



**Determination Report
Old Cooma Road
Realignment
Queanbeyan City Council**

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Executive summary

This Determination Report has been prepared to assist Queanbeyan City Council in its consideration of the proposed realignment and duplication of a section of Old Cooma Road. This report:

- provides an overview of the Proposal as described in the Review of Environmental Factors (REF) prepared by David Hogg Pty Ltd, December 2010
- confirms the statutory process applicable to the determination of the Proposal
- considers the issues raised in representations (submissions) and Council's responses
- documents and considers additional information that has bearing on the determination of the Proposal
- develops recommended approval conditions as considered appropriate for adoption by Council should it resolve to proceed with the Proposal.

It should be noted that the REF contains information on impact mitigation measures and management strategies to be implemented to ameliorate the impacts of the Proposal. These are addressed through recommended approval condition 1, as detailed below. It is intended that these measures and strategies are augmented by a number of additional approval conditions to provide additional certainty with respect to the mitigation and management of specific issues. These recommended approval conditions are described below, as well as in Section 6.2. These are based on Aurecon's consideration of the representations made to Council as a result of exhibition of the REF and information provided by Council during preparation of this Determination Report.

Recommended approval conditions

General

1. Except as expressly provided by the conditions below, Old Cooma Road realignment and duplication (Stage 1 and the ultimate duplication) shall be designed, constructed and operated in accordance with:
 - i) the REF Report for Old Cooma Road, dated December 2010, prepared for Queanbeyan City Council by David Hogg Pty Ltd
 - ii) all identified procedures, safeguards and mitigation measures identified in the REF except where amended in this Determination Report
 - iii) conditions of approval identified in this Determination Report.
2. These conditions do not relieve Council of the obligation to obtain all other necessary approvals, licences or permits required under any other Act. Without affecting the generality of the foregoing, Council shall comply with the terms and conditions of such approvals, licences and permits.
3. Council must review the REF and further mitigate and manage any additional impacts associated with the ultimate duplication when the decision is made to construct the duplication.

Construction environmental management plan

4. Prior to the commencement of construction works (including site establishment works preceding commencement of substantial construction), Council shall prepare, or have the contractor prepare, a construction environmental management plan (CEMP). The plan shall be prepared in consultation with relevant government agencies and public authorities, and any other relevant party. The plan shall be prepared in accordance with these approval conditions, the relevant recommended mitigation measures listed in the REF (including supporting documentation), all relevant Acts and Regulations, and accepted environmental management best practice.
5. The CEMP shall address, but not be limited to, the following matters:

- i) consultation requirements with relevant government agencies, public authorities and other stakeholders
 - ii) specific environmental management objectives and strategies for the main environmental management elements and include, but not be limited to: water quality, noise and vibration; air quality; erosion and sedimentation; waste/ resource management; biodiversity; weed control; geotechnical issues; traffic and access; visual screening, landscaping and rehabilitation; hazards and risks and sustainability
 - iii) identification of the statutory and other obligations which Council is required to fulfil during construction including all approvals and consultation required from authorities and other stakeholders, and key legislation and policies which control construction of the Proposal
 - iv) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to the CEMP
 - v) measures to avoid and/or control the occurrence of environmental impacts
 - vi) take into consideration the provisions of the biodiversity strategy for the project
 - vii) environmental management procedures for all construction processes which are important for the quality of the environment in respect of permanent and/or temporary works
 - viii) monitoring, inspection, and test plans for activities and environmental qualities which are important to the environmental management of the Proposal including performance criteria, specific tests, protocols (eg frequency and location) and procedures to follow
 - ix) steps Council intends to take to ensure that all plans and procedures listed in the CEMP are being complied with.
6. The CEMP shall be made publicly available.
7. Construction personnel shall be inducted as to the requirements of the CEMP.

Community notification

- 8. Throughout the construction phase, Council shall keep the local community informed of the progress of the Proposal including any traffic disruptions and controls, construction of temporary detours and changes to local accesses.
- 9. Where construction work is required to be undertaken outside of standard working hours (7am to 5pm Monday to Saturday), Council shall, where practicable, provide prior notification to affected residents. In the event of emergencies where this is not possible, notification shall be provided as soon as practicable.
- 10. Prior to the commencement of construction works, Council shall establish and publicly advertise a contact telephone number to operate for the duration of the construction period, to allow any member of the public to make a complaint or comment, or to seek information about the construction works. The contact telephone number shall be staffed during normal business hours. An initial response to any complaints received shall be provided within two working days and, where required, a more detailed response within 10 working days.
- 11. Details of any complaints received in relation to the Proposal shall be recorded on Council's complaints register.

Traffic and access

- 12. Consultation with relevant bus companies shall be undertaken to understand their requirements. If applicable, the results of this consultation shall be used to refine the detailed design to facilitate the safe operation of these services.
- 13. Access arrangements for properties with insufficient sight lines shall be resolved during detailed design and in consultation with the affected property owners. Should any environmental impacts (such as vegetation removal) result from the solution, this shall be documented. Measures provided in the REF and these conditions of approval shall be reviewed to confirm whether any

additional mitigation or management measures would be required. The offset plan shall also be reviewed to ensure that it would cover any additional vegetation removal that may result.

14. Traffic monitoring of traffic volumes and level of service at intersections shall be undertaken at regular intervals once Stage 1 is opened to traffic to identify when Old Cooma Road should be duplicated as described in the ultimate duplication.

Noise and vibration

15. A revised assessment and mitigation strategy (including the provision of additional noise walls) shall be undertaken as part of the detailed design. This assessment shall also review and if necessary refine the noise model inputs (such as traffic levels and the design).
16. In finalising the height of the noise barriers, it shall be confirmed that adequate consideration has been given to noise emissions from the exhausts of heavy vehicles.
17. A construction noise management plan shall be prepared by Council to form part of the CEMP which identifies practical and cost-effective noise abatement measures to be implemented. As far as practicable, the plan shall be consistent with the Department of Environment, Climate Change and Water's (DECCW) *Interim Construction Noise Guidelines*.
18. Once Stage 1 has been opened to traffic, noise monitoring shall be undertaken to confirm the noise levels predicted in the noise assessment undertaken as part of the REF and the efficacy of noise walls. If noise levels are higher than those modelled as part of the REF, additional noise walls or alternative noise abatement measures shall be considered.

Biodiversity

19. During detailed design, the option of locating the trunk services shared trench closer to the final design footprint shall be considered to minimise the need for vegetation removal and edge effects on areas of vegetation.
20. Prior to the construction of the road sections, pre-clearing fauna surveys should be undertaken to inspect rock habitats and any hollow bearing trees likely to be disturbed.
 - i) If threatened fauna are found, these should be relocated in consultation with DECCW
 - ii) Other (non-threatened) fauna are to be located to the nearest suitable habitat outside the impact zone
 - iii) During tree removal a suitably qualified person will be present at to rescue, relocate and rehabilitate fauna that may be disturbed by the process.
21. Temporary fencing shall be erected prior to the removal of any vegetation. As noted in Section 5 of the SIS, the fencing should be robust and easily visible, but not placed in a way to restrict animal movement through remnant vegetation areas.
22. Regular inspections shall be undertaken by Council during clearing activities to monitor compliance with fencing and vegetation clearing.
23. Final design of the underpasses shall be undertaken in consultation with DECCW, and consideration shall be given to increasing the number of underpasses where large areas of vegetation occur either side of the road, either through dedicated fauna underpasses or combining underpasses with proposed drainage structures.
24. Finalisation of the biodiversity offsets associated with the Proposal shall be consistent with DECCW's principles for the use of biodiversity offsets in New South Wales (NSW). This shall include appropriate consultation with DECCW.
25. Detailed design of lighting shall minimise light spill beyond the roadway outside of built up areas.
26. Ongoing management of Old Cooma Road shall include appropriate attention to weed management, particularly for the section adjacent to native vegetation.

