

Access Road, from Narellan Road (State Road 178) to  
Cunningham Drive, Mount Annan Botanic Garden,  
Mount Annan, Camden & Campbelltown Local  
Government Areas

REVIEW OF ENVIRONMENTAL FACTORS

# DECISION REPORT

MAY, 2010

# REF DECISION REPORT

## SYDNEY REGION

Access Road, from Narellan Road (State Road 178) to Cunningham Drive, Mount Annan Botanic Garden, Mount Annan, Camden & Campbelltown Local Government Areas

### INTRODUCTION

A Review of Environmental Factors (REF) has been prepared to assess and determine the environmental impacts of the proposal as described below. The REF has been prepared by Danny O'Brien, Director of Environmental Assessments Pty Limited and forwarded for assessment on behalf of the RTA's Sydney Road Services at Yennora, NSW.

This Decision Report has been prepared to consider the REF in relation to the requirements under the NSW Environmental Planning & Assessment Act (EP&A), 1979 and the Commonwealth's *Environment Protection & Biodiversity Conservation Act (EPBC), 1999*.

The objectives of this Decision Report are to:

- Assess the likely environmental impacts detailed in the REF,
- Determine the significance of those impacts,
- Propose conditions of approval to apply should the proposal proceed and,
- Address the position under the EPBC Act.

## PROJECT DESCRIPTION

The proposed project as described in Section 3 of the REF would extend from the intersection of Narellan Road (State Road 178) and terminate at the intersection of Cunningham Drive within the MABG as the limit of work. The Access Road would be constructed to the Roads & Traffic Authority's Quality Assurance standards and specifications. The design of the Access Road and associated works/facilities has taken into account the impacts on the environment including environmentally sensitive areas and has sought to minimise potential impacts. The details of the proposal are as follow:

### Narellan Road:

- Upgrade of the existing three way signalised intersection to provide a fourth leg into the Botanic Garden,
- A left turn deceleration lane from Narellan Road (westbound) to the proposed Access Road (4.0m width and approximately 120m in length),
- A signalised Right turn lane from Narellan Road to the proposed Access Road,
- Exit to Narellan Road (eastbound) via a dedicated signalised right turn lane,
- Exit to Narellan Road (westbound) via a signalised shared left turn and through lane,
- Bus and bicycle lane facilities westbound on Narellan Road.

### Access Road:

- 4 lane divided road from Narellan Road to the first roundabout,
- Roundabout with 3<sup>rd</sup> leg access to future visitors centre,
- 2 lane road (with shoulders) from the visitors centre roundabout to Cunningham Drive, which is in 'one-way' operation anti-clockwise.

### Ancillary works associated with the above activities include:

- A security gate, toll/ticket booth station, two roundabouts and a median will be constructed. The toll/ticket booth station and security gate will be established between the first roundabout and Cunningham Drive,
- Box culverts will be installed at low points to take existing catchment flows from the east to the west that will drain into the Annan Creek to the west. The culverts would be of a sufficient size and located to convey 100 year local catchment flows.
- Signage and line marking provisions,
- Earthworks,
- Utility relocation near the intersection of Narellan Road and the Access Road.

Environmental management measures are detailed in the relevant sections of this REF. The proposed Access Road route road would be undertaken within an existing largely disturbed area, limiting environmental management practices that may otherwise need to be implemented due to the disturbed rural context of the subject site.

The objectives of the proposal:

Section 2.2 of the REF provides the overall objectives of the proposal and states the overall objectives are primarily directed to the provision of safe and easy access to the MABG for emergency services and to maximise visitor experience of the facility. The primary objectives are:

- to provide safe and efficient access and egress to the MABG by visitors and emergency services,
- to provide an attractive and modern roadwork appearance with suitable urban design principles of the immediate vicinity,
- to provide a safe efficient road system at the intersection of Narellan Road and the intersection of Cunningham Drive,
- to integrate the principles of Ecological Sustainable Development (ESD) into the proposal, and
- to minimise ecological impacts on the study area's biota.

## **JUSTIFICATION OF THE PROPOSAL**

The Mount Annan Botanic Garden is a major public facility in south-western Sydney and is an important facility to the local tourist industry and research centre in the region. The development of the Access Road would provide efficient formal access and egress to the Mount Annan Botanic Garden for emergency services and visitors when entering and exiting the facility without significant effect on the environment and the community. The proposal would provide considerable benefit to the community by promoting and maximising visitor experiences of the MABG facility and to future visitors to the proposed visitors centre. Visitors to the MABG will gain immediate entry and exposure to the “whole of gardens experience” with vistas to the Lake Gilinganadum, Lake Nadungamba and the Cumberland Plain Woodland conservation precincts which are currently remote from the existing entry point in the Mount Annan Botanic Garden.

The proposed Access Road would reduce local traffic congestion at the existing access to the MABG during peak visitor periods, and overall improve urban amenity and road and safety conditions in the area along the Mount Annan Drive. Importantly, as the MABG is situated in a bushfire prone area, a considerable portion of the MABG's botanical assets are fire sensitive species and would be killed outright by bushfire events. The new Access Road will provide quick and easy access by local fire-fighting authorities to the entire network of the MABG's internal road system to suppress or extinguish threatening or approaching bushfires. Moreover, the Access Road will be highly suitable for access by other emergency services including NSW Ambulance, NSW Fire Brigades and the Police during any emergencies within the MABG.

