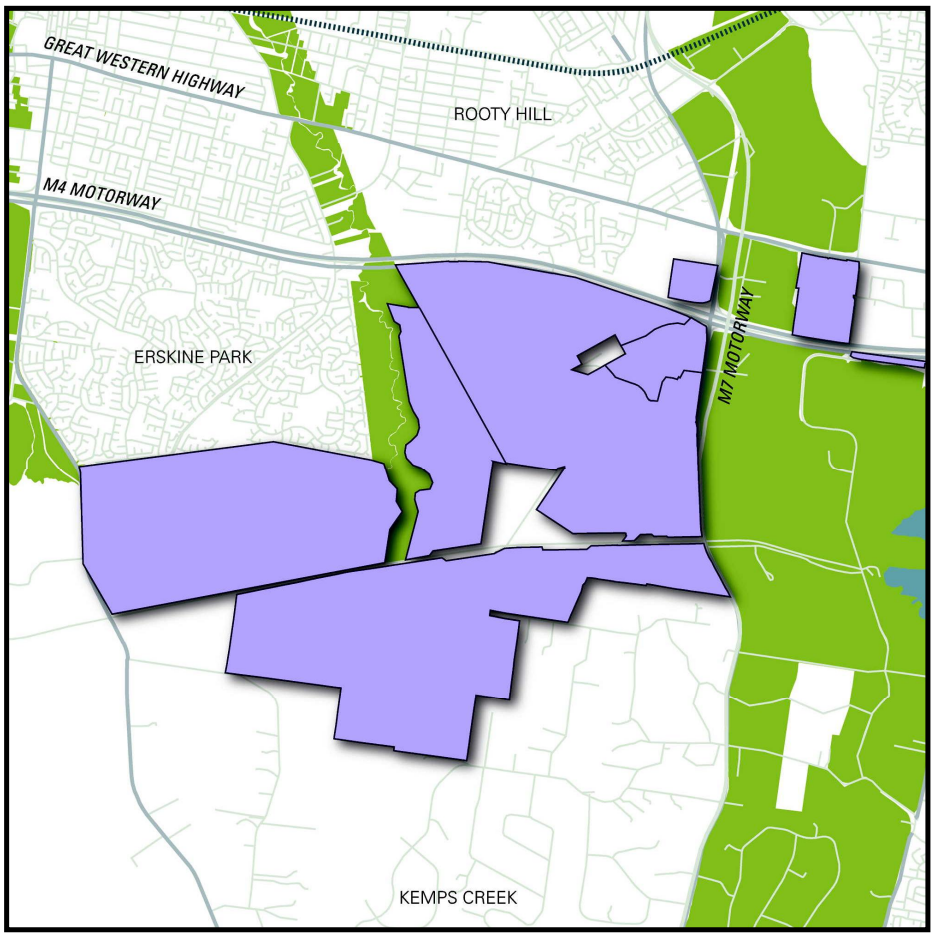
Western Sydney Employment Hub

Proposed Erskine Park Link Road Network

CONCEPT PLAN

Environmental Assessment – Submissions Report and Preferred Project Report

February 2009



NECS
NATIONAL ENVIRONMENTAL CONSULTING SERVICES

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February 2009

Prepared for the NSW Roads and Traffic Authority

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ABBREVIATIONS

AHD	Australian Height Datum
AFG	Aboriginal Focus Groups
BMP	Biodiversity Management Plan
CBD	Central Business District
CPW	Cumberland Plain Woodland
DA	Development Application
dB	Decibel
DCAC	Darug Custodians Aboriginal Corporation
DCP	Development Control Plan
DEC	Department of Environment and Conservation
DECC	Department of Environment and Climate Change
DEWHA	Department of Environment, Water, Heritage and the Arts
DGR	Director General's Requirements
DIPNR	Department of Infrastructure, Planning and Natural Resources
DLALC	Deerubin Local Aboriginal Land Council
DNR	Department of Natural Resources
DoP	Department of Planning
DoS	Degree of Saturation
DPI	Department of Primary Industries
DTAC	Darug Tribal Aboriginal Corporation
DUAP	Department of Urban Affairs and Planning
E.	Eucalyptus
EA	Environmental Assessment
EMP	Environmental Management Plans
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*

EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPEA	Erskine Park Employment Area
EPI	Environmental Planning Instrument
EPLR	Erskine Park Link Road
ESD	Ecologically Sustainable Development
ha	Hectare
HPP	Habitat Protection Plan
INP	Industrial Noise Policy
km	Kilometre
LEP	Local Environmental Plan
LGA	Local Government Area
LMB	Land Management Branch of DoP
LoS	Level of Service
m	Metres
M	Million
NECS	National Environmental Consulting Services
NPW Act	*National Parks and Wildlife Act 1974*
NPWS	National Parks and Wildlife Service
NSW	New South Wales
NWP	North West Precinct
PAD	Potential Archaeological Deposit
PM_{10}	Particulate Matter < 10 µm
POEO Act	Protection of the Environment Operations Act 1997
REP	Regional Environmental Plan
RFEF	River-Flat Eucalypt Forest
RL	Relative Level
RTA	Roads and Traffic Authority