Drainage impacts

27. As part of the CEMP, an erosion and soil management plan shall be compiled in accordance with the Landcom guidelines Managing Urban Stormwater- soils and construction Volume 2D Main Road Construction (DECC, 2008). The plan shall be prepared in consultation with relevant stakeholders. It shall provide full details of all pollution control measures to be undertaken during construction.
28. During construction, regular inspections by Council of erosion and sedimentation control devices shall be undertaken to ensure that the most appropriate controls are being implemented and that they are being maintained in an effective condition at all times.
29. Any complaints from surrounding residences that the realignment of Old Cooma Road has resulted in flooding or drainage impacts to private property are to be investigated.

Sustainability

30. Detailed design shall consider opportunities to incorporate energy saving features into Proposal components, subject to compliance with applicable design and safety standards.

Explanation of acronyms and terms used in recommended approval conditions

- CEMP: construction environmental management plan
- Council: Queanbeyan City Council (or its authorised agent)
- DECCW: Department of Environment, Climate Change and Water
- (the) Proposal: Old Cooma Road proposed realignment and duplication

1. Introduction

1.1 Background to the Proposal

By 2031 the proposed new residential development at Googong is expected to accommodate approximately 16,000 people and consist of 5,550 new households, a town centre and a business centre. This is expected to result in increased traffic movements along Old Cooma Road between Googong and Queanbeyan. The current Old Cooma Road is a two lane narrow winding road. Upgrading this road is required as this route forms a key part of the regional transport corridor.

The Old Cooma Road upgrade (the Proposal) consists of duplication and realignment of the existing Old Cooma Road between a point 400 metres south of the intersection with the proposed Edwin Land Parkway at Karabar and the intersection with Googong Road at Googong. The Proposal also includes the decommissioning and rehabilitation of sections of road that would no longer be functional. This would include the north eastern section of the existing Old Cooma Road (from the Heights Road intersection to the existing access of the quarry), section of road between the quarry entrance and the Talpa Road area and the section of Tempe Crescent between the current egress point and Heights Road.

The Old Cooma Road realignment would be undertaken in two parts: Stage 1 and the ultimate duplication.

- Stage 1 involves the construction of new section of road approximately 1.5 kilometres in length, and the construction of a trunk services shared trench (extending for the entire Proposal length).
- The ultimate duplication is for the eventual duplication of Old Cooma Road to a four lane dual carriageway.

1.2 Purpose of this report

The Review of Environmental Factors (REF) for the Old Cooma Road Realignment Proposal prepared by David Hogg Environmental Consultants (December 2010) indicates that the assessment of the Proposal falls entirely under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). As such, Queanbeyan City Council is the proponent for the Proposal as well as the determining authority.

In order to maintain transparency in the approval process, Council engaged Aurecon Australia Pty Ltd to undertake an independent determination of the Proposal. This included developing recommended conditions of approval as considered appropriate for the Proposal.

This report has been prepared by Cormac Farrell and Lucia Coletta, and verified by Mike Luger. Cormac is Aurecon's ACT Environment Leader and has over 10 years of professional experience in environmental risk assessment and environmental management in the public and private sectors. Lucia is an environmental planner in Aurecon's Environment sub-sector. She has over six years professional experience writing planning approval documents and reviewing third party submissions to environmental impact assessments. Mike Luger is a Principal Environmental Scientist with over 18 years of experience in environmental assessment and management.

This Determination Report will assist Council in its consideration of the Proposal. The report has the following specific objectives:

- to provide an overview of the Proposal as described in the REF, and to confirm the statutory process applicable to the determination of the Proposal
- to provide consideration of the issues raised in representations (submissions) and Council's responses
- to document and consider additional information which has bearing on the determination of the Proposal

- to develop recommended conditions of approval as considered appropriate for adoption by Council should it resolve to proceed with the Proposal.

1.3 Structure of this report

This Determination Report has been structured as follows:

- Section 1 provides a discussion on the background to the Proposal and purpose of the Determination Report
- Section 2 reviews the statutory approvals process as described in the REF and makes clarifications and comment as considered appropriate
- Section 3 provides a description of the Proposal as provided in the REF together with consideration of the 'do nothing' option, and sustainability and climate change
- Section 4 provides a discussion of the representations made following the public exhibition of the REF and identifies key issues for consideration in the Determination Report
- Section 5 provides a detailed consideration of the substantive issues associated with the Proposal
- Section 6 provides a conclusion as to the adequacy of the assessment together with recommended conditions of approval for consideration by Council in its determination of the Proposal.

2. Statutory approvals process

As noted in Section 1 of this report, the Proposal is considered to fall under Part 5 of the EP&A Act. The statutory requirements relating to the proposed works are discussed in Section 5 of the REF. The following section reviews the statutory approvals process as described in the REF and provides comment where considered appropriate.

2.1 Local environmental planning instruments

There are three Local Environmental Plans (LEPs) in force in the Queanbeyan LGA (local government area) - the *Queanbeyan Local Environmental Plan 1998*, *Queanbeyan (Googong) Local Environmental Plan 2009* and *Yarrowlumla Local Environmental Plan 2002*. The REF identified that the works associated with the Proposal fall within the area covered by the Queanbeyan LEP, while land adjoining the Proposal to the east is covered by the Yarrowlumla LEP.

However, two parcels of land adjoining the Proposal to the east are zoned under the Queanbeyan (Googong) LEP. This LEP repealed the Yarrowlumla LEP which had previously zoned the land.

2.1.1 Queanbeyan Local Environmental Plan 1998

The REF indicates that the vast majority of Old Cooma Road falls within a designated road corridor and that the land is zoned 1(a) Rural A. However, as the footprint of the Proposal is larger than the existing road easement, other zonings which are directly affected in the Queanbeyan LEP include 1(c) Rural C, 7(a) Environmental Protection and 7(b) Environmental Protection.

While not mentioned in the REF, the Old Cooma Road falls under 'roads' which is permissible with consent in all of the above mentioned zonings. Clause 6A of the LEP provides that development listed in Schedule 1 to the Environmental Planning and Assessment Model Provisions 1980 (such as public utility undertakings – road transport, under which the Proposal would fall) are permissible without consent. It is noted that the Environmental Planning and Assessment Model Provisions have been repealed.

2.1.2 Queanbeyan (Googong) Local Environmental Plan 2009

Two parcels of land adjacent to the Proposal to the east are zoned as R5 Large Lot Residential. It is not confirmed whether these parcels of land would be affected by the Proposal.

The Proposal falls under the definition of "roads" in the LEP and therefore, the Proposal is permissible without consent.

2.1.3 Yarrowlumla Local Environmental Plan 2002

The Proposal would affect land zoned under the Yarrowlumla LEP. Zonings affected are 1(d) Rural residential and 1(a) General Rural of the Yarrowlumla LEP.

The Proposal falls under the definition of "roads" in the LEP and therefore, the Proposal is permissible with consent within these zonings.

2.2 State Environmental Planning Policies

2.2.1 SEPP (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 ('the Infrastructure SEPP') aims to provide a consistent planning regime under the EP&A Act for the effective delivery of infrastructure.

Section 5.1.2 of the REF states that under clause 94(1) of the Infrastructure SEPP, development on any land for the purpose of a road or road infrastructure facilities is permitted to be carried out by or on

behalf of a public authority without consent. The Proposal satisfies the conditions of this clause and therefore the assessment can therefore be undertaken under Part 5 of the EP&A Act.