All options were considered in the REF and the proposed option is the most suitable considered. The proposal has taken into account all environmental impacts identified in the REF and the principles of Ecologically Sustainable Development (ESD). Therefore, the proposal in its current form is justified in this instance.

## **CONSIDERATION OF REVIEW OF ENVIRONMENTAL FACTORS**

The REF has been examined and considered and addresses the requirements of Section 111 of the *Environmental Planning & Assessment Act, 1979*.

In considering the activity this assessment has examined and taken into account, all matters affecting or likely to affect the environment by reason of that activity as addressed in the REF and associated information. This assessment was considered in accordance with the Department of Infrastructure, Planning & Natural Resources best practice guideline.

This assessment has considered the potential impacts of the activity on critical habitat and on threatened species, populations and endangered ecological communities or their habitats for both terrestrial and aquatic species as described under the NSW Threatened Species Conservation Act, 1995 and the NSW Fisheries Management Act, 1994.

As part of the consideration of the activity this assessment has also addressed all matters of national environmental significance (NES) and any impacts on Commonwealth land. In relation to matters of national environmental significance, this evaluation has been undertaken in accordance with Commonwealth Administrative Guidelines on determining whether an action has, will have, or is likely to have a significant impact.

The proposal in the form of an EPBC application had been referred to the Federal Minister for the Environment under the EPBC Act, 1999 as a matter of National Environmental Significance (NES) concerning the presence of foraging habitat of the international migratory bird species the Latham's Snipe *Gallinago hardwickii*.

## **{COMMUNITY CONSULTATION and / or} CONSIDERATION OF REPRESENTATIONS**

The REF and the EPBC referral of the proposal have been submitted to the Federal Government's Department of Environment, Water, Heritage & the Arts (DEWHA) for review and has been publically exhibited on DEWHA's website for public review and comment. The list of all representations received are appended to this Decision Report, however, no submissions report has been prepared in this instance. A copy of the DEWHA response to the referral is appended to this Decision Report (see Appendix 1).

The Botanic Gardens Trust has undertaken a number of community consultation programs which included distribution of mailouts to local residents and an information evening provided for local residents, interested stakeholders, local ornithologists, Friends of the Gardens and staff of the Mount Annan Botanic Garden. Local Councils (Camden and Campbelltown City) displayed the DEWHA submission on their websites as did the Botanic Gardens Trust and invited comment to be directed to DEWHA.

More extensive community involvement was not considered necessary in this instance as there will be no negative impacts on the community. The community had opportunity to make comment on the proposal as the proposal was made public by advertisements placed in local print media.

Both the Tharawal LALC and Glenda Chalker of the Cubbitch Barta Native Title Claimants group (the Dharawal people) were commissioned to undertake independent assessments of the subject site and to provide their views on the proposed Access Road and to determine if there are any Aboriginal cultural heritage significance issues in relation to the proposed development of the Access Road. One isolated find, a reddish-brown stone artefact of silcrete origin was located at the southern extremity of the subject site adjacent to the proposed 'mini-roundabout' on the southern side of Cunningham Drive. Both the Tharawal LALC and the Cubbitch Barta Native Title Claimants group recommend that this artefact be relocated outside of the impact area and both groups have no objections to the proposed Access Road. (See correspondence from the Tharawal Local Aboriginal Land Council and Glenda Chalker of the Cubbitch Barta Native Title Claimants group appended to the REF).

It is concluded that it is unlikely that there would be any significant Aboriginal archaeological or Aboriginal cultural heritage significance issues to be associated with the proposed Access Road. However should any Aboriginal archaeological material evidence (including cultural heritage values) be located or identified during the monitoring activities, then all works would cease in that vicinity and the DECCW will be contacted for advice.

Community consultation and feedback and representations made and the responses to these are appended to this Decision Report (see Table 1).

## **Additional Studies and New Information**

No additional studies have been undertaken and none are required in this instance.

## **CONCLUSION**

The activity described in the REF will have minimal environmental impacts which can be ameliorated satisfactorily. Having regards to the safeguard measures proposed and to the Conditions of Approval set out below, I consider that these impacts are unlikely to be significant and therefore Environmental Impact Statement under Part 3A is not required.

The activity described in the REF will not affect declared critical habitat. The activity described in the REF will not significantly affect threatened species, populations or endangered ecological communities or their habitats under the Threatened Species Conservation Act, 1995 and the Fisheries Management Act, 1994. Therefore, a Species Impact Statement (SIS) is not required.

The activity described within the REF will not affect the following matters of National Environmental Significance (Latham's Snipe). A referral to the Federal Government's Department Environment, Water, Heritage & the Arts under the Commonwealth's Environment Protection & Biodiversity Conservation Act (EPBC), 1999 had been made seeking a determination from the Commonwealth Environment Minister on whether the activity will have a significant environmental impact on matters of National Environmental Significance. The Commonwealth Environment Minister advised through the federal Department of Environment, Water, Heritage & the Arts that the proposed Access Road is not a Controlled Action, that the proposed action does not require further assessment and approval under the EPBC Act and that the proposed action can proceed (see Appendix 1).