SEE	Statement of Environmental Effects
SEPP	State Environmental Planning Policy
SREP	Sydney Regional Environmental Plan
SWP	South West Precinct
TDC	Transport Data Centre
TEOM	Tapered Element Oscillating Microbalance
TSC Act	*Threatened Species Conservation Act 1995*
TSP	Total Suspended Particulate Matter
V/C	Volume to Capacity
WSEH	Western Sydney Employment Hub
WSELIA	Western Sydney Employment Lands Investigation Area

I INTRODUCTION AND BACKGROUND

1.1 THE PROPOSAL

The Roads and Traffic Authority of NSW (RTA) are seeking approval for a Concept Plan for a road network connecting employment areas in the Fairfield, Blacktown and Penrith Local Government Areas (LGAs) with the M4 and M7 Motorways and Mamre Road, Erskine Park. The network is known as the Erskine Park Link Road Network (EPLR Network) in the Western Sydney Employment Hub (the Hub). The proposed road network is located within the Blacktown and Penrith LGAs but extends to the boundary of the Fairfield LGA so as to link the employment lands in that LGA.

The EPLR Network which would service the North West Precinct (NWP) of the Hub comprises the following key elements:

- An east-west route (Erskine Park Link Road as an extension of Lenore Lane) connecting Mamre Road and Erskine Park Road to the Old Wallgrove Road interchange with Wallgrove Road and the M7;
- Eastern and western north-south link roads (Old Wallgrove Road and N-S Link respectively) connecting the Erskine Park Link Road to the South West Precinct (SWP) of the Hub; and
- A northern access road to Archbold Road connecting the Erskine Park Link Road to the M4 at a new interchange with east facing ramps only.

Additional works would be required to upgrade roads connecting to the EPLR Network, however these upgrades do not form part of the Concept Plan.

1.2 EXHIBITION OF THE ENVIRONMENTAL ASSESSMENT

An Environmental Assessment (EA) for the Proposal was prepared in accordance with Part 3A of the *Environmental Planning and Assessment (EP&A) Act* 1979. The EA was placed on public exhibition by the Department of Planning (DoP) for the period Thursday 20 March 2008 until Monday 28 April 2008. Copies of the EA were available at:

- Department of Planning (Head Office);
- Department of Planning (Parramatta);
- RTA Blacktown Motor Registry;
- Nature Conservation Council of NSW;
- Penrith City Council;
- Blacktown City Council; and
- Fairfield City Council.

A copy of the EA was also made available on the DoP website. The DoP provided the RTA with copies of the 42 submissions received during the exhibition period.

1.3 STATUTORY CONTEXT

On 9 June 2006, the Minister for Planning declared by order in the NSW Government Gazette, pursuant to Section 75B(1) of the *EP&A Act 1979* that the proposal, comprising the Concept Plan, is a Major Project to which Part 3A of the *EP&A Act* applies.

Section 1.3 of the EA outlines the approval requirements for the EPLR Network. In summary, when considering a project to which Part 3A of the *EP&A Act* applies, after the exhibition of an EA, Section 75H(5) of the *EP&A Act* requires that copies of submissions raised to the exhibition of the EA be provided to the Director-General. Section 75H(6) of the Act identifies that the Director-General may require the proponent to submit to the Director-General:

(a) a response to the issues raised in those submissions;
(b) a preferred project report that outlines any proposed changes to the project to minimise its environmental impact; and
(c) any revised statement of commitments.

This submissions report, including Preferred Project Report and revised Statement Of Commitments will be submitted to the Director-General of the DoP, thereby fulfilling the RTA's requirements under Section 75(H)(6) of the *EP&A Act*.

The Minister, after receipt of an assessment report from the Director-General, will subsequently give or refuse to give approval for the concept plan for the project under Section 75O of the *EP&A Act*. Should the Minister approve the project, under Section 75P of the Act, the Minister's determination can outline the requirement (or otherwise) for further environmental assessment for the whole or stages of the project.

1.4 STRUCTURE OF THIS SUBMISSIONS REPORT

This document has been prepared at the request of the Director-General of the DoP dated 23 May 2008, pursuant to Section 75H(6) of the *EP&A Act* following the exhibition of the EA for the Concept Plan for the EPLR Network. It includes identification of, and the RTA's response to, issues raised in public submissions (refer Section 2), information regarding additional investigations carried out since the exhibition of the EA (refer Section 3), a Preferred Project Report which outlines proposed design and alignment changes (refer Section 4) and a revised Statement of Commitments (refer Section 5).

2 CONSIDERATION OF SUBMISSIONS

2.1 RESPONDENTS

Forty two submissions were received during public exhibition of the EA. Each submission was reviewed individually and the issues raised were identified. Table 2.1 identifies the respondents to the EA and allocates each respondent with a submission number. Table 2.1 also identifies the sections within this report where the respondent's issues are addressed.

There were 17 submissions received from individuals. The remaining 25 submissions were received from a combination of government agencies, business stakeholders and other organisations. The key issues raised in submissions related to the following matters:

- Consultation requirements;
- South West Precinct road network;
- Alternatives to and within the proposal;
- Traffic impact assessment;
- Network and road design;
- Proposed mitigation measures;
- Funding for the proposed EPLR Network;
- Timing/staging of the proposed EPLR Network;
- Land ownership and acquisition;
- Bus access arrangements;
- Biodiversity impacts;
- Air quality assessment;
- Impact on Westlink M7;
- Potential impact on infrastructure and easements;
- Impact of Archbold Road component on local residents and industry in the Minchinbury area;
- Need for additional studies.

