacts are expected from the presence of the construction workforce in the project area.

2.2 Operational impacts

The potential altered social impacts generated during operation of the modified project are listed below.

- Visual (NSW);
- Noise (NSW);
- Property impacts (NSW);
- Local amenity;
- Social risks; and
- Sustainability.

Visual and Noise Impacts
Shortening of the alignment such that it avoids one crossing each of Williamsdale, MacDiarmid, Burra and Lagoon Roads would result in a reduced area of visual impact, and involve an alignment into a less prominent location. Similarly, the realignment results in no air or scour valves in the more residential Burra village area, hence significantly reducing noise, and perceived noise impacts from the project.

Property Impacts
As mentioned under construction impacts, fewer properties would be traversed, and much of the easement of the new route would be contained within existing road easements. An estimated 16,008 m^2 less of permanent easement on private property will be required. As such property impacts (potential value impacts, easement complications to titles, visual and land use amenity) would be reduced as a result of the project modification.

The project would not remove the existing water rights of landholders that may be in place for domestic use.

Local Amenity
Local stakeholder input and preferences have been a key determinant in adopting the revised pipeline alignment and outlet location. A key benefit of this revised configuration is the improved amenity, both ecological (through riparian revegetation and habitat creation) and aesthetic, generated by increasing flows in Burra Creek in the vicinity of the Burra village which have been values recommended by local stakeholders.

Social Risks
The social impact assessment identified aggravation of inter-jurisdictional issues as a potential social issue generated by the project and its development. The current revised project proposal represents a positive action in response to local community concerns and preferences that has produced a mutual benefit for both the project, the host communities and other stakeholders, thus reducing disparities in impacts and benefits, and consequently also ameliorating somewhat this social risk.

Sustainability
Through the generation of electricity at the mini hydro facility, the project is acting to reduce energy use required for pipeline operation, reducing the carbon footprint of the project and the overall contribution of the project to climate change and its social ramifications.

2.3 Mitigations

In regard to social impacts, the revised pipeline and discharge configuration themselves have acted to reduce social impacts, and generate positive social amenity impacts.

Responding to a number of local community expectations (including the expectation that some of the project modification cost savings be used to benefit the local community) ACTEW intends to assist the progressive reestablishment of riparian vegetation and other creek improvement works in strategic locations along Burra Creek. Acknowledging such works may take several years to establish, ACTEW is fully committed to the improvement of environmental values along Burra Creek in the longer-term. Other long term benefits to the local community, including road upgrading/safety improvements and access to fire fighting water from the pipeline.

No additional social impacts are anticipated as a result of the revised configuration, and thus no mitigations are required beyond the adoption of compensation standards for any newly and further affected landholders.

2.4 Residual social impacts

In summary, the revised configuration reduces the negative social impacts of the project during both construction and operation by limiting land impacts, and avoiding construction and related noise, vibration, dust and traffic impacts in the vicinity of Burra village.

The revised configuration enhances local community benefits from the project, involving improving the riparian habitat quality and aesthetic amenity of Burra Creek and village through increased flows in the creek and riparian revegetation works. The modification is also itself a reflection of the project's positive response to community needs and preference.

3 Public submissions related to social impacts

Public exhibition of the EA/Draft EIS raised several submissions related to the social assessment. These submissions are addressed below.

Submission 11
The social assessment does not consider the impact of construction on landholders and the impact of the creation of an easement on affected landholders. Recommends preparation of a new impact statement to assess these impacts and continued consultation with individual stakeholders to prevent any negative social impacts.

Response
Impacts associated with the creation of a permanent easement have been discussed in the land use chapter (chapter 17 of the EA/Draft EIS as well as section 5.1.4 of the social impact assessment). Impacts to land holders have also been considered in relation to amenity impacts of dust, noise, vibration, access and privacy and lifestyle impacts during the construction phase.

Submission 38
Insufficient detail of social impact of increased numbers of people and traffic during construction.

Response
Traffic studies (see chapter 25 of the EA/Draft EIS) undertaken for the project have developed management measures to maintain traffic safety and convenience in the project area. The social impact assessment has further identified the most vulnerable local groups and occasions (related to local equine riders and local social events) for which further consideration would be made in traffic management plans. Similarly, the social impact assessment has anticipated that the operation of a construction workforce in the project area for a period of less than 1.5 years is unlikely to interact with the local community such that it generates significant or enduring social impact.

Submission 38
The social assessment does not reflect the fact that the pipeline would cross both rural and rural residential land. Consultation in developing this assessment has been undertaken on the basis of a “broader user-group scale” and does not address individual impacts. Key stakeholders have been identified in the report, yet the Stakeholder consultation list indicated that no residents affected by the pipeline were consulted in Burra.

Response
The EA/Draft EIS has noted throughout, that the pipeline would cross both rural and rural residential land. The social impact addendum notes that Burra is a ‘rural residential area’. This does not affect the outcome of the social impact assessment.

The social impact assessment has drawn on records of extensive consultations undertaken with local community members and directly affected land holders in Burra. The social assessment drew on the issues raised during these events, and from this individual land holder basis broadened to key stakeholders related to community concerns and social impacts. The social impact assessment has therefore considered issues and impacts facing individual landholders, but for obvious reasons, not specific individuals, and augmented previous project consultations to broader stakeholders to consider other community issues whilst avoiding consultation fatigue.

Submission 38
The social assessment is incomplete as it refers to some details which are either not currently known or finalised.

Response 4
The social impact assessment considers all known and reasonably anticipated aspects of the proposed project’s construction and operation, as is common practice in development proposals.

The limitations (discussed in section 1.5 of the social impact assessment) acknowledges that some impacts depend on final construction methods (eg choice of plant and equipment) which are determined during the detailed construction programming. This is not expected to impact on the results of the social impact assessment.

Submission 38
The social assessment understates the impact of the following aspects on residents:

- noise and impact on health
- inadequate compensation
- visual impacts during and after construction, including loss of trees
- disturbance during construction
- traffic
- dust
- vibration and the impact on buildings

Response
The social impact assessment has considered these issues associated with the project. In addition, these issues have been addressed in other areas of the EA/Draft EIS (Part C of the document).

ACTEW's offer of compensation to affected land-holders has been determined by a valuation methodology in accordance with the Land Acquisition (Just Terms Compensation) Act 1991. This process is currently ongoing, and not appropriate for discussions within an environmental approval document.

Submission 38
Do not agree that Burra/Williamsdale residents would benefit from greater water security in Canberra as stated in the social impact assessment. The negative impacts of this project on these communities have been considerably played down.

Response
The social and economic fabric of Wiliamsdale/Burra is no doubt linked to that of the ACT where water security is fundamental to the economic and social future. The social impact assessment notes that the majority of impacts to Burra/Williamsdale would be minimised through good construction management and that residual impacts are anticipated to be minor and temporary. The revised design further reduces these impacts in Burra, as well as positively responding to local preferences for discharge structure locations.

Submission 34

Concerned about environmental impact on Angle Crossing noting its popularity as a recreational area.

Response

The social impact assessment notes that access to Angle Crossing would be limited during construction, but that during operation the amenity of the site is unlikely to be significantly reduced as visual and noise impacts and safety concerns are not significant. Additionally, the site, although popular for recreation, is already in a highly altered state and thus these minor changes are unlikely to detract from its aesthetic and recreational amenity. Upgrading of facilities at the car park are proposed when construction is complete.