The activity described in the REF will not have any significant impacts on any additional matters of National Environmental Significance and would not affect any Commonwealth land. Having regard to the safeguard measures proposed and to the Conditions of Approval set out below, I consider that these impacts are unlikely to be significant.

Finally, in regards to Aboriginal cultural heritage values of the subject site, the Tharawal Local Aboriginal Land Council (TLALC) and Glenda Chalker of the Cubbitch Barta Native Title Claimants group (the Dharawal people) were commissioned to undertake independent assessments including physical surveys of the proposed Access Road and immediate environs. Both groups were also invited to provide their views on the proposed Access Road and to determine if there were any Aboriginal cultural heritage significance issues in relation to the proposal. One isolated find, a reddish-brown stone artefact of silcrete origin was located at the southern extremity of the subject site adjacent to the proposed 'mini-roundabout' on the southern side of Cunningham Drive. Both the Tharawal LALC and the Cubbitch Barta Native Title Claimants group recommended that this artefact be relocated outside of the impact area. Both the Tharawal Local Aboriginal Land Council and the Cubbitch Barta Native Title Claimants group have no objections to the construction of the proposed Access Road. It is concluded that it is unlikely that there would be any significant Aboriginal archaeological or Aboriginal cultural heritage significance issues to be associated

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with the proposed Access Road. However should any Aboriginal archaeological material evidence (including cultural heritage values) be located or identified during the monitoring activities, then all works would cease in that vicinity and the DECCW will be contacted for advice.

## **CONDITIONS OF APPROVAL**

### **1 REF Safeguards/Mitigation Measures:**

1.1 All safeguard measures stated in the REF and these Conditions of Approval shall be applied to the proposal. These Conditions of Approval prevail where there is any inconsistency with the mitigation measures.

### **2 Licences, permits and approvals, and Environmental Specification:**

2.1 All necessary licences, permits and approvals required by legislation shall be obtained prior to works commencing. These licences, permits and approvals shall be complied with during works.

2.2 The general requirements of RTA QA Environmental Protection Specification G36 and G38 shall be implemented and complied with during construction, and shall be amended to include project specific requirements arising from the REF and these Conditions of Approval.

### **3 Notification:**

3.1 The RTA Project Manager shall notify the RTA's Environmental Services Section (Sydney Region) in writing (fax or email) when works are to commence.

3.2 Public notification shall be issued to the public notices section of local newspapers and letter-box drop notification to local residences shall be undertaken if required prior to the commencement of the construction works upon approval by the RTA.

### **4 Environmental Management Plans:**

4.1 A Construction Environmental Management Plan (CEMP) shall be prepared addressing all REF safeguard measures. These Conditions of Approval and other environmental requirements are applicable.

4.2 The Construction EMP shall be reviewed by the RTA's Environmental Adviser, Sydney Operations and Services prior to commencement of site works.

- 4.3 Safeguards to be implemented during the construction phase shall include the initial development of a Construction Environmental Management Plan (CEMP) that will define and detail all specific environmental management actions to be implemented and addressed including tree protection works, dust controls, erosion and sedimentation control measures, waste management and minimisation, noise and vibration measures and air and water quality management issues etc.
- 4.4 The Construction Environmental Management Plan shall also detail environmental management and storage of materials including the management of stockpile sites as well as any compound sites. All on-site management measures and safeguards would be in place prior to any construction activity commencing.

## **5. Environmental Awareness and Training:**

- 5.1 All members of the project team involved in the proposed activities shall be made aware of their environmental responsibilities and measures to minimise environmental and other impacts.

## **6. Environmental Auditing and Inspection:**

- 6.1 A risk assessment is to be carried out on the proposal in accordance with the RTA Audit Pack and CSD risk assessment procedures to determine an audit and inspection program for the works.
- 6.2 A review of the risk assessment is to be undertaken after the initial audit or inspection to evaluate if the level of risk chosen for the project is appropriate.
- 6.3 Any works resulting from this approval and as covered by the REF may be subject to an environmental audit(s) and / or inspection at anytime during their duration.

## **7.0 Community Consultation and Liaison:**

- 7.1 Members of the affected community shall be notified of the proposed works prior to their commencement. The notification shall identify the nature of the works, why they are necessary, give an estimated duration and identify any changes to traffic or access during the works.
- 7.2 A person or persons shall be allocated for dissemination of general information on the project. A contact person or persons with telephone number(s) shall be identified for receiving any comment or complaints from local residents/owners and other government authorities including both the Camden and Campbelltown Councils where necessary.

- 7.3 A register of public complaints shall be established at the time of construction commencing and maintained for the duration of construction. The register shall record details of complaints, complainant information and action taken to address complaints.
- 7.4 Any complaints received shall be recorded and attended to promptly. On receiving a complaint, works shall be reviewed to determine whether issues relating to the complaints can be avoided or minimised. Feedback shall be provided to the complainant explaining what outcomes have resulted in a prompt fashion.

## **8.0 Access and Traffic Management:**

- 8.1 All works shall be undertaken so as to minimise impacts to traffic flow along Narellan Road and Cunningham Drive. Where possible, traffic flows shall be maintained for the duration of works.
- 8.2 Where possible, current traffic movements along the Narellan Road shall be maintained during the reconstruction phase. Disturbance to traffic flows must also be minimised to prevent unnecessary traffic delays along the Narellan Road.