Table 2.1: List of Respondents

Respondent	Submission No.	Sections where Issues are Addressed
Individual	1	2.2.1, 2.2.4, 2.2.5, 2.2.11, 2.2.13, 2.2.14
Individual	2	2.2.1, 2.2.4, 2.2.11, 2.2.14
NSW Department of Primary Industries	3	2.2.17
Individual	4	2.2.1, 2.2.4, 2.2.11, 2.2.14
Individual	5	2.2.2, 2.2.4, 2.2.5, 2.2.11, 2.2.14
Sydney Water	6	2.2.1, 2.2.5, 2.2.8, 2.2.17
Individual	7	2.2.2, 2.2.4, 2.2.5, 2.2.11, 2.2.13, 2.2.14
Individual	8	2.2.4, 2.2.5, 2.2.14
Individual	9	2.2.4, 2.2.5, 2.2.11, 2.2.13, 2.2.14
Nature Conservation Council of NSW	10	2.2.2, 2.2.9, 2.2.12, 2.2.13, 2.2.17
Individual	11	2.2.2, 2.2.13
ALDI Stores	12	2.2.11, 2.2.14
Individual	13	2.2.2, 2.2.4, 2.2.11, 2.2.13, 2.2.14
Individual	14	2.2.2, 2.2.4, 2.2.5, 2.2.13, 2.2.14
Department of Water and Energy	15	2.2.12, 2.2.17
Western Sydney Conservation Alliance	16	2.2.17
Individual	17	2.2.2, 2.2.4, 2.2.11, 2.2.13, 2.2.14, 2.2.17
Individual	18	2.2.4, 2.2.14
Penrith City Council	19	2.2.3, 2.2.7, 2.2.10, 2.2.11
CC Weston & Associates on behalf of LWH Pty Ltd	20	2.2.5
Minchinbury Action Group (including petition signed by 145 persons)	21	2.2.2, 2.2.4, 2.2.11, 2.2.13, 2.2.14, 2.2.17
Individual	22	2.2.2, 2.2.4, 2.2.5, 2.2.14
Individual	23	2.2.4, 2.2.5, 2.2.11, 2.2.14, 2.2.17
Individual	24	2.2.4,
Individual	25	2.2.2, 2.2.4, 2.2.5, 2.2.13, 2.2.14
Blacktown City Council	26	2.2.3, 2.2.4, 2.2.5, 2.2.7, 2.2.10, 2.2.11, 2.2.17
Department of Environment and Climate Change	27	2.2.7, 2.2.12, 2.2.13, 2.2.16, 2.2.17
VALAD Property Group	28	2.2.10
Westlink M7	29	2.2.1, 2.2.6, 2.2.11,
Integral Energy	30	2.2.8,
Individual	31	2.2.1, 2.2.4, 2.2.14
Fairfield City	32	2.2.1, 2.2.5, 2.2.7, 2.2.8, 2.2.9, 2.2.10, 2.2.11, 2.2.17
Ministry of Transport	33	2.2.9, 2.2.10, 2.2.11, 2.2.16
Transgrid	34	2.2.2, 2.2.7, 2.2.8, 2.2.17
Planning Workshop Australia on behalf of Hanson Construction Materials	35	2.2.7, 2.2.11, 2.2.16
Goodman	36	2.2.3, 2.2.5, 2.2.7, 2.2.11
BBC Consulting Planners on behalf of Fitzpatrick Investments and FDC	37	2.2.2, 2.2.5, 2.2.7, 2.2.11

Respondent	Submission No.	Sections where Issues are Addressed
Construction and Fitout Pty Ltd		
Mullane Planning Consultants – On behalf of CSR Limited, Fitzpatrick Investments Pty Ltd, GPT Group, Valad Property Groups, Bluescope Steel Limited, Australand and ING	38	2.2.10
JBA Urban Planning Consultants in association with Allens Arthur Robinson on behalf of Jacfin Pty Ltd	39	2.2.5, 2.2.10, 2.2.11
Blacktown City Council	40	2.2.4, 2.2.5, 2.2.7, 2.2.10, 2.2.11
Department of Planning (Land Management Branch)	41	2.2.1, 2.2.2, 2.2.7
Sydney Catchment Authority	42	2.2.1, 2.2.7, 2.2.8, 2.2.12, 2.2.15, 2.2.17

2.2 RESPONSES TO ISSUES RAISED

2.2.1 Consultation

Issues Raised

Submission Numbers: 1, 2, 4, 6, 29, 31, 32, 41, 42.

In summary, respondents raised the following issues:

- Lack of consultation (1, 2, 4);
- Lack of consultation with Minchinbury residents in particular those adjacent to and/or in proximity to Archbold Road (31);
- Lack of consultation with Westlink M7 (29);
- Need to consult with the Land Management Branch of DoP in relation to proposed section of road adjacent to Ropes Creek (41);
- Prior to construction consultation be undertaken by the RTA with Sydney Water and apply for any water and/or sewer adjustment (6);
- Consultation required with Fairfield City Council in relation to proposed road configuration linking the Fairfield LGA to the EPLR Network (32);
- Consultation should be undertaken with the SCA in relation to the design of any crossing of the Warragamba –Prospect Pipelines (42).

