

14 Other environmental issues

This chapter outlines other environmental issues not listed in the Director-General's Requirements (DGRs) and the cumulative impacts of the Project. It also provides further details on the potential impacts of Stage 1 of the Project.

14.1 Socio-economic issues

14.1.1 Potential impacts

Impacts during construction

The Project would be mainly located in agricultural areas, with isolated rural residences. Thus, a relatively small population would be directly affected by the construction of the Project given the extent of the water cycle infrastructure required and location of the Project.

During construction, the Project would create the following socio-economic issues:

- Potential disturbance to surrounding rural residential areas and local businesses.
- Potential disruption of recreational activity at various nearby sites, such as the Googong Foreshores.
- Changed amenity of the area, due to the siting of infrastructure, as well as noise and dust.
- Possible loss of privacy at nearby residences due to the presence of nearby workers.

The majority of socio-economic impacts that may arise during construction are addressed in Chapter 13. They include:

- Traffic and transport impacts (refer to Section 13.1.5).
- Air quality impacts (refer to Section 13.3.4).
- Noise and vibration impacts (refer to Section 13.4.4).
- Hazards and risks (refer to Section 13.5.4).

Impacts during operation

While the Project is operating, there would be a significant transformation of the landscape with the development of the Googong township, including about 5,500 dwellings.

14.1.2 Mitigation and management

Impacts during construction would be short-term and minimised as far as practical by the implementation of consultation and mitigation measures as part of the works.

A comprehensive community engagement and stakeholder management program has commenced and would continue to determine a profile of the project corridor and the surrounding local area. A review of socio-economic issues for the area would be undertaken to more fully assess the impacts of the project. Stakeholder views and community responses are to be considered in the assessment. Consultation with individual landowners would be conducted to minimise impacts on privacy.

14.1.3 Benefits of the Project

The Project would bring many socio-economic benefits to the area, such as about 300 construction jobs, housing, new recreational areas and increased regional water security. Residents in the surrounding areas would benefit from the creation of schools and other community facilities in closer proximity than existing services.

14.2 Utilities and services

14.2.1 Potential impacts

The Project has the capacity to impact upon other utilities, services and infrastructure in the area, during construction and operation. This is primarily through the risk of interacting with existing services, causing interruptions to supply for other areas. Existing utilities and services within and adjacent to the study area have been identified.

14.2.2 Mitigation and management

Existing utilities and services within and adjacent to the study area would be noted within the construction environmental management plan (CEMP) and other construction documentation so that potential impacts could be avoided or managed during construction work.

An ongoing communication and consultation program is being implemented to ensure that local service providers and utilities are involved in the planning process. This is particularly relevant for ACTEW and Country Energy, with regards to the existing Googong water treatment plant (WTP) and associated water supply pipeline, as well as the overhead electricity supply lines in the area.

The CEMP and operational environmental management plan (OEMP) would outline procedures for managing existing utilities and services during construction and operation.

14.2.3 Benefits of the Project

The Project would create a new node for services in the region, which would facilitate the provision of better service for local communities.

14.3 Greenhouse gas emissions and climate change

14.3.1 Potential impacts

Greenhouse gas emissions would be produced from a variety of sources during construction and operation of the Project. These sources would include emissions from production of energy used in building the required infrastructure, and emissions from electricity used to operate aspects of the Project, such as the pumps.

Emissions during construction

Construction of the Project would produce greenhouse gas emissions from:

- Heavy and light vehicles, plant and equipment.
- The manufacture of project materials, such as pipes.

Emissions during operations

The concept design report provides a high level of detail regarding the electricity demand and use of key water cycle infrastructure (refer to Section 7.1 of Appendix B). For Stage 1 of the Project, the maximum electrical demands are shown in Table 14.1. The figures shown are maximum values that include a 30 per cent contingency and relate to the demand of the specific equipment used. The Googong township development would be staged and energy use would gradually increase over time

Table 14.1 Maximum electrical demands – Stage 1 of the Project

Item	Electrical demand (kVA)
Water recycling plant	1,171
Interim reservoirs	69
Sewage pumping station SPS1	69
Sewage pumping station SPS2	112
Bulk water pumping station	87

Operation of the Project would produce greenhouse gas emissions from:

- Energy consumption as a result of the operation and maintenance of the Project (eg sewage pumping stations, the water recycling plant, pumps, and all other water cycle infrastructure). Appendix B details the estimated energy use of key aspects of water cycle infrastructure.
- Use of heavy and light vehicles, and plant equipment.

Potential impacts of climate change

Potential impacts of climate change on the Project include:

- Changes in water demand and supply, due to changing climatic conditions. These could affect the predicted water balance outcomes of the Project.
- Increased risk of extreme weather conditions, such as heat waves, with the potential to affect infrastructure.

14.3.2 Mitigation and management

The Project fits within the overall sustainability strategy for the Googong township, which would include energy efficiency measures and other greenhouse gas abatement initiatives. Although specific actions are yet to be finalised, CIC is investigating the use of solar energy throughout the Googong township and is consulting with Country Energy regarding other renewable energy sources that may be available to the Googong township. Proposed mitigation measures are outlined below.