## **9. Erosion, Sedimentation & Water Quality Control:**

- 9.1 All erosion and sediment control devices shall be developed in accordance with RTA Road Design Guide 1989, Section 8-Erosion and Sedimentation and the Landcom publication 'Managing Urban Stormwater- Soils and Construction' (the Blue Book).
- 9.2 Controls shall be implemented on site prior to commencement of works and shall be inspected at a minimum of weekly intervals and within 24 hours of all rainfall events. Any problems are to be rectified without delay. Regular routine maintenance (and records to illustrate this maintenance) shall be undertaken to replace damaged sediment control structures and maintain and improve other temporary measures as required.
- 9.3 An erosion and sedimentation control plan shall be prepared and implemented prior to any on-site road works being undertaken for the site. This will ensure minimisation of erosion of soils and the retention of sediments within the subject site so that erosion of soils and sediments do not impact on localised water catchment area and affect water quality including that of the nearby Annan Creek.
- 9.4 A procedure for dewatering shall be prepared as part of the CEMP. The procedure shall include details such as sediment controls, supervision of dewatering and staff training. The procedures shall be submitted with the CEMP for review by RTA Environmental Services Section, Sydney.

- 9.5 A soil conservationist from the RTA's Erosion, Sedimentation and Soil Conservation Consultancy Services Register is to be engaged during the detailed design. All recommendations are to be considered for incorporation during design development. The soil conservationist is to at least consider:
- \* The likely run-off from the sub-catchment,
  - \* Diversion of up-slope water around the disturbed area,
  - \* Requirements for erosion and sediment control according to the Department of Housing's publication Managing Urban Stormwater-Soils and Construction. Any temporary sediment basins incorporated into such designs should include a two-stage cleaning process.
- 9.6 The soil conservationist shall be employed to periodically inspect and /or audit soil conservation and water quality controls for the duration of construction. Inspections shall be at least on a fortnightly basis during the early phases on clearing, drainage and earthworks activities. A register of these inspections shall be maintained. An inspection report shall be prepared by this officer after each inspection.
- 9.7 Stockpiles shall be managed in accordance with the RTA guideline Stockpile Site Management Procedure and DECCW Environmental Protection Licence, should one be required.
- 9.8 Materials to be transported from the site to surrounding areas shall be minimised.
- 9.9 Clean water shall be diverted around the site.
- 9.10 Erosion and sedimentation control measures shall be checked and maintained on a regular basis and records kept and provided on request by the RTA's environmental officers.
- 9.11 Erosion and sediment control measures shall not be removed until works are complete and the areas stabilised and consolidated.
- 9.12 Works areas shall be stabilised progressively during the construction phase.
- 9.13 All erosion and sedimentation control safeguards shall be in accordance with the Blue Book as a policy to be implemented. This shall include management of the proposed construction of the Access Road and associated works including the intersection of Narellan Road, intersection of Cunningham Drive, the proposed roundabouts, the site compound area and any stockpile sites.

## **10. Ecological /Vegetation Management:**

- 10.1 An ecologist shall be present during the initial clearing works, especially in relation to the removal of any large trees including the large Grey Box tree with multiple hollows.
- 10.2 Any injured or displaced wildlife shall be placed in the care of WIRES or other appropriate wildlife carer organisation.
- 10.3 Clearing shall be kept to an absolute minimum. Trees and vegetation to be retained near the works shall be protected where necessary. Stockpiles and compound areas shall not be placed in close proximity to trees to be retained i.e. within the drip-line of the canopy of those trees.
- 10.4 Sensitive areas including Latham's Snipe foraging grounds and the riparian areas shall be fenced off and sign-posted as 'No-go Areas'.
- 10.5 Impacts on the seasonal foraging habitat of the Latham's Snipe shall be minimised to the fullest extent possible and the driving or parking of any vehicles in areas outside of the development footprint, stockpile areas and the compound site shall be strictly prohibited.
- 10.6 Declared noxious weeds such as the Chilean Needle Grass shall be managed according to the requirements under the Noxious Weeds Act, 1993. Care, particularly with machinery use shall be applied to ensure that all activities do not result in the further spread of Chilean Needle Grass than currently exists.
- 10.7 The large habitat tree i.e. the multi-hollowed Grey Box (*Eucalyptus moluccana*) to be removed shall be placed in a suitable area for use by wildlife species as a habitat feature. This site location shall be at the discretion of the Botanic Garden Trust. Suitable habitat areas for placement include (but are not limited to) along the bank of the adjacent Lake Gilinganadum for waterbird, reptile and amphibian use or adjacent to the riparian area for similar use by wildlife.

## **11. Noise & Vibration:**

- 11.1 The proposed works shall be undertaken in accordance with the Roads & Traffic Authority's Environmental Noise Management Manual (ENMM) and the RTA's *Environmental fact sheet No. 2-Noise Management and Night Works*. The RTA's Practice Note V11 regarding the 5 days notification to any residents of night works shall be implemented if necessary due to the sensitive noise receptors present adjacent to the subject site i.e. local residences on the Mount Annan Drive. Any noise generated during the construction phase of the works must be minimised.