Clause 94(2) of the Infrastructure SEPP includes the following activities within the definition of road infrastructure facilities:

- (a) construction works (whether or not in a heritage conservation area), including:
 - i) temporary buildings or facilities for the management of construction, if they are in or adjacent to a road corridor,
 - ii) creation of embankments,
 - iii) extraction of extractive materials and stockpiling of those materials, if:
 - (a) the extraction and stockpiling are ancillary to road construction, or
 - (b) the materials are used solely for road construction and the extraction and stockpiling take place in or adjacent to a road corridor,
 - iv) temporary crushing or concrete batching plants, if they are used solely for road construction and are on or adjacent to a road corridor, and
 - v) temporary roads that are used solely during road construction,
- (b) emergency works, or routine maintenance works, carried out on an existing public road or on land that is adjacent to such a road (including on land to which *State Environmental Planning Policy No 14—Coastal Wetlands* or *State Environmental Planning Policy No 26—Littoral Rainforests* applies but, if they are on such land, only if any adverse effect on the land is restricted to the minimum possible to allow the works to be carried out),
- (c) alterations or additions to an existing road (such as widening, duplication or reconstruction of lanes, changing the alignment or strengthening of the road),
- (d) environmental management works, if the works are in or adjacent to a road corridor.

All elements of the construction of the Proposal (Section 4 of the REF) are contained within the definition of road infrastructure facilities and as such, also fall under Clause 94 of the EP&A Act.

In summary, the Proposal is considered a class of development which falls under the Infrastructure SEPP, which prevails over the relevant LEPs and constitutes an 'activity' that falls under Part 5 of the EP&A Act.

2.2.2 Other SEPPs

There are no other SEPPs applicable to the Old Cooma Road Realignment.

2.3 Assessment under Part 5 of the EP&A Act

Section 5A of the EP&A Act identifies what matters must be taken into account in deciding whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats. Pursuant to Section 111 of the EP&A Act, a determining authority must 'examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity'.

Section 5.1.2 of the REF indicates that it has been prepared in accordance with Clause 228 of the EP&A Regulation. This includes (Section 111(2)) consideration of the effects of an activity on:

- any conservation agreement entered into under the National Parks and Wildlife Act 1974 and applying to the whole or part of the land to which the activity relates
- any plan of management adopted under that Act for the conservation area to which the agreement relates

- any joint management agreement entered into under the Threatened Species Conservation Act 1995
- any biobanking agreement entered into under Part 7A of the Threatened Species Conservation Act 1995 that applies to the whole or part of the land to which the activity relates.

The REF does not explicitly state whether there would be any effect on any of the above matters. However, with reference to the DECCW website¹, it is noted that the Old Cooma Road Realignment does not affect any conservation areas. There are also no registered biobanking agreements in the Queanbeyan LGA.

Section 111(3) of the Act requires consideration of the effect of an activity on any wilderness area (within the meaning of the Wilderness Act 1987) in the locality in which the activity is intended to be carried on. While the REF does not explicitly state whether there would be any effect on any wilderness area, it is noted that the DECCW website includes a page² which makes reference to parks and reserves in NSW that contain such wilderness areas. None are in the immediate vicinity of the Old Cooma Road Realignment.

Section 111(4) requires consideration of the effect of an activity on:

- critical habitat
- in the case of threatened species, populations and ecological communities, and their habitats, whether there is likely to be a significant effect on those species, populations or ecological communities, or those habitats
- any other protected fauna or protected native plants within the meaning of the National Parks and Wildlife Act 1974.

Section 5.1.2 of the REF indicates that the previous flora and fauna assessment of the impact of the Proposal found that there would be a significant impact on threatened species listed under the TSC Act. As such, a Species Impact Statement (SIS) was prepared and included as an appendix to the REF.

Under Section 111(4) of the Act, this Section, a determining authority must consider the likely significance of impacts associated with the proposed activity. Under Section 112, where impacts would likely be significant, an Environmental Impact Statement (EIS) must be prepared and all the related statutory requirements observed. Section 112(1B) provides that if an activity is on land that is or is part of a critical habitat, or is likely to significantly affect threatened species, populations or ecological communities, or their habitats, an SIS or an EIS including an SIS needs to be prepared.

As noted, the REF includes an SIS which addresses the impacts that the Proposal would have on species and ecological communities listed under the TSC Act.

Under Section 112(1C), an environmental impact statement is not required in respect of an activity that:

- (a) is on land that is, or is part of, critical habitat, or is likely to significantly affect threatened species, populations or ecological communities, or their habitats, and
- (b) is not likely to significantly affect the environment except as described in paragraph (a), if the determining authority has obtained or been furnished with a species impact statement in respect of the activity, prepared in accordance with Division 2 of Part 6 of the Threatened Species Conservation Act 1995. However, the provisions of this Part relating to environmental impact statements (other than subsection (1) (a) (i)) apply to the species impact statement as if references to an environmental impact statement included a reference to the species impact statement.

¹ <http://www.environment.nsw.gov.au/nationalparks/parktypes.aspx?type=stateconservationarea>

² <http://www.environment.nsw.gov.au/parktypes/WildernessViewByRegion.htm>

As such, as an SIS has been produced for the REF and the Proposal is not likely to cause a significant impact on any other factor of the environment (Section 5.1.2 of the REF), an EIS is not required.

Clause 228 of the EP&A Regulation identifies certain matters which a proponent of an activity must take into account when considering the impact of the activity on the environment where no specific guidelines relating to the proposed activity are in force. Section 24 of the REF documents provides consideration of the clause 228 factors. These have been reviewed and considered in conjunction with other information provided in the REF and subsequently in relation to clarification of specific matters including, where relevant, reference to information requested from and provided by the applicant. Reference to this table has been made with regard to forming a view on determination of the Proposal.

As part of the determination process, Council invited public comment on the proposed activity, including its environmental impacts. There is no statutory requirement for Council to do this.

It is noted that the REF provides an account of the development of the Proposal including consultation undertaken with stakeholders.

In making its determination (ie its decision on whether to approve the Proposal in terms of its decision-making role under Part 5 of the EP&A Act), it is therefore anticipated that Council would make its decision based on:

- the assessment undertaken in the REF together with the identified impact mitigation measures
- consideration of the substantive issues raised in representations
- the recommended conditions of approval provided in this Determination Report.

Aurecon's recommendations with respect to determination of the Proposal are provided in Section 6.2 of this report.

2.4 Commonwealth legislative requirements

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) specifies that approval from the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities is required if a Proposal is likely to have a significant effect on a matter of national environmental significance (NES).

The EPBC Act currently identifies the following NES matters, namely:

- World Heritage properties
- National Heritage places
- wetlands of international importance (Ramsar wetlands)
- Commonwealth listed species and ecological communities
- Commonwealth listed migratory species
- Commonwealth marine areas
- nuclear actions.

The EPBC Act also provides that approval from the Minister is required for:

- an action on Commonwealth land that has, will have, or is likely to have a significant impact on the environment
- an action outside Commonwealth land that has, will have or is likely to have a significant impact on the environment on Commonwealth land
- an action undertaken by the Commonwealth which has, will have or is likely to have a significant impact on the environment anywhere in the world.

Section 24.3 of the REF considers the requirements of the EPBC Act by way of undertaking a review of NES matters. The REF identifies that due to potentially significant impacts to the endangered plant species hoary sunray, and the critically endangered ecological community White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and derived native grasslands; a referral was prepared and

submitted to the Department of Environment, Water, Heritage and the Arts (now the Department for Sustainability, Environment, Water, Population and Communities) in October 2010.