Mitigation measures during construction

Mitigation measures during construction would include:

- The adequate maintenance and proper use of all vehicles and machinery to minimise energy use and greenhouse gas emissions.
- The use of fuel-efficient and low-emission vehicles as practicable.
- The re-use of on-site (excavated) materials where materials are suitable and their re-use feasible.
- The use of low greenhouse intensity materials rather than conventional materials where appropriate.
- The use of locally sourced materials where feasible.

Mitigation measures during operation

Energy use and climate change management strategies for the concept plan include:

- The re-use of materials on site and off site; and recycling.
- Overall commitment to energy efficiency and sustainability throughout the Googong township.
- Sizing pumps and other infrastructure appropriately for each stage as the development of the Googong township progresses.
- Use of SCADA and telemetry during operation to minimise wastage of electricity.
- Use of fuel-efficient and low-emission vehicles where practical.
- A management strategy, which would be implemented to maximise the energy efficiency of plant and equipment.
- The implementation of climate change adaptation strategies to lessen impacts on future residents.

14.3.3 Benefits of the Project

The operation of an integrated water cycle management system would be a benefit to the community in times of high water demand and drought conditions. It would also provide an independent water supply and storage for use during emergencies, such as major bushfires.

14.4 Cumulative impacts

14.4.1 Current and future projects in the region

Road projects

There are two road proposals in the region related to the Googong Township proposal. Both projects are located north of the study area and would be undertaken by Queanbeyan City Council (QCC). They are:

- The upgrade of Old Cooma Road. The proposal involves the widening, realignment and deviation of Old Cooma Road to upgrade to a four-lane, dual carriageway between the intersection with the future Edwin Land Parkway at Karabar, and the intersection with Googong Dam Road at Googong. Construction works are proposed in three stages, with the final stage (duplication of the road) due for completion around 2027.
- Edwin Land Parkway Extension. The proposal involves the construction of a new two-lane single carriageway road that would link Jerrabomberra to Old Cooma Road, Karabar. This road would extend from the existing termination point of Edwin Land Parkway located at the roundabout on Numeralia/Stringybark Drive in Jerrabomberra and connect through to Old Cooma Road just south of Candlebark Road past Barracks Creek Bridge in Karabar.

The potential environmental impacts of the road upgrades have been separately assessed. The Old Cooma Road upgrade is being facilitated by CIC to ensure a coordinated timeframe for the Googong township staging and the roadworks.

Water projects

In addition, two projects for the ACTEW Water Security Program are located near the Googong township. These projects are:

- The Murrumbidgee to Googong Water Transfer (proposed). The project involves transferring up to 100 megalitres of water per day from the Murrumbidgee River through a 12km underground pipeline to Burra Creek in NSW. The water would then flow about 13 km down Burra Creek into Googong Reservoir.
- Googong Dam Spillway Upgrade (in progress). The project involves remediation work for the spillway including repairing eroded sections and extending the spillway walls to improve flooding capacity.

Potential cumulative traffic impacts of the Project and the spillway upgrade works are addressed in Section 13.1.4.

Residential development

The expansion of Queanbeyan to accommodate the predicted population growth of the region would occur in several areas. Cumulative impacts of the approved, proposed and future developments would be considered by QCC and State and Commonwealth agencies, both in terms of the overall urban planning for the region and as each project progresses.

Other projects

In addition to the above projects and proposals, there is a quarry to the north of the study area, off Old Cooma Road (to the west). There is unlikely to be any cumulative impact associated with the Project and the quarry.

14.4.2 Consequential impacts of the Project

The Project facilitates the development of the Googong township, which will have impacts on the study area. The majority of these potential impacts were considered during the local environmental study in 2004 and have been subsequently addressed by the recent approval of the rezoning of the land. As each neighbourhood of the Googong township is developed, development applications would be prepared, which would address the impacts of each subdivision stage under Part 4 of the EP&A Act.

The general impacts of the creation of a township at Googong have been considered as part of the planning for the Sydney–Canberra corridor region and the greater Queanbeyan area (refer to Chapter 2).

Consequential impacts of the project also include the potential changes to the recreational uses of Googong Foreshores, due to the increased local population adjacent to the Foreshores. It is unclear what these changes may be (if any), but the relevant land managers of the Googong Foreshores should monitor any changes as the development of the Googong township progresses. In particular, the recreational facilities within the Googong township will be extensive, so it is difficult to predict the level of recreational use of the Googong Foreshores by future residents. Appropriate management measures could then be implemented, particularly at the existing gate on Googong Dam Road. Although it is unlikely that the Project would facilitate any negative impacts on the Googong Foreshores, the ACT and/or Commonwealth governments could restrict access to the Foreshores or impose other management measures on the Commonwealth land. A referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and consultation with the Department of Environment, Water, Heritage and the Arts is being undertaken to address these potential consequential impacts.

14.5 Conclusions

In general, the Project would not have significant impacts on the issues addressed in this chapter. Many potential issues, particularly associated with greenhouse gas emissions and utilities and services, would be adequately addressed through the implementation of environmental management plans for construction and operation.

The cumulative impacts of the Project would generally be positive.