- 11.2 Noise and vibration impacts shall be minimised by contractors by implementing the methods and recommendations outlined in the Practice Note 7 in the RTA's *Environmental Noise Management Manual* and the RTA's *Environmental fact sheet No.2-Noise Management and Night Works*.
- 11.3 Works shall be carried out during normal working hours namely 7am to 6pm Monday to Friday and 8am to 1pm on Saturdays. No works are to be undertaken on Sundays or public holidays. Non vibration rollers shall be utilised to prevent vibration impacts and annoyance to visitors to the MABG and the nearby Macarthur Centre for Sustainability.

## **12. Waste Management:**

- 12.1 Concrete washout shall only occur in designated bunded areas away from drainage lines. All staff including subcontractors shall be inducted on the areas where concrete washout is to occur.
- 12.2 The resource management hierarchy principles shall be followed during the construction phase in accordance with the *Waste Avoidance & Resource Recovery Act, 2001* including the following:
- unnecessary resource consumption shall be avoided as a priority,
  - avoidance shall be followed by resource recovery (including reuse of materials, reprocessing, recycling and energy recovery), and
  - disposal shall be undertaken as a last resort.
- 12.3 Earthen bulk fill material shall only be placed temporarily at the designated stockpile site and taken from there to its final destination or used on-site if possible. Any deposition of fill for disposal to a site not owned by the RTA or the Botanic Gardens Trust must have prior written approval from any landowners in accordance with the RTA's *Environmental Direction No. 20-Legal Off-site disposal of Bulk RTA Project Wastes*.

## **13. Air Quality & Dust Management:**

- 13.1 Safeguards to be implemented shall include measures such as watering or covering exposed areas. These and other measures shall be used to minimise and prevent air pollution and dust.

- 13.2 Spraying of paint and other airborne materials shall not be carried out during strong winds or in weather conditions where high levels of dust or air borne particles are likely.
- 13.3 No vegetation or other materials shall be burned on site.
- 13.4 Vehicles transporting waste and other materials that may produce odours or dust shall be covered during transportation.
- 13.5 Dust impacts shall be mitigated with the regular use of water carts and sprays to suppress potential airborne dust particles from exposed earthworks and stockpiles when necessary e.g. windy days. Stockpiles shall not to be placed near the Narellan Road.

**14. Non-indigenous Heritage:**

- 14.1 If archaeological remains are uncovered during the reconstruction of the Access Road then all works shall immediately cease in the vicinity of the find and the RTA's Senior Regional Environmental Officer contacted immediately for further advice.
- 14.2 If any items defined as relics under the NSW Heritage Act, 1977 are uncovered during the works, all works shall cease in the vicinity of the find and the RTA's Senior Environmental Officer shall be contacted immediately.

**15 Indigenous Heritage:**

- 15.1 The Tharawal LALC shall be undertaking monitoring of the subject site during the initial earthworks. In the unlikelihood of Aboriginal heritage items being uncovered during the works, all works in the vicinity of the find shall cease and the RTA's Aboriginal Cultural Heritage Adviser and the Senior Regional Environmental Officer contacted immediately. Works in the vicinity of the find shall not recommence until clearance has been received from the RTA officers and the DECCW.

**16 Socio-economics**

- 16.1 Community consultation shall be undertaken in accordance with the RTA's *Community Involvement Practice Notes and Resources Manual*.

16.2 Any complaints received during the reconstruction and upgrade works shall be recorded and attended to promptly in accordance with the RTA's *Community Involvement Practice Notes and Resources Manual* and the Botanic Gardens Trust contacted immediately.

**17 Visual Effects:**

17.1 Landscaping works shall be managed in accordance with the RTA's *Landscape Guideline, 2008*.

**RECOMMENDATION & APPROVAL**

I have considered to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed construction of the Access Road from Narellan Road to Cunningham Drive, Mount Annan Botanic Garden at Mount Annan. I agree with the recommendations of the Environmental Assessor and approve the carrying out of the proposed Access Road in accordance with those recommendations pertaining to all environmental safeguard measures identified in the REF and the above Conditions of Approval, and consider that the proposal is unlikely to result in significant environmental impacts.

Botanic Gardens Trust Authorising Manager (Print name)

\_\_\_\_\_

BGT Position \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Determined under authorised delegation, in accordance with Section 111 of the Environmental Planning & Assessment Act.

**TABLE 1**

**COMMUNITY CONSULTATION, FEEDBACK, QUERIES & COMMENTS**

Following are the issues raised and responses provided regarding the proposed new MABG Access Road: Questions 1-7 were raised during the information evening. The remainder questions were raised prior to the meeting.