The studies showed that the Proposal would not have a significant impact on the identified ecological issues. The referral process deemed the Proposal not a controlled action and as such, no further assessment or approval is required under the EPBC Act.

3. Description of the Proposal

3.1 Need and objectives

The need for the Proposal results from the decision to release land at Googong for the construction of residential development. Over the next 20 years, Googong is proposed to accommodate 16,000 people, 5,550 new homes and a town and business centre.

A recent transport study (Gabites Porter; 2009) identified that Old Cooma Road would be placed under stress due to the Googong development. By 2031, Old Cooma Road would experience an increase in 4,404 vehicles during the AM/PM peak.

As part of the Googong development, Queanbeyan City Council made a commitment to improve road access between Googong and Queanbeyan including the upgrade of Old Cooma Road.

The *Queanbeyan City Council Residential and Economic Strategy 2031* identified the realignment and duplication of Old Cooma Road as a priority transport issue for Queanbeyan, to be constructed by 2030.

Stage 1 of the Proposal is required to improve the existing narrow winding road. The ultimate duplication is required to cater for the expected increase in traffic between Googong and Queanbeyan in approximately 20-25 years.

3.2 Consequences of not proceeding

Should the Proposal not proceed, the REF indicates that:

- The residential areas of Googong would remain poorly connected to Queanbeyan CBD and schools
- Traffic congestion would increase particularly in the vicinity of Cooma Road Quarry resulting in increasing delays to traffic during peak periods.

3.3 Proposed works as described in the REF

The Proposal would include the realignment of Old Cooma Road for a distance of approximately 4.5 kilometres between the proposed intersection of Edwin Land Parkway and Googong Road, Googong.

The general features of the Proposal as described in the REF comprise:

- Stage 1: construction of a new section of road approximately 1.5 kilometres in length, a trunk services shared trench would be constructed and extend for the entire ultimate duplication length (from the proposed Edwin Land Parkway and Googong Dam Road). Stage 1 would then consist of a two lane carriageway southbound and a single carriageway northbound.
- Ultimate duplication: duplication of the entire 4.5 km length between the proposed Edwin Land Parkway and Googong Dam Road to form a four-lane dual carriageway and provision of a shared bicycle and pedestrian pathway
- Works would also consist of:
 - Earthworks associated with the ultimate duplication (undertaken as part of Stage 1)
 - Changes to local access including to Cooma Road Quarry, Tempe Crescent, Heights Road and Talpa Road (undertaken as part of Stage 1)
 - Construction of appropriate drainage and stormwater systems (undertaken as part of Stage 1 and the ultimate duplication)
 - relocation of existing 11kV and 66kV overhead electricity lines, underground telecommunications cable, optical fibre lines and gas mains where required (undertaken as part of Stage 1)
 - rehabilitation of unused portions of road (including the existing Old Cooma Road, south of the quarry entrance) (undertaken as part of Stage 1)

- landscaping, primarily with grasses and trees (undertaken as part of Stage 1 and the ultimate duplication)
- street lighting (undertaken as part of Stage 1)
- installation of sound attenuation structures (undertaken as part of Stage 1)
- provision of appropriately located fauna underpasses (undertaken as part of Stage 1 and the ultimate duplication)
- fencing (undertaken as part of Stage 1)
- establishment of temporary stabilised access and works areas (undertaken as part of Stage 1 and the ultimate duplication)

The REF indicates that two design scenarios were addressed:

- an interim arrangement (Stage 1) consisting of the realignment of Old Cooma Road from north of Tempe Crescent to the intersection with Talpa Road and constructing a two lane carriageway southbound and a single lane carriageway northbound.
- the ultimate duplication which would consist of duplicating Old Cooma Road to a four-lane dual carriageway. The ultimate duplication would not be constructed until approximately 2030.

The REF makes note that most of the environmental studies have taken into consideration both stages of the Proposal. However, it also notes that due to the time delay in the construction of the ultimate duplication, there may be some changes in the environmental surrounds, legislative context or road construction technologies in the intervening period. This provides a level of uncertainty that should be addressed at the time that the ultimate duplication is considered.

4. Summary of issues raised in representations and review of the REF

4.1 Requirement for representations and representations received

Where the environmental assessment undertaken under Part 5 of the EP&A does not take the form of an EIS, there is no statutory obligation for a proponent to publicly exhibit the assessment. While a proponent may invite comment (referred to as representations under Part 5), there is no statutory requirement for a determining authority to take any such comments into consideration when determining a proposed activity. Similarly, there are no specific requirements related to public notification.

Despite the lack of a statutory requirement, Council appear to have undertaken adequate and responsible public notification. Thirty five representations in total were received; the majority from individual community members. All representations have been considered in this report. The identities of the individual community members have not been provided in this report due to privacy legislation requirements.

4.2 Issues raised in representations

All representations have been reviewed and individual issues identified. Issues raised have been categorised into six groups as follows:

- traffic and access (traffic volumes and heavy vehicle volumes along Old Cooma Road, access to local roads off Old Cooma Road, speed limit, pedestrian and cyclist path and bus impacts)
- noise and vibration (assessment undertaken, noise walls)
- biodiversity (removal of vegetation, fauna impacts and movement and the offset strategy)
- amenity (including air quality, property values)
- drainage impacts (including erosion and private property drainage issues)
- sustainability.

The following sections are restricted to issues that were considered substantive and specifically related to the determination of the Proposal. Accordingly, it does not include matters essentially considered to be a general comment or observation on the part of the author of the representation. A more detailed assessment of these issues raised in the representations is provided in Section 5.

In order to portray the issues as accurately as possible, wherever possible, the wording from the representations has been used in Section 5 to avoid the risk of omitting pertinent details.

4.3 Issues arising from Aurecon's review of the REF

In addition to the issues raised in representations, it was considered that the following issues were of particular relevance to the determination of the Proposal:

- environmental management during construction
- the effective engagement of the community, particularly those residents directly affected by construction activities
- staging of Old Cooma Road ultimate duplication.

Consideration of these issues is provided in the following sections.

5. Evaluation of issues

5.1 General

While the REF assessment and therefore the determination covers the ultimate duplication, ie four lane dual carriageways, initial construction would be limited to the Stage 1 arrangement of the two-lane southbound carriageway and one lane northbound carriageway. This is expected to be adequate to address the short-term growth in traffic.

However, the conditions in this report do not relieve Council of the obligation to revisit the assessment of impacts associated with the ultimate duplication at the time of any decision to construct the ultimate duplication. In other words, while the current assessment provides a certain level of information, it would still be necessary to consider relevant matters at that time, such as legislative changes relating to threatened species for example. As such, a specific approval condition (3) has been compiled to address this issue.

5.2 Environmental management during construction

Consideration of issues

The REF provides a substantial number of recommendations relating to mitigation of impacts associated with the construction (and operation) of the Proposal, particularly in Chapters 8 to 22. Chapter 23, which addresses environmental management, indicates that the mitigation measures identified in the previous chapters relating to construction would be consolidated into a project specific construction environmental management plan (CEMP) that would be prepared by the construction contractor, following appointment.

Preparation and implementation of a CEMP is strongly supported. It is important however, that this be undertaken in a holistic and coordinated manner, and within a structured framework. While Chapter 23 identifies the key elements that would be included within the CEMP, it is important that these are explicitly addressed in the conditions of approval. The condition of approval relating to the CEMP recommends an outcome (performance) based approach to provide flexibility in attaining a satisfactory level of performance.

It is appropriate that carriage of preparation and implementation of the CEMP be assigned to the construction contractor as the party who will have direct control over the work site. It should be noted, however, that Council as the approval holder, would ultimately be responsible for compliance with the approval conditions. It is assumed therefore that Council would implement appropriate mechanisms to ensure ongoing satisfactory compliance by the contractor.