Response

The RTA has consulted with various groups/individuals during the development of the Concept Plan for the EPLR Network. Initial consultation was undertaken with local Councils, relevant government departments/authorities, utility providers, property holders, the operator of the M7 Motorway (Westlink M7) and representatives of the Aboriginal community. This constituted the initial phase of the consultation programme for the Concept Plan for the EPLR Network.

As outlined in Section 1.7.4 of the EA, consultation with the community including key stakeholders would be ongoing during the concept approval and project approval stages for the proposed EPLR Network. The phases of the consultation programme are:

Concept Plan Approval Stage

- Stage 1 – Preparation of Concept Plan and EA for submission to the Director General of DoP. Consultation with potentially affected landholders, key stakeholders, local Councils and relevant Government Departments; and
- Stage 2 – Review of submissions to the EA for the Concept Plan for the EPLR Network. The public exhibition of the EA for the Concept Plan for the EPLR Network and the consideration of submissions within this report form the initial stage of community consultation for the project.

Project Approval Stage

- Stage 3 – Update community on progress of project planning and consult as appropriate with directly affected landholders; and

- Stage 4 – Environmental Assessments of roads within the EPLR Network in accordance with the requirements of the Minister's determination.

During the Detailed Design/Project Approval stage further consultation would be undertaken with Councils, property owners, utility providers and the local community. This would specifically involve consultation with Penrith City Council, Blacktown City Council, Fairfield City Council, Sydney Catchment Authority, Integral Energy, Transgrid, Sydney Water, Westlink M7 and the DoP. This subsequent round of consultation would allow for each party to confirm their specific requirements with regard to the project (including specific utility adjustment/protection requirements) when more detailed design information is available. In addition, consultation would be undertaken with the Department of Water and Energy, Department of Environment and Climate Change and Ministry of Transport as appropriate as specific sections of the network are designed and developed.

Consultation with the local community including potentially affected residents in Minchinbury would be undertaken during the detailed design phase of the various components of the proposed network. Issues raised during the public consultation have been documented to provide input into the detailed design to be undertaken in the Project Approval Stage. A framework for the consultation program for the EPLR Network has been provided in Section 1.7.4 of the EA.

The EA was exhibited by the DoP as described in Section 1.2 of this report.

Following public exhibition of the EA and receipt of submissions, the RTA has undertaken further consultation with various stakeholders, including:

- Westlink M7: Consultation was initially undertaken with representatives of Westlink M7, the DoP and RTA on 29 August 2006 at the Westlink M7 Control Centre. The purpose of the meeting was to discuss the Concept Plan for the proposed EPLR Network. An additional meeting was held on 24 October 2007. In response to the Westlink M7 submission, a meeting was held on 29 July 2008 with the General Manager, Westlink Motorway Limited, DoP and the RTA to address the issues raised by Westlink M7.

- Land Management Branch, DoP: A meeting was held with representatives of the Office of Strategic Lands (formerly known as the Land Management Branch of DoP) to discuss changes to the proposed Archbold Road connection in relation to land owned by the Department. As a result of these discussions the RTA has further considered and subsequently refined the corridor alignment for the proposed Archbold Road connection. Section 4 of this report provides further details relating to the refined alignment for the Archbold Road corridor;

- Penrith City Council: A meeting was held with Penrith City Council on 29 August 2008 to discuss Council's preferred alignment. As a result of these discussions the RTA has further considered and subsequently refined the corridor alignment for the proposed Erskine Park Link Road. Section 4 of this report provides further details relating to the refined alignment for the Erskine Park Link Road corridor;

- Transgrid: A meeting was held with representatives of Transgrid on 22 February 2008 in relation to the RTA's proposal for the road frontage along the Transgrid property;

- Land Owners: Discussions have taken place with representatives of Jacfin Pty Ltd and Fitzpatrick Investments Pty Ltd in relation to the potential impact of the proposed corridor alignments on development potential of industrial lands. As identified in Section 5.2.2 of the EA, initial route selection criteria included consideration of opportunities for future development within the NWP. Subsequent to discussions with landowners, the RTA has refined the proposed EPLR Network corridor alignments as described in Section 4. Copies of key stakeholder correspondence are included in Appendix A; and

- Representatives of the Aboriginal community: Further specialist Aboriginal heritage investigations of the area potentially impacted by the proposed EPLR Network have been undertaken since exhibition of the EA (refer Sections 2.2.16 and 3.2). On 10 September 2008 the RTA, Navin Officer Heritage Consultants and representatives of the following organisations/associations undertook a site inspection of the proposed alignment:
  - Darug Land Council;
  - Darug Custodians Aboriginal Corporation;
  - Deerubbin Local Aboriginal Land Council;
  - Darug Aboriginal Cultural Heritage Assessments;
  - Darug Tribal Aboriginal Corporation;
  - Jacfin Pty Ltd;
  - Fitzpatrick Investments Pty Ltd; and
  - Goodman.

The draft Statement of Commitments included in the EA has been revised to include Community Consultation during the detailed design/project approval phase (refer Section 5).

2.2.2 Alternatives

Issues Raised

Submission Numbers: 5, 7, 10, 11, 13, 14, 17, 21, 22, 25, 34, 37, 41.