<b>ISSUE RAISED</b>	<b>RESPONSE</b>
Q 1. Why there is a third leg on the first roundabout?	This 3 <sup>rd</sup> leg will lead to the future proposed Visitor Information Centre.
Q 2. What is the duration of construction?	The project is expected to be completed by June 2011.
Q 3. The size of the development footprint or work area shown as 16,500m <sup>2</sup> in EPBC application. This appears incorrect considering 520m length and 35m width.	The width of the proposed Access Road varies, however 35m is the maximum width as indicated in the application. The road varies from 4 lanes width (35m) to 2 lanes.
Q 4. What is the plan for an emergency evacuation?	Signs will be installed within the Garden for emergency evacuation including 'safe place'/mustering point. MABG staff are well trained in following emergency evacuation procedures.
Q 5. Where would be the entrance booth [sic]?	It is proposed to establish the booth between the two roundabouts. MABG is considering introduction a 'parking fee' system.
Q 6. Would the box culvert act as an underpass for fauna?	A: The culvert was designed to manage stormwater. However the culvert would also be well suited to act as a 'quasi' underpass for terrestrial fauna including reptiles, amphibians, birds and small mammals.
Q 7. Flash flooding is a major issue in this area. Has this been considered?	Yes, flash flooding has been considered and a 100 Year ARI has been incorporated into the design of the proposed Access Road ensuring capability of coping with future flash flooding events.

**TABLE 2**

**QUESTIONS RAISED PRIOR TO THE MEETING**

<b>ISSUE RAISED</b>	<b>RESPONSE</b>
Is improved visibility of the Garden to passing road traffic an important objective?	The improved visibility of the MABG to passing traffic is an important objective as it is expected this would increase visitor numbers to the MABG subsequently exposing the general public to the objectives of the Botanic Gardens Trust.
Will the break in tree cover allow slightly more noise to intrude into the MAB Garden and Macarthur Centre for Sustainable Living?	The break in tree cover is unlikely to significantly increase the level of traffic noise generated along the Narellan Road than currently exists.
Noise from cars and trucks along Narellan Road.	See above comments.
Shielding the MABG and MCSL from traffic noise.	The proposed new Access Road would not make it impossible to reduce traffic noise within the MABG or the MCSL in the future, as there would be opportunity to create tree belts in the general vicinity should this be an ultimate goal in the future.
Why is the proposed Latham's Snipe Habitat Offset Area only equivalent in area to the area lost by the proposed access?	The proposed offset area for the Latham's Snipe foraging habitat is considered sufficient in this instance. However, future monitoring of the offset areas would be able to determine if additional areas needed to be considered in the future if required. Additional areas elsewhere within the MABG could be considered if deemed appropriate by the BGT and the community in the future if warranted.
Why is the offset not more than twice the area lost to cars, asphalt, noise etc?	The proposed offset area is considered to be sufficient by both the BGT and the federal DEWHA in this instance. The BGT needs to consider all facets of the MABG natural assets including both flora and fauna as well as to balance other needs of the facility including the provision of suitable and adequate infrastructure for visitors.
Increasing visitor numbers and making improvements to our environment.	The MABG aims include increasing visitor numbers and making improvements to the natural and recreational environment. It is necessary to increase visitor numbers so that we can in turn

	make improvements to our environment including maintaining the MABG ecological assets.
Consideration for wildlife crossing on the Narellan Road.	A wildlife crossing established along the Narellan Road would be difficult to achieve and dangerous to motorists as collisions between motorists and wildlife including macropods is not an ideal outcome in this instance.
Opportunity to include an effective wildlife crossing of Narellan Rd	The BGT has no jurisdiction over the Narellan Road. Moreover,, the provision of a wildlife crossing over the Narellan Road would need considerable assessment. This is outside of the scope of this study.
Physical barriers added to the MABG/Narellan Road frontage.	The proposed Access Road would not include the installation of physical barriers to the MABG to a higher degree than already exists as there is an existing wire fence preventing terrestrial fauna including macropods from crossing over the Narellan Road into the MABG and the MCSL via Narellan Road.
New fences make it difficult for kangaroos and wallabies, wombats and other wildlife to reach Macarthur.	Macropods (kangaroos, wallabies and allies) as well as wombats and other terrestrial wildlife would find it difficult to enter into the MABG and the MCSL due to the considerable traffic generated along the Narellan Road and the presence of the existing fence.
Could a 1.5 m road shoulder for cyclists be included in the proposal to encourage use of alternative transport?	The addition of a further 1.5 metres to the road would be cost prohibitive and there is no guarantee that a cycleway at this short distance would increase the number of cyclists to the MABG. The provision of a 1.5 metre wide cycleway would also increase the size of the loss of Latham's Snipe foraging habitat. The proposed Access Road design has adopted a 'minimalist' approach to further curb its impacts on the environment. The posted speed for vehicles along the Access Road would be considered safe for the co-use of the Access Road by both motorists and cyclists.
Could the dollars spent on the Access Road have met the objectives of MABG better if it were to	The control of African Olive within the MABG is a priority of the BGT and has attracted external