It is important that the community has access to the CEMP to better understand how specific environmental aspects are being managed, particularly those community members directly affected by construction activities. It is considered appropriate that the CEMP be made publicly available.

Recommended approval conditions

- Prior to the commencement of construction works (including site establishment works preceding commencement of substantial construction), Council shall prepare, or have the contractor prepare, a construction environmental management plan (CEMP). The plan shall be prepared in consultation with relevant government agencies and public authorities, and any other relevant party. The plan shall be prepared in accordance with these approval conditions, the relevant recommended mitigation measures listed in the REF (including supporting documentation), all relevant Acts and Regulations, and accepted environmental management best practice.
- The CEMP shall address, but not be limited to, the following matters:

- consultation requirements with relevant government agencies, public authorities and other stakeholders
 - specific environmental management objectives and strategies for the main environmental management elements and include, but not be limited to: water quality, noise and vibration; air quality; erosion and sedimentation; waste/ resource management; biodiversity; weed control; geotechnical issues; traffic and access; visual screening, landscaping and rehabilitation; hazards and risks and sustainability
 - identification of the statutory and other obligations which Council is required to fulfil during construction including all approvals and consultation required from authorities and other stakeholders, and key legislation and policies which control construction of the Proposal
 - definition of the role, responsibility, authority, accountability and reporting of personnel relevant to the CEMP
 - measures to avoid and/or control the occurrence of environmental impacts
 - take into consideration the provisions of the biodiversity offset strategy for the project
 - environmental management procedures for all construction processes which are important for the quality of the environment in respect of permanent and/or temporary works
 - monitoring, inspection, and test plans for activities and environmental qualities which are important to the environmental management of the Proposal including performance criteria, specific tests, protocols (eg frequency and location) and procedures to follow
 - steps Council intends to take to ensure that all plans and procedures listed in the CEMP are being complied with.
- The CEMP shall be made publicly available.
 - Construction personnel shall be inducted as to the requirements of the CEMP.

5.3 Community engagement

Consideration of issues

For projects of this nature, it is the residents in the immediate proximity to construction works that are required to bear an obvious impact on their general amenity (in relation to noise, dust generation, disruption to access etc), notwithstanding the implementation of all reasonable and practicable impact mitigation and management measures.

The effective management of community engagement needs to incorporate effective and proactive communication. As such, the commitment to continue to engage and notify the community of the Proposal, should be explicitly outlined in the approval conditions.

Recommended approval conditions

- Throughout the construction phase, Council shall keep the local community informed of the progress of the Proposal including any traffic disruptions and controls, construction of temporary detours and changes to local accesses.
- Where construction work is required to be undertaken outside of standard working hours (7am to 5pm Monday to Saturday), Council shall, where practicable, provide prior notification to affected residents. In the event of emergencies where this is not possible, notification shall be provided as soon as practicable.
- Prior to the commencement of construction works, Council shall establish and publicly advertise a contact telephone number to operate for the duration of the construction period, to allow any member of the public to make a complaint or comment, or to seek information about the construction works. The contact telephone number shall be staffed during normal business hours. An initial response to any complaints received shall be provided within two working days and, where required, a more detailed response within 10 working days.
- Details of any complaints received in relation to the Proposal shall be recorded on Council's complaints register.

5.4 Traffic and access

Summary of issues

- Drivers crossing over to the wrong side of the road- measures such as ripple strips or reflective markers should be used.
- Speed limit should not be increased from 70kph to 80kph, particularly as existing speed limit is not adhered to. Speed cameras or traffic lights should be installed.
- Safety concerns about bus stops (in particular the bus stop at the Wickerslack Lane and Old Cooma Road used by school children).
- The 2031 date for subsequent re-alignment phases is far too late- needs to be brought forward
- Pedestrian and cyclist path should be constructed as part of Stage 1, not Stage 2. Should be designed to snake up the gradient so that it is accessible to walkers/cyclists/children.
- Existing Old Cooma Road should be retained to divert trucks away from Tempe Crescent and Talpa.
- Trying to turn right onto Old Cooma Road from residences is risky due to the heavy vehicle traffic. Speed limits, slip-ways and merging traffic zones or median refuge island should be established.
- Inadequate sight lines for exiting from properties on the southern extent of Stage 1.

Consideration of issues

The traffic assessment for the Old Cooma Road has been undertaken as a qualitative assessment, with no specific traffic modelling undertaken for either the Stage 1 or the ultimate duplication road designs. However, previous traffic studies including the Googong and Tralee Traffic Study 2031 (Gabites Porter, 2010) have indicated the increase in traffic volumes (primarily due to the development of Googong) as the need for the Proposal. No quantitative modelling is provided as part of the REF to assess the road design in terms of improved traffic flow, intersection capacity or arrangement. This information would be required to appropriately identify when the traffic conditions would require it to be duplicated. This is considered to be a more effective approach to determining when the ultimate duplication needs to be constructed.

In re-aligning Old Cooma Road, a safer alignment is proposed through the construction of separate carriageways with 3.5 metre wide lanes and 1.5-2.5 metre shoulders. The road is designed to appropriate standards to accommodate an increase in speed limit (Stage 1 would result in an increase to 80kph, while the ultimate duplication would see areas of 100kph) and is required to address specific standards which include safety matters. It is understood that Council is in the process of consulting with the RTA on the design and safety requirements of the road. In this regard, appropriate safety audits may need to be carried out on the Proposal.

Concerns were also raised regarding impacts to existing bus stops along Old Cooma Road particularly the stops that service Wickerslack Lane, Tempe Crescent and Talpa. The REF does not address this issue and it is a pertinent issue for consideration in the determination of the Proposal. It is noted that the design of the road would feature a shoulder width of approximately 1.5-2.5 metres and could facilitate bus stopping areas (and cyclists). However, further consideration needs to be given to maintaining existing bus services.

A number of representations raised the issue of safe access from property driveways at the southern extent of Stage 1. These properties currently have direct driveway access onto Old Cooma Road and with the Stage 1 Proposal speed limit increase from 70 kph to 80 kph, would have insufficient sight lines for safe access onto the road. It is understood that Council is looking into this issue and is considering the provision of a local access road to connect these driveways and provide a safe egress point onto Old Cooma Road. This process is supported.

Recommended approval conditions

- Consultation with relevant bus companies shall be undertaken to understand their requirements. If applicable, the results of this consultation shall be used to refine the detailed design to facilitate the safe operation of these services.
- Access arrangements for properties with insufficient sight lines shall be resolved during detailed design and in consultation with the affected property owners. Should any environmental impacts (such as vegetation removal) result from the solution, this shall be documented. Measures provided in the REF and these conditions of approval shall be reviewed to confirm whether any additional mitigation or management measures would be required. The offset plan shall also be reviewed to ensure that it would cover any additional vegetation removal that may result.
- Traffic monitoring of traffic volumes and level of service at intersections shall be undertaken at regular intervals once Stage 1 is opened to traffic to identify when Old Cooma Road should be duplicated as described in the ultimate duplication.

5.5 Noise and vibration

Summary of issues

- Increasing traffic noise would impact on residents in certain areas in Wickerslack Lane, Tempe Crescent, Heights Road and Old Cooma Road.
- Noise barriers would be essential to the Proposal particularly on the eastern side of the realigned section of Old Cooma Road.
- Noise barriers are inadequate- change in traffic on local roads would affect the directionality of noise- has this been considered in the noise assessment.
- Wrong noise criteria was used based on the RTA's Environmental Noise Management Manual.
- Council should give special consideration to specific noise mitigation aimed at heavy vehicles, particularly in relation to road surface treatments, speed limits and restrictions on the use of compression brakes.
- Closing the northern section of Tempe Crescent (where it connects with Old Cooma Road) would direct traffic down Heights Road and increase noise from Heights Road.