In summary, the respondents raised the following issues:

- Alignment Changes
  - From Lenore Lane across Ropes Creek and entering the BCC LGA, the alignment should be revised in consultation with BCC, PCC, and DoP (19, 37);
  - The proposed alignment near Ropes Creek will restrict the width and shape of any proposed subdivision by the LMB. Adjustment to the northern route alignment is recommended (41);
  - Proposed adjustment to the northern route to avoid sensitive woodlands area and avoid small pockets of non-developable lands (10, 41);
  - Transgrid in relation to the Transgrid Sydney West substation site request that due to potential impact of increased traffic on the security of the site that the proposed link road be repositioned away from the substation and that any future link road be positioned to the west of the site (34).

- Archbold Road
  - Existing infrastructure should be upgraded without the need for the Archbold Road connections and ramps (17, 21, 22).

- External Roadworks
  - Include west bound ramps on Archbold Road (11);
  - Need east and west on/off ramps at Mamre Road/Erskine Park (11);
  - Overpasses need to be upgraded at Erskine Park (11);

- Erskine Park, Roper Road and Carlisle Avenue should be upgraded (5, 7, 11, 13, 14, 25);
- Intersection at Erskine Park Road and Mamre Road needs signals and the roadway widened (11).

Response

Overview

The RTA has developed various network options for servicing the fully developed NWP and SWP of the Hub with the aim of designing for the worst case scenario and to develop the appropriate road network for the NWP. Details of the specific network feature for each scenario is described in detail in Section 2.4.4 of the EA and Working Paper No 2 of the EA.

The RTA has also evaluated various network options with alternative internal and external road links for both the NWP and SWP, which is designed to accommodate additional traffic generated from the area south of the Sydney Water supply pipeline (Warragamba-Prospect Pipelines 1 & 2).

Proposed Alignment Changes

As outlined in Section 2.2.1, meetings have been held with the Land Management Branch of DoP, Penrith City Council and potentially affected landholders to discuss proposed changes as outlined in some of the submissions received during the EA public exhibition period. Figure 1 shows the proposed modifications to this corridor alignment as a result of these discussions.

Road	Response to Proposed Alignment Change
Archbold Road	The DoP proposed a change to the alignment of the Archbold Road connection. The revision of the alignment would minimise potential impacts on the development potential of land owned by the Department and allow the design of a proposed industrial subdivision to be simplified with better access to the proposed EPLR Network. Figure 1 shows the proposed refinement to the corridor alignment compared with that proposed in the EA. The alignment has been modified to meet this requirement (refer Section 4).
Erskine Park Link Road	Penrith City Council and landowners requested that the route be realigned in relation to the section of the Erskine Park Link Road which includes crossing/s of Ropes Creek. The revised alignment to the north of the crossings proposed in the EA would reduce the length of the crossing of Ropes Creek. The benefits of the proposed change include rationalisation of the Ropes Creek crossing, consolidation of land for future development and a reduced impact to the overhead power lines. However, this change has resulted in an increase in length of the Erskine Park Link Road corridor by approximately 100m.
Old Wallgrove Road	Transgrid in their submission to the EA have objected to use of the existing section of Old Wallgrove Road as part of the EPLR Network. Consultation commenced with Transgrid in relation to the network in 2006 and continued through to finalisation of the EA with the most recent meeting between the RTA and Transgrid taking place on 22 February 2008. The RTA has considered alternatives to the use of the existing section of Old Wallgrove Road. The outcome of this review confirmed the existing section of Old Wallgrove Road as the optimum location for this component of the proposed EPLR Network. This conclusion is confirmed based on the already existing connection to the SWP by way of a 2 lane roadway, thereby eliminating impacts associated with a new corridor footprint on land, infrastructure assets and the environment.

Road	Response to Proposed Alignment Change
	The suggestions made in Transgrid's submission would be considered during the project approval and detailed design phase of the project. However, it should be noted the proposed road corridor has been narrowed to 30m along Transgrid's frontage to minimise the impact on Transgrid's assets such as electricity pylons.

Archbold Road

The purpose of the proposed Archbold Road connection and associated ramps to the M4 Motorway is to allow the optimal distribution of traffic to and from the WSEH onto the surrounding road network. Restricting the use of Archbold Road would increase traffic on alternate routes and most importantly on the critical intersections along Wallgrove Road. The following summarises the potential impact on the adjoining road network for two scenarios:

1. If there is no connection between M4 and Great Western Highway, this is likely to:
   - Increase traffic volumes on parallel north-south routes including M7 north of Old Wallgrove Road, Wallgrove Road north of the direct link, Erskine Park Road, Roper Road, Carlisle Avenue, Bennett Road (exceeds environmental capacity for a collector road passing schools and local shopping centre) and Mamre Road;
   - Increase traffic volumes on east-west routes including Wonderland Drive, Old Wallgrove Road close to Wallgrove Road, the direct link, Lenore Lane, Great Western Highway east of Archbold Road and the M4 between Roper Road and Wallgrove Road; and
   - Reduce traffic volumes on Archbold Road north of the M4, Great Western Highway west of Archbold Road, Erskine Park Link Road between Old Wallgrove Road and Archbold Road and Old Wallgrove Road south of Erskine Park Link Road.

2. If there is no east facing ramps on M4, this is likely to:
   - Increase traffic volumes on Wallgrove Road, Wonderland Drive, Old Wallgrove Road, the proposed Erskine Park Link Road between Old Wallgrove Road and Archbold Road, the M4 west of Archbold Road, and the Great Western Highway between the M7 and Archbold Road; and
   - Reduce traffic volumes on Archbold Road north of the M4, Great Western Highway west of Archbold Road and the M4 east of Archbold Road.