be spent instead on increased funding of African Olive control, on a visitor friendly annex to the Millennium Seed Bank or on a Garden Restaurant?	funding from Integral Energy. However, the provision of a suitable Access Road to the MABG for both visitors and emergency services is also a priority. In regards to MABG partnership with the Millennium Seed Bank, NSW Treasury recently agreed to fund the (\$15.5m) development of PlantBank a new seedbank/research facility at Mount Annan. Finally, in regards to a Garden Restaurant, another restaurant within the MABG is unlikely to be viable at this stage. However, this could be considered in the future should visitor numbers to the MABG increase in the future.
What are the economics of the entrance fees?	Mount Annan Botanic Gardens entry fee revenue is directly attributed to operational expenditure. Therefore, this revenue is important to the overall functioning of the Garden.
Does the Garden entry toll pay the employment costs of the Garden staff collecting it?	Yes.
Consideration of a wildlife corridor from the Nepean River next time it is offered funding for improvements.	Within the Garden wildlife corridors have been identified and are managed. DECCW, Campbelltown City and Camden Councils are aware of the Trust's concerns and need to maintain links between the Garden and the Nepean River. A current rezoning proposal by neighbouring properties incorporates the future objective of a wildlife corridor to the Nepean River.
Could it be that a larger MABG with more land for a wildlife corridor would increase visitor numbers?	It is possible that a larger MABG could increase the size of land for wildlife. Visitors would enjoy interaction with wildlife maximising their "whole of gardens experience". Land holdings of any greater size than the current Garden, would be difficult to manage without additional staff levels.
Is it possible to comment on your Statement of Environmental Effects?	The Review of Environmental Factors appears on the Botanic Gardens Trust website ( <a href="http://www.rbgsyd.nsw.gov.au">www.rbgsyd.nsw.gov.au</a> ). If there are any queries or comments stakeholders wish to make, they can be directed to the Manager Natural Heritage, Peter Cuneo through the general Garden contact number 02/4634 7904.
Will my comments be noted and considered in the public consultative process?	Yes, your comments and views are appreciated by the BGT and we thank you for your interest and participation in the MABG proposed Access Road consultative process. We encourage the public to make their views known on any

	activities concerning the MABG.
When is the deadline for public comment?	The period for public comment on the submission to DEWHA has ended. However, if stakeholders wish to ask further questions or discuss the project, again queries can be directed to the Manager Natural Heritage, Peter Cuneo, general Garden phone number 02 4634 7904.
Why did you not consider the need to reduce noise escaping from Narellan Road to Macarthur Centre for Sustainable Living and Mt Annan Botanic Garden?	The reduction of noise emanating from the Narellan Road would under most circumstances be difficult to achieve. However, with the passage of time, the broader study area's trees will reach maturity and additional plantings will establish at strategic locations within the MABG to assist in the reduction of noise levels.
Noise levels at both sites adjacent to Narellan Road are too loud. Please plan to plant a noise barrier along Narellan Road to reduce noise and allow for the barrier to be effective with the proposed Access Road passing through it.	A noise barrier in the vicinity is outside of the scope of the proposed Access Road. Acoustic barriers could be explored at a later stage if this is consistent with any future Plans of Management for the MABG.
Please incorporate a cycle path along Narellan Road including free access to Mt Annan Botanic Garden for pushbikes, to encourage cycle use and decrease car use, to reduce global warming.	Regional recreational and commuter cycleway routes have been planned, with entrances from residential areas on the western side of the Garden. Please refer to the BGT website: <a href="http://www.rbg Syd.nsw.gov.au">www.rbg Syd.nsw.gov.au</a> Free access to cyclists and pedestrians may be possible if funding for these works is achieved.
Please at least double the offset area for snipe habitat to improve our environment.	There are no current plans to increase the area of the offset area for the Latham's Snipe. Monitoring of the current offset area will continue and be reviewed after the first 12 months. If larger offset areas are required or a relocation of some forging habitat as a result of the monitoring program of the Latham's Snipe, then these would be considered.
Will the offset area preparation be finished before work starts on the proposed road?	The offset area preparation will be completed prior to the next Latham's Snipe seasonal visits to the Australian mainland. Slashing of these areas to ensure clear delineation has been undertaken well in advance of the seasonal migration.
Could a wildlife crossing of Narellan Road be built?	It is not certain at this stage if a wildlife crossing could be incorporated along the Narellan Road. To consider the establishment of a wildlife corridor in this area would need careful assessment and a feasibility study on this issue would firstly need to be carried out. There would be no consideration to "build" a wildlife crossing on the Narellan Road at this stage, particularly in view of the large scale residential development currently underway in this area to the north of MABG. The Garden's priority fauna focus at this stage, outside its boundaries, is maintaining fauna and flora links with the Nepean River to the