Consideration of issues

The REF has addressed the issue of traffic noise, and where exceedances of appropriate guideline noise criteria have been predicted, noise walls of varying heights have been proposed at sensitive receivers.

Noise impact assessment

As the noise impact assessment and the REF did not assess the anticipated level of construction noise for either the Stage 1 or the ultimate duplication, the extent to which construction noise could impact on surrounding sensitive receivers cannot be assessed. However, the *Interim Construction Noise Guidelines* measures have been recommended for use in the construction phase where reasonable and feasible.

There are a number of inputs in the noise impact assessment that are not consistent with statements made in the REF. The noise assessment assumed that approximately six per cent of future traffic numbers would comprise heavy vehicles. However, the traffic assessment section of the REF (Section 17.1) indicates that currently heavy vehicles makes up 12.4 per cent of the traffic along Old Cooma Road and this is proposed to increase as the Googong development commences. Traffic numbers for the noise assessment are indicated in the report as 15,000 for 2021 and 26,000 for 2031. The REF (Section 17.1) details that traffic volumes in 2021 would be over 11,000 vehicles per day. The discrepancies in the inputs could have resulted in an inaccurate assessment of the extent of operational noise impact.

Noise mitigation

It is understood that due to representations made, Council is currently looking into the noise criteria used in the operational noise assessment. While the assessment used the ECRTN (Environmental Criteria for Road Traffic Noise) criteria for a “redeveloped road”, there has been some suggestion that the criteria used should have been for a “new road”. This would alter the noise criteria and therefore the identification of areas where noise mitigation measures would be required. It is considered that only part of the alignment should use the criteria for a “redeveloped road” (in areas where the existing Old Cooma Road is to be upgraded). In other areas, the “new road” criteria should be used.

One representation identified that the changed arrangements of traffic on the local roads to the east of the Proposal could alter the noise impacts on his property. While it is considered that noise on local roads would not be altered and therefore have no changes on noise to nearby residences, the noise assessment does not make it clear whether noise from local roads was considered in the model. This could have increased impacts in certain situations where local road noise could reflect off any proposed noise walls constructed between Old Cooma Road and Heights Road. While this may not be a large noise impact, consideration should be given when finalising noise wall heights and undertaking further modelling.

Noise from heavy vehicles is different from light vehicles as noise is made by the exhaust of these vehicles, which sit well above the level of a light vehicle. The noise report has not made it clear whether this issue was incorporated into the noise model.

Recommended approval conditions

- A revised assessment and mitigation strategy (including the provision of additional noise walls) shall be undertaken as part of the detailed design. This assessment shall also review and if necessary refine the noise model inputs (such as traffic levels and the design).
- In finalising the height of the noise barriers, it shall be confirmed that adequate consideration has been given to noise emissions from the exhausts of heavy vehicles.
- A construction noise management plan shall be prepared by Council to form part of the CEMP which identifies practical and cost-effective noise abatement measures to be implemented. As far as practicable, the plan shall be consistent with the Department of Environment, Climate Change and Water’s (DECCW) *Interim Construction Noise Guidelines*.
- Once Stage 1 has been opened to traffic, noise monitoring shall be undertaken to confirm the noise levels predicted in the noise assessment undertaken as part of the REF and the efficacy of noise walls. If noise levels are higher than those modelled as part of the REF, additional noise walls or alternative noise abatement measures shall be considered.

5.6 Biodiversity

Summary of issues

Council has acknowledged that Old Cooma Road would affect biodiversity in the area. A Species Impact Statement (SIS) has been prepared to assess impacts and identify mitigation and management measures. A referral was made under the *Environment Protection and Biodiversity Conservation Act 1999* to the Department of Sustainability, Environment, Water, Population and Communities. This referral found that the impact was not likely to be significant and the Proposal was not considered to be a controlled action.

The issues raised during public consultation include the following:

- The protection of sensitive environments in the Gale Woodland, including;
 - proposed service trench which could encroach into this area
 - preference in some submissions for this area as an offset option
 - concern that existing landcare activities are able to continue.
- Consideration of habitat for fauna species in the LGA and how affected by the Proposal, particularly in terms of fragmentation and movement across areas affected by the road.

- Consideration of additional underpasses between Wickerslack Lane and Edwin Land Parkway (in the Mirabee/Gale Woodland area).
- Ongoing monitoring of fauna road kills to determine if further measures are required.
- Fencing along Old Cooma Road to stop fauna getting onto Old Cooma Road and stop illegal access (such as from motorbikes) off Old Cooma Road to bushland areas.
- Concern expressed over the lack of information on the size of the Rosenberg goanna population in the area.
- Council should have a council-wide biodiversity strategy and should conserve all remaining bushland areas in the LGA.
- Street lights other than those at intersections should be turned off from 12 midnight or 1 am to dawn to assist animals.

Consideration of issues

Council has indicated that only bushland within the road corridor (approximately 17.2 ha) would be removed, with fencing provided during construction to prevent accidental removal of bushland outside of this corridor. This is supported, and any such fencing should be put in place prior to commencement of construction activities. Induction of construction personnel should highlight the purpose of such fencing and regular inspections undertaken during clearing activities to ensure effective compliance.

A concern was raised regarding the distance between the road footprint and the trunk services shared trench in the vegetated land in the northern part of the ultimate duplication. It is acknowledged that the distance is needed to protect the services from the future construction of the ultimate duplication.

SIS adequacy

The SIS provides specific sections assessing the presence, condition and likely impacts of all species and communities with actual or potential habitat within the Proposal footprint. It should be noted that a previous report on the presence and condition of species and vegetation communities in the area produced in August 2007 has been incorporated into the SIS and mapping extended where appropriate.

The SIS approaches and survey techniques used have been reviewed by Aurecon and conform to the recommended approaches. The ecological consultants are well respected with recognised expertise in vegetation and faunal survey. The survey methods used are outlined in sections 2.3-2.4 of the SIS, and the survey intensity/effort is appropriate for the site and can be expected to have provided a high degree of detection for species and ecological communities. It should be noted that one of the species specifically noted in public comments, Rosenberg's Goanna, is by nature cryptic and likely to be difficult to detect at any survey intensity.

The main findings of the SIS have been summarised in Section 10 of the REF, including a specific section covering the mitigation measures and offsets proposed to manage these impacts.

Fauna crossings/underpasses

As part of the Proposal, Council is proposing to provide two fauna underpasses along the length of the Proposal as part of the ultimate duplication. These would be low underpasses to accommodate ground dwelling animals. However, there have been a number of representations questioning whether additional underpasses would be required, and requesting that these underpasses be designed to facilitate movement of larger animals (such as Wombats).

The proposed underpass locations are at creek crossings, and these will act as natural movement pathways for many species due to the higher ground cover and the presence of water. However, there is also the potential for stormwater flows to scour out these underpasses and reduce the availability of rocks, large woody debris and other features that facilitate animal movements. Both of these underpasses are in either a regional or local biolink, so the concern over the number of underpasses is reasonable. There is very limited information on the efficacy of fauna underpasses in either promoting animal movement or on reducing road strike, but the overriding principle is sound. Most (if

not all) of the ground dwelling species within the study area favour rocks and large woody debris environments for foraging and movement, and are unlikely to willingly cross the open area of the road if a viable alternative is nearby.

Consideration of the number and size of underpasses and final design of the underpasses should be undertaken in consultation with DECCW.