The analysis was based on projected volumes modelled for 2016 for both AM and PM peak two hours.

External Roadworks

Based on the modelling analysis, a list of external roads that require upgrading to accommodate the traffic demand generated from NWP and SWP of the Hub development has been identified and compiled as shown in Section 4.6 of Working Paper 2: *Traffic Study* of the EA. However, it should be noted that external road improvements identified in Section 4.6 of Working Paper 2 of the EA do not form part of this Concept Plan approval. Hence, the issues raised in relation to Erskine Park Road would be addressed separately.

2.2.3 Property Ownership

Issues Raised

Submission Numbers: 19, 26, 36.

In summary, the respondents raised the following issues:

- RTA should be the acquisition and the construction authority for the EPLR Network and the authority responsible for the road (19);
- Site Description needs to be updated (26, 36).

Response

The draft *State Environmental Planning Policy (Western Sydney Employment Hub) 2008* (WSEH SEPP 2008) identifies the relevant Council as the acquisition authority in relation to the proposed EPLR Network. The DoP has subsequently advised that these matters will be considered in finalising the WSEH SEPP 2008.

The roads within the proposed EPLR Network are sub-arterial roads and would be constructed either by the local Councils who would be the road authority or developers of adjoining parcels of land.

The land ownership details have been updated to take account refinements to the corridor alignments for the EPLR Network since the development of the Concept Plan (refer Table 2.2).

Table 2.2
Updated Property Ownership Details

Property Owner	LOT/DP
Austral Bricks	DP 341/1094500, 10/1072146, 11/1072146, 12/1072146, 13/1072146, 14/1072146, 10/1061232, 11/1061232
Dial A Dump ACN 114 843 453 P/L	2/262213, 1/400697, W/419612
Jacfin Pty Ltd	201-204/1117111
CSR Limited (Bluescope)	1-6/1094504
Fitzpatrick Investments P/L (Cottle)	7/253678, 8/253678, 97/1087837, 10/253678, 130/1125690
Hartford Lane P/L Australand Industrial No 111 P/L	204/1074277, 205/1074277, 206/1074277, 207/1074277, 208/1074277, 209/1074277
Sumy P/L (Tesrol Group)	9/241859, 11/241859, 13/241859, 1/650179

Property Owner	LOT/DP
Mirvac, James Fielding Funds Management Ltd – Old Wallgrove Rd Trust, Perpetual Nominees (property custodian on land title).	101/1028252
Sargents Charitable Foundation Ltd	4/563249, 8/240143
Hanson Construction Materials (Pioneer Concrete Qld)	11/558723
Department of Planning	4/262213
Transgrid	8/229769, 6/229769
Sydney Water, Sydney Catchment Authority, Telstra, Agility, Integral.	Easements

2.2.4 Archbold Road

Issues Raised

Submission Numbers: 1, 2, 4, 5, 7, 8, 9, 13, 14, 17, 18, 21, 22, 23, 24, 25, 26, 31, 40.

In summary, the respondents raised the following issues:

- Not sure if the proposed Archbold Road extension would result in land acquisition (1);
- Better road link could be provided by improving Carlisle Avenue between Eddy Road and Roper Road. Also Roper Road leading to M4 could be improved. This has no impact on residents as it does not go through residential areas (14);
- Property values affected (1, 5, 7, 8, 9, 22, 23);
- Currently there are too many accidents on the M4 due to confusion with off ramp signage between Roper Road and Wallgrove Road (2, 4);
- Another on/off ramp between existing Roper Road ramps and Wallgrove Road ramps is not needed and is not going to benefit Minchinbury residents (2, 4, 21);
- Upgrading of ramps to allow on/off movements on Roper Road on the western side is a better option(2, 4, 13);
- Providing another access to M4 between Roper Road and Wallgrove Road will slow traffic down on the M4 itself (5, 7, 21, 25);
- Roper Road is already two lanes in each direction for much of its length and could readily be used as a link to the proposed link road (17, 25);
- The entire length of Archbold Road should be included for upgrading, including intersection treatments at Sargents Road, Robinson Street and the Great Western

Highway, as part of the development of the WSEH. The road should be upgraded at no cost to Council, as the nexus is generated from development of the WSEH and not existing traffic volumes and normal traffic growth (21, 24, 26, 40);

- In the absence of any detailed traffic modelling, the suggested two lane reconstruction of Archbold Road is difficult to comprehend. The previous traffic study for the Eastern Creek Precinct identified Archbold Road as a four lane divided carriageway. Therefore, Council could not support the use of Archbold Road to provide access to WSEH unless the road is upgraded to a main collector standard which involves two lanes in each direction and a combined footpath/cycleway on one side including bridge widening over the M4 Motorway (26);

- The proposed design levels shown on RTA plan for the intersection of Archbold Road and Sargents Road do not match existing levels and therefore requires redesign if access is to be maintained to Sargents Road (26);

- Is the proposal linked to Dial-A-Dump proposal for a 24 hour 7 day a week tip to be located within 500m of residents in Minchinbury? (2, 4, 31);

- Need to close Robinson Street from Archbold Road and make it a cul-de-sac (18).