	south-west.
It is stated that there is no evidence that the endangered Cumberland Land Snail is present on the proposed site. MABG staff and volunteers have located the snail well within the site, in the grass. Why has this been overlooked?	The consultants Environmental Assessments Pty Limited had undertaken a targeted search for the Cumberland Plain Land Snail within the proposed Access Road route however the species was not recorded. Environmental Assessments had also inspected the DECCW's Atlas database records and the results of the Atlas records indicated that there were no records of the species within or adjacent to the proposed Access Road.
The mention of the removal of 30 screening trees fails to identify that these are the endangered Camden White Gum. Why hasn't this been addressed?	The Camden White Gum ( <i>Eucalyptus benthamii</i> ) sourced from the Kedumba Valley is planted in the area between Lake Gilinganadum and Narellan Road. These trees will not be affected by the proposal.
The statement that the endangered Latham's Snipe is abundant along the Mt Annan Creek is blatantly inaccurate. I have been studying the waterbirds on the Mt Annan dams since last July and intend to continue until 2012. Presence of LS along the creek is negligible being 1 or at the most 2.	The consultant had utilised the data and reports issued to him and the results and conclusions were based on these reports and additional information. It is important that all information and records of Latham's Snipe are entered into the file on the species pertaining to the MAGB. If additional information is available from local enthusiasts, this could be forwarded to the Manager Natural Heritage, Peter Cuneo for consideration.
The Latham Snipe surveys carried out during January, February and March were carried out latter at the end of the LS foraging season. A more lengthy survey should be undertaken.	It is considered that the previous assessments undertaken and documentary evidence utilised in the assessment of habitat of the Latham's Snipe is sufficient in this instance. A more lengthy survey targeting this species for the purposes of the consideration of the impacts of the proposed Access Road on the species is not warranted in this instance. However, we acknowledge that the Latham's Snipe is an important significant migratory species and that the BGT values the species and considers the utilisation of the MABG by the Latham's Snipe is an asset to the MABG. Future monitoring of Latham's Snipe will take place during successive seasonal visits to the MABG.
The results of a survey carried out in 1990 by Alan Leishman indicated that there was only 1 Latham Snipe recorded on Lake Gilinganadum. I note that the survey in the REF recorded 4. My survey saw a definite increase in the number of LS at Lake Gilinganadum. I would like to advocate that the proposed access road be delayed until further surveys are carried out to ascertain whether the noted increase is going to continue. I would be happy to supply you with my results for 2010, 2011 and 2012. Ignoring the need for further surveys would be grossly	The BGT has considered all the previous surveys and assessments of the Latham's Snipe available to assess the impacts of the proposed Access Road. An additional study was also contracted. Combined, these were considered adequate in this instance. Mitigation measures address the seasonal presence of the seasonal migratory bird, ensuring minimal disturbance of a species that moves throughout the Garden. DEWHA has also assessed the significance of this project's impacts and determined that this is "not a controlled action". The BGT is strongly committed to

<p>negligent in the management of the foraging area for the LS”.</p>	<p>conservation and welcomes all data and records of the species visiting the MABG contributed by the community including local ornithologists and naturalists. The BGT understands that the Latham’s Snipe is variable in its presence and spread within their foraging areas.</p>
<p>The proposed offset areas for the Latham’s Snipe are not in any area where the birds occur in any quantity. Also these areas are to be subjected to mowing by the MABG which will rid the areas of the grasses preferred by the LS.</p>	<p>The proposed offset area will be managed to replicate foraging habitat for Latham’s Snipe i.e. thick grassland adjacent to water bodies. Future monitoring will determine the success (or otherwise) of the offset areas as suitable habitat and adjustments would be made in the future if required. The mowing practices will preclude Cumberland Plain Woodland tree and shrub (and woody weed) species from regenerating as the Latham’s Snipe avoids native woodland / shrublands.</p>
<p>Why can't the road be located further away from Lake Gilinganadum so that the impact on the Latham’s Snipe is minimal?</p>	<p>The proposed Access Road is the best and most suitable location based on strategic and environmental considerations. The re-positioning of the Access Road to other locations would present other environmental, ecological and strategic problems. Moreover, the species prefers mud flats, sedges and long rank grass e.g. Kikuyu. The proposed offset areas are near water bodies where CPW species that are regenerating can be managed by slashing, mowing etc and the location ensures that the Latham’s Snipe has close proximity to water sources to maximise their protection and adequate food and water resources.</p>

## APPENDIX 1



**Australian Government**

**Department of the Environment, Water, Heritage and the Arts**

Mr Danny O'Brien  
Director  
Environment Assessments Pty Ltd  
GPO Box 314  
GOSFORD NSW 2250

Date: 9 June 2010  
EPBC Ref: 2010/5485  
EPBC contact: James van Meurs  
(02) 6274 1496  
James.Vanmeurs@environment.gov.au

Dear Mr O'Brien

**Decision on referral  
Construction of Access Road to Mount Annan Botanic Gardens, NSW.**

This proposed action, development of a 520m long access road and an associated intersection upgrade, off Narellan Road, Mount Annan, NSW has now been considered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

**I have decided that the proposed action is not a controlled action. This means that the proposed action does not require further assessment and approval under the EPBC Act before it can proceed.** A copy of the document recording this decision is enclosed. This document will be notified publicly on the Department's website.

Please note that this decision relates only to the specific matters protected under Chapter 4 of the EPBC Act.

This decision does not affect any requirement for separate state or local government environment assessment and approvals of the proposed action.

If you have any questions about the referral process or this decision, please contact the EPBC project manager and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Michelle Wicks  
Acting Assistant Secretary  
Environment Assessment Branch



**Australian Government**

**Department of the Environment, Water, Heritage and the Arts**

**Notification of  
REFERRAL DECISION – not controlled action**

**Construction of Access Road to Mount Annan Botanic Gardens, NSW (EPBC 2010/5485)**

This decision is made under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

<b>person named in the referral</b>	Botanic Gardens Trust
<b>proposed action</b>	The development of a 520m long access road and an associated intersection upgrade, off Narellan Road, Mount Annan, NSW as described in referral documentation received 13 May 2010.

**Referral decision: Not a controlled action**

<b>status of proposed action</b>	The proposed action is not a controlled action.
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**Person authorised to make decision**

<b>Name and position</b>	Michelle Wicks Acting Assistant Secretary Environment Assessment Branch
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**signature** 

**date of decision** 9 June 2010