Fencing

No fauna exclusion fencing is proposed along the length of the Proposal (for either the Stage 1 or the ultimate duplication). It is noted that Council proposes to monitor Old Cooma Road post-construction for road kill. This should be used to determine if any fencing should be installed.

The access of bikes to bushland areas is an existing issue in the LGA and is considered to be a separate issue to the determination of the Proposal.

Offsets

It has been suggested that Council consider purchasing additional land adjacent to the southern extent of the Proposal. The SIS made specific mention of the identification of a 129Ha local offset site, which is adjacent to previous offset areas provided for other road developments in the area. The offset area that has been identified in the REF is considered to be more than sufficient to offset the Proposal. The offset area is also of the same type of vegetation which is to be removed by the Proposal, particularly the listed Box-Gum Woodland communities.

It is noted that the DECCW has developed specific principles for the use of biodiversity offsets in NSW. Finalisation of the offsets associated with the Proposal should be consistent with these principles. It is also considered appropriate that DECCW be consulted with respect to this matter.

Limiting the period of artificial lighting

It has been suggested that consideration be given to reducing the period of artificial lighting to minimise impacts on fauna, presumably in relation to reducing the potential for predation of native nocturnal fauna.

Lighting requirements, in terms of design and intended operational mode, are determined principally by road user safety requirements. This would also extend to use of the shared pedestrian/cycle pathway. As such, it is considered impractical to implement this measure. It is noted that through design, it is possible to minimise light spill into areas away from the roadway, and it would be appropriate to consider this during detailed design. The proposed fauna underpasses will not have any internal lighting, and this may assist in encouraging the use of these areas in preference to the road surface itself.

Weed management

Ongoing management of Old Cooma Road should include appropriate attention to weed management, particularly for the section adjacent to native vegetation. It is noted that there are already obligations on Council under the provisions of the *Noxious Weeds Act 1993* with respect to weed species listed under the Act and related legislation.

Recommended approval conditions

- During detailed design, the option of locating the trunk services shared trench closer to the final design footprint shall be considered to minimise the need for vegetation removal and edge effects on areas of vegetation.
- Prior to the construction of the road sections, pre-clearing fauna surveys should be undertaken to inspect rock habitats and any hollow bearing trees likely to be disturbed.
 - If threatened fauna are found, these should be relocated in consultation with DECCW

- Other (non-threatened) fauna are to be located to the nearest suitable habitat outside the impact zone
- During tree removal a suitably qualified person will be present at to rescue, relocate and rehabilitate fauna that may be disturbed by the process.
- Temporary fencing shall be erected prior to the removal of any vegetation. As noted in Section 5 of the SIS, the fencing should be robust and easily visible, but not placed in a way to restrict animal movement through remnant vegetation areas.
- Regular inspections shall be undertaken by Council during clearing activities to monitor compliance with fencing and vegetation clearing.
- Final design of the underpasses shall be undertaken in consultation with DECCW, and consideration shall be given to increasing the number of underpasses where large areas of vegetation occur either side of the road, either through dedicated fauna underpasses or combining underpasses with proposed drainage structures.
- Finalisation of the biodiversity offsets associated with the Proposal shall be consistent with DECCW's principles for the use of biodiversity offsets in New South Wales (NSW). This shall include appropriate consultation with DECCW.
- Detailed design of lighting shall minimise light spill beyond the roadway outside of built up areas.
- Ongoing management of Old Cooma Road shall include appropriate attention to weed management, particularly for the section adjacent to native vegetation.

5.7 Amenity

Summary of Issues

- Oppose the alignment without the full planning of the Cooma Road leading to the CBD.
- Deterioration of water quality collected in water tanks and dams due to the increased vehicle particulates and bitumen runoff.
- Impact on property prices.

Consideration of issues

Full planning of Old Cooma Road

A representation of the planning of the entire length of Old Cooma Road, is an issue which would need to be addressed by Council as traffic volumes along the length of Old Cooma Road outside of the study area increase. However, while a pertinent issues, it is not considered appropriate to make this an approval condition.

Water quality

There has been little consideration of air quality impacts during operation, however, impacts on rainwater tanks from increased vehicle particulate emissions is unlikely to affect the potability of water.

The REF acknowledges that there is potential for dust and dirt from construction activities to impact on surrounding residences. As such, a number of standard management practices have been identified within the REF including watering of exposed surfaces, minimising the extent of exposed surfaces, and progressive revegetation of cleared areas once construction activities are completed.

Management of these types of emissions falls under the general Section 120 provisions of the *Protection of the Environment Operations Act 1997* which the construction contractor would be required to comply with.

Property prices

While it is unknown whether property prices would be affected adversely by the construction of the road, the road would also provide benefits, including the improvement of access and road safety.

Recommended approval conditions

No specific conditions of approval are considered necessary in relation to this issue.

5.8 Drainage impacts

Summary of issues

- Potential flooding of properties due to inadequate drainage facilities on the road.
- Increased run-off from road.
- No gutter or drainage on the east side of the existing road that results in residences getting flooded.
- Erosion problem in creek bed between the cutting at the north end near the connection with the Edwin Land Parkway and Wickerslack Lane.

Consideration of issues

There are a number of concerns surrounding existing drainage problems along Old Cooma Road. This appears to be due to the lack of sufficient drainage along the existing road that causes flooding and drainage problems on private properties, situated down gradient and downstream of the road.

The Proposal includes the development of both cross and longitudinal drainage that is considered to be sufficient. In addition, during construction, the REF identifies that an erosion and sedimentation management plan would be prepared to address and manage potential erosion risk.

Recommended approval conditions

- As part of the CEMP, an erosion and soil management plan shall be compiled in accordance with the Landcom guidelines Managing Urban Stormwater- soils and construction Volume 2D Main Road Construction (DECC, 2008). The plan shall be prepared in consultation with relevant stakeholders. It shall provide full details of all pollution control measures to be undertaken during construction.
- During construction, regular inspections by Council of erosion and sedimentation control devices shall be undertaken to ensure that the most appropriate controls are being implemented and that they are being maintained in an effective condition at all times.
- Any complaints from surrounding residences that the realignment of Old Cooma Road has resulted in flooding or drainage impacts to private property are to be investigated.

5.9 Sustainability

Summary of issues

- Use of solar power for street lighting

Consideration of issues

A number of representations requested consideration be given to the use of solar power for street lighting. This is supported, subject to compliance with applicable design and safety standards.

Recommended approval conditions

- Detailed design shall consider opportunities to incorporate energy saving features into Proposal components, subject to compliance with applicable design and safety standards.

6. Conclusion and recommended approval conditions

6.1 Conclusion

As indicated in Section 1.2, this Determination Report has been prepared to assist Council in its consideration of the Proposal, and with the purpose of fulfilling the following objectives:

- to provide an overview of the Proposal as described in the REF, and to confirm the statutory process applicable to the determination of the Proposal
- to provide consideration of the issues raised in representations (submissions) and Council's responses
- to document and consider additional information which has bearing on the determination of the Proposal
- to develop recommended conditions of approval as considered appropriate for adoption by Council should it resolve to proceed with the Proposal.

It is considered these objectives have been met.

Based on Aurecon's consideration of the REF, representations made to Queanbeyan City Council and information provided by the applicant during preparation of this report, it is recommended that the realignment and duplication of Old Cooma Road be approved subject to implementation of the conditions of approval provided in Section 6.2 of this report.