Response

Land Acquisition

The Concept Plan has identified the corridor alignment for the proposed EPLR Network. During the Project Approval Stage land acquisition and compensation details would be finalised in consultation with the affected land owners as detailed in Section 5.12.2 of the EA. With respect to Archbold Road upgrading between M4 and Sargents Road, generally the proposed road upgrade would be contained within the existing road corridor. However, this is to be confirmed during the detailed design phase of the project.

Traffic

The Archbold Road Link would function as one of the critical links in the proposed EPLR Network providing a northern connection to the Hub. There would be major impacts to adjoining roads and intersections without the introduction of the Archbold Road link as detailed in Section 2.2.2 of this document and further improvements would be required to external roads as detailed in Section 4.6 of Working Paper No 2 of the EA. An alternate link road suggested by respondents by improving Carlisle Avenue between Eddy Road and Roper Road and improvement to Roper Road leading to M4 or west facing ramps on Roper Road would not provide a direct northern connection to the WSEH.

The traffic assessment undertaken for the EA has since been updated based on more recent land use and employment/population forecasts (including employment forecasts and WSELIA) for the WSEH (refer Section 3.1 of this report). The updated traffic modelling results support the preferred road network option with four lanes for the EPLR Network.

During the Project Approval stage further traffic modelling would be undertaken in consultation with the local Councils and the Westlink M7 operators. The outcome of this work would form part of the detailed design for roads, intersections and associated infrastructure works.

Design

The issues raised by the community and Council in relation to design matters including provision of additional signage, intersection designs including the treatment of Archbold Road and Robinson Street, ramp connections to the M4 and matching levels at Sargents Road would be addressed during the Project Approval stage.

Relationship with Other Proposals

The *Draft Western Sydney Employment Hub SEPP* (2008) identifies the relationship between the proposed EPLR Network and other proposed developments within the WSEH.

General

The proposed Archbold Road link would provide direct northern access to the WSEH development.

The Dial-A-Dump proposal is subject to a separate development approval process and is not linked to the EPLR Network project. It is understood a development application has been lodged recently by Dial-A-Dump to redevelop the old quarry site with a new access from the south east corner of their site linking with Old Wallgrove Road to the south.

During the Project Approval stage, detailed environmental assessment would be undertaken that would consider the direct and indirect impacts of the EPLR Network with other (approved) proposals/developments, including consideration of potential health and lifestyle impacts.

2.2.5 South West Precinct

Issues Raised

Submission Numbers: 6, 8, 20, 26, 32, 36, 37, 39, 40

In summary, the respondents raised the following issues:

- The Concept plan does not provide a road network connecting employment areas in the Fairfield, Blacktown and Penrith LGAs with the M7 and M4 in the terms designated by the DGRs. The network should be considered for the whole of the Western Hub (39);
- Potential impacts include:
  - Access from properties to Aldington Road (8);
  - Impact on land values (8);
  - Impact on quality of life of residents (8);
- Need to identify timing for SWP development (8);
- Land acquisition – Need to identify requirements in relation to land acquisition and timing (8);
- No road linkage is provided to the southern extension of the Hub which should include an east/west link along Burley Road/Chandos Road to the M7, M4, Wallgrove Road and Wetherill Park Industrial Area (20, 40);
- Without the southern link the modelling confirms that there is insufficient capacity in the network north of the pipeline (26);

- The EPLR cannot operate at satisfactory levels unless the SW link is provided and a commitment to the SW link to the M7 Motorway is required (26);

- Consultation required with FCC in relation to proposed road configuration linking the Fairfield LGA to the EPLR Network (32);

- Detailed investigation and comprehensive studies should be undertaken on the provision of future links to the SWP so that work in relation to Garfield Road in East Horsley Park is integrated with the proposal for the extension of Old Wallgrove Road and North South Link Road (36, 37, 40);

- Planning is needed for a new interchange on the M7 Motorway south of the Sydney Water Pipeline (6).

Response

The Western Sydney Employment Hub as defined in the NSW Government Metropolitan Strategy comprises over 2000 hectares (ha) of land in the vicinity of the M4 Motorway and M7 Motorway interchange located in the Blacktown, Fairfield, Holroyd and Penrith LGAs. The land is divided into 10 precincts.

The primary objective of this project is to develop a road network which links industrial lands within the NWP including the Erskine Park (Precinct 7) and Eastern Creek (Precincts 1 and 2), Industrial Precincts and future industrial lands (Precincts 6 and 8) with the M4 and M7 Motorways (refer Figure 2). The EPLR Network is a strategic road infrastructure project that is crucial to the ongoing development of the Hub. The proposed EPLR Network is located within the Blacktown and Penrith LGAs but extends to the boundary of the Fairfield LGA so as to link the employment lands in that LGA. As outlined in Section 2.5 of the EA, the road network for the SWP is the subject of a separate environmental assessment process.

Other objectives of the Project include:

- Development of an internal road network that adequately services the industrial lands of the NWP and provides a connection to future industrial lands in the SWP;

- Ensuring new roads connect with the existing road network;

- Provision of bus, cyclist and pedestrian facilities as part of the EPLR Network;

- Protection of the environment by either avoiding, minimising or mitigating disturbance to environmentally sensitive areas; and

- Meeting community expectations in relation to provision of services and facilities.

In order to define the road network required to service the NWP of the Hub, the RTA developed a preferred network from the assessment of alternative internal and external road link options for a fully developed NWP and SWP which is designed to accommodate additional traffic that will eventually be generated from the SWP. As part of the SWP development of the Hub, a road network within the SWP needs to be developed linking with the proposed EPLR Network in the NWP. The proposed EPLR Network was tested to determine whether it will meet the traffic demand when the SWP development is completed.

The RTA evaluated various network options with alternative internal and external road links for both NWP and SWP, which is designed to accommodate additional traffic generated from the area south of the Sydney water supply pipeline. The additional road network required to service the SWP would include:

- A southern east-west route ('Southern Route' commencing south of Bakers Lane to the west) linking Mamre Road with Wallgrove Road and M7; and

- Eastern and western north-south connections between the SWP and the NWP (Old Wallgrove Road and "N-S Link" respectively) that link the northern (NWP) and the southern (SWP) east-west link roads.

In the development of the proposed four lane divided road network for the NWP, the RTA has taken into consideration the comparison of modelled volume to capacity ratios, in addition to future land and road network developments required for the SWP. However, it should be noted that the issues raised in relation to the SWP would be addressed as part of a separate approval process for the SWP as it does not form part of this Concept Plan approval. Appendix B of this report is an updated traffic report for the project based on more recent land use and employment/population forecasts for the WSEH. The updated traffic report provides details of the V/C ratios for the access links with the proposed EPLR Network and illustrates that the proposed EPLR Network design results in acceptable uncongested conditions at year 2031.

Furthermore, a list of external roads that require upgrading to accommodate the traffic demand generated from NWP and SWP of the Hub development, have been identified. However, as outlined in Section 4 of the EA the improvement to the external roads does not form part of this concept plan approval.

The network options within the SWP are the subject of ongoing technical investigations, strategic planning and consultation and consequently will be assessed separately and have not been included in the EPLR Network assessed in the EA. It is expected further consultation would be initiated by the DoP with Fairfield City Council and potentially affected landholders and residents during development of the network of roads for the SWP.

2.2.6 Westlink M7

Issues Raised

Submission Number: 29.

In summary, the respondents raised the following issues:

- The proposed road will provide an alternative traffic route to motorists and facilitate toll avoidance by motorists impacting on Westlink's business (29).

Response

The roads proposed in the Concept Plan would likely to be either sub-arterial or collector roads under the care and control of local Councils. It should also be noted that the nearest parallel road to M7 Motorway proposed as part of EPLR Network of roads falls outside the M7 Exclusion Zone.

In response to the Westlink M7 submission a meeting was held on 29 July 2008 with the General Manager, Westlink Motorway Limited, DoP and the RTA to address the issues raised by Westlink M7. Consultation with Westlink M7 would continue during the Project Approval Stage, particularly in relation to the intersection with Wallgrove Road /M7 and any works required within the Westlink M7 road corridor.

2.2.7 Road Design

Issues Raised

Submission Numbers: 19, 26, 27, 32, 34, 35, 36, 37, 40, 41, 42.

In summary, the respondents raised the following issues:

- Classification of the road;
  - Classification needs to be confirmed (26, 35);
  - The EPLR should be classified as a State Road not a local road as proposed (26);
  - The EPLR network should be an access denied road (26);

- Concept Plan implies locations are subject to change which is inconsistent with the draft SEPP (37);

- Road Corridor and infrastructure
  - The need for a 40m corridor to be reviewed in terms of allowing landowners to provide batters within their property as is the case for Lenore Lane (19, 36);
  - Typical cross section needs to be updated to take account of recent approvals on Old Wallgrove Road (36);
  - Median strip should be reduced in width to reduce overall ecological footprint of the road or the median strip be landscaped with endemic native species (27);
  - During detailed design the typical cross sections showing batters should be reviewed as BCC desirable batter slopes are 5 to 1 (26);
  - The impact of the road on floods greater than the 100 year ARI event up to a Probable Maximum Flood should be assessed (26).

- Bus, Pedestrian, Cycleway Access
  - The shared pedestrian footpath and cycle way should run parallel to each of the proposed link roads and connect up with the M7 pedestrian/cycle footway and local networks where possible and designed in accordance with the NSW Bicycle Guidelines (RTA 2003) (26);
  - Need to provide details of how the provision of bus, cyclist and pedestrian facilities, shared pathways and bus access arrangements will achieve identified outcomes (32);
  - Further detail on the role, impact and feasibility of incorporating bus lanes and bus priority as part of the network. Need to substantiate the projected bus use (26);

- Extent of the proposed Erskine Park Link Road Network
  - External roads that require upgrading are not part of the Concept Plan (19);
  - The section of Archbold Road between Sargents Road and Great Western Highway has been omitted from the strategic network however it should be included for upgrading including intersection treatments at Sargents Road. The road would need to be upgraded to a main collector road (40);

- Design of the road should be revised to take account of additional studies including threatened species, water quality assessment, Aboriginal and Cultural heritage and noise assessment (32);

- Road Hierarchy – The existing accessibility afforded by its right of way and road access to the Old Wallgrove Road/Wallgrove Road and Archbold Road access is not diminished, in terms of the distance its vehicles would be required to travel to the M4 and M7 interchanges, the manoeuvrability of trucks and the level of service available to Hanson vehicles at intersection (34, 42).

Response

Classification of the Road

The roads within the EPLR Network are likely to be classified sub-arterial roads and would be constructed either by the local councils who would be the road authority or developers of adjoining parcels of land. It is anticipated that