6.2 Recommended approval conditions

The following acronyms and terms are used in this section:

- CEMP: construction environmental management plan
- Council: Queanbeyan City Council (or its authorised agent)
- DECCW: Department of Environment, Climate Change and Water
- (the) Proposal: Old Cooma Road

General

1. Except as expressly provided by the conditions below, Old Cooma Road realignment and duplication (Stage 1 and the ultimate duplication) shall be designed, constructed and operated in accordance with:
 - i) the REF Report for Old Cooma Road, dated December 2010, prepared for Queanbeyan City Council by David Hogg Pty Ltd
 - ii) all identified procedures, safeguards and mitigation measures identified in the REF except where amended in this Determination Report
 - iii) conditions of approval identified in this Determination Report.
2. These conditions do not relieve Council of the obligation to obtain all other necessary approvals, licences or permits required under any other Act. Without affecting the generality of the foregoing, Council shall comply with the terms and conditions of such approvals, licences and permits.
3. Council must review the REF and further mitigate and manage any additional impacts associated with the ultimate duplication when the decision is made to construct the duplication.

Construction environmental management plan

4. Prior to the commencement of construction works (including site establishment works preceding commencement of substantial construction), Council shall prepare, or have the contractor prepare, a construction environmental management plan (CEMP). The plan shall be prepared in consultation with relevant government agencies and public authorities, and any other relevant party. The plan shall be prepared in accordance with these approval conditions, the relevant recommended mitigation measures listed in the REF (including supporting documentation), all relevant Acts and Regulations, and accepted environmental management best practice.
5. The CEMP shall address, but not be limited to, the following matters:
 - i) consultation requirements with relevant government agencies, public authorities and other stakeholders
 - ii) specific environmental management objectives and strategies for the main environmental management elements and include, but not be limited to: water quality, noise and vibration; air quality; erosion and sedimentation; waste/ resource management; biodiversity; weed control; geotechnical issues; traffic and access; visual screening, landscaping and rehabilitation; hazards and risks and sustainability
 - iii) identification of the statutory and other obligations which Council is required to fulfil during construction including all approvals and consultation required from authorities and other stakeholders, and key legislation and policies which control construction of the Proposal
 - iv) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to the CEMP
 - v) measures to avoid and/or control the occurrence of environmental impacts
 - vi) take into consideration the provisions of the biodiversity offset strategy for the project
 - vii) environmental management procedures for all construction processes which are important for the quality of the environment in respect of permanent and/or temporary works
 - viii) monitoring, inspection, and test plans for activities and environmental qualities which are important to the environmental management of the Proposal including performance criteria, specific tests, protocols (eg frequency and location) and procedures to follow
 - ix) steps Council intends to take to ensure that all plans and procedures listed in the CEMP are being complied with.
6. The CEMP shall be made publicly available.
7. Construction personnel shall be inducted as to the requirements of the CEMP.

Community notification

8. Throughout the construction phase, Council shall keep the local community informed of the progress of the Proposal including any traffic disruptions and controls, construction of temporary detours and changes to local accesses.
9. Where construction work is required to be undertaken outside of standard working hours (7am to 5pm Monday to Saturday), Council shall, where practicable, provide prior notification to affected residents. In the event of emergencies where this is not possible, notification shall be provided as soon as practicable.
10. Prior to the commencement of construction works, Council shall establish and publicly advertise a contact telephone number to operate for the duration of the construction period, to allow any member of the public to make a complaint or comment, or to seek information about the construction works. The contact telephone number shall be staffed during normal business hours. An initial response to any complaints received shall be provided within two working days and, where required, a more detailed response within 10 working days.
11. Details of any complaints received in relation to the Proposal shall be recorded on Council's complaints register.

Traffic and access

12. Consultation with relevant bus companies shall be undertaken to understand their requirements. If applicable, the results of this consultation shall be used to refine the detailed design to facilitate the safe operation of these services.
13. Access arrangements for properties with insufficient sight lines shall be resolved during detailed design and in consultation with the affected property owners. Should any environmental impacts (such as vegetation removal) result from the solution, this shall be documented. Measures provided in the REF and these conditions of approval shall be reviewed to confirm whether any additional mitigation or management measures would be required. The offset plan shall also be reviewed to ensure that it would cover any additional vegetation removal that may result.
14. Traffic monitoring of traffic volumes and level of service at intersections shall be undertaken at regular intervals once Stage 1 is opened to traffic to identify when Old Cooma Road should be duplicated as described in the ultimate duplication.

Noise and vibration

1. A revised assessment and mitigation strategy (including the provision of additional noise walls) shall be undertaken as part of the detailed design. This assessment shall also review and if necessary refine the noise model inputs (such as traffic levels and the design).
2. In finalising the height of the noise barriers, it shall be confirmed that adequate consideration has been given to noise emissions from the exhausts of heavy vehicles.
3. A construction noise management plan shall be prepared by Council to form part of the CEMP which identifies practical and cost-effective noise abatement measures to be implemented. As far as practicable, the plan shall be consistent with the Department of Environment, Climate Change and Water's (DECCW) *Interim Construction Noise Guidelines*.
4. Once Stage 1 has been opened to traffic, noise monitoring shall be undertaken to confirm the noise levels predicted in the noise assessment undertaken as part of the REF and the efficacy of noise walls. If noise levels are higher than those modelled as part of the REF, additional noise walls or alternative noise abatement measures shall be considered.

Biodiversity

15. During detailed design, the option of locating the trunk services shared trench closer to the final design footprint shall be considered to minimise the need for vegetation removal and edge effects on areas of vegetation.
16. Prior to the construction of the road sections, pre-clearing fauna surveys should be undertaken to inspect rock habitats and any hollow bearing trees likely to be disturbed.
 - x) If threatened fauna are found, these should be relocated in consultation with DECCW
 - xi) Other (non-threatened) fauna are to be located to the nearest suitable habitat outside the impact zone
 - xii) During tree removal a suitably qualified person will be present at to rescue, relocate and rehabilitate fauna that may be disturbed by the process.
17. Temporary fencing shall be erected prior to the removal of any vegetation. As noted in Section 5 of the SIS, the fencing should be robust and easily visible, but not placed in a way to restrict animal movement through remnant vegetation areas.
18. Regular inspections shall be undertaken by Council during clearing activities to monitor compliance with fencing and vegetation clearing.
19. Final design of the underpasses shall be undertaken in consultation with DECCW, and consideration shall be given to increasing the number of underpasses where large areas of vegetation occur either side of the road, either through dedicated fauna underpasses or combining underpasses with proposed drainage structures.

20. Finalisation of the biodiversity offsets associated with the Proposal shall be consistent with DECCW's principles for the use of biodiversity offsets in New South Wales (NSW). This shall include appropriate consultation with DECCW.
21. Detailed design of lighting shall minimise light spill beyond the roadway outside of built up areas.
22. Ongoing management of Old Cooma Road shall include appropriate attention to weed management, particularly for the section adjacent to native vegetation.

Drainage impacts

23. As part of the CEMP, an erosion and soil management plan shall be compiled in accordance with the Landcom guidelines Managing Urban Stormwater- soils and construction Volume 2D Main Road Construction (DECC, 2008). The plan shall be prepared in consultation with relevant stakeholders. It shall provide full details of all pollution control measures to be undertaken during construction.
24. During construction, regular inspections by Council of erosion and sedimentation control devices shall be undertaken to ensure that the most appropriate controls are being implemented and that they are being maintained in an effective condition at all times.
25. Any complaints from surrounding residences that the realignment of Old Cooma Road has resulted in flooding or drainage impacts to private property are to be investigated.

Sustainability

5. Detailed design shall consider opportunities to incorporate energy saving features into Proposal components, subject to compliance with applicable design and safety standards.

7. References

<http://www.environment.nsw.gov.au/nationalparks/parktypes.aspx?type=stateconservationarea>, accessed 18 February 2011.

<http://www.environment.nsw.gov.au/parktypes/WildernessViewByRegion.htm>, accessed 18 February 2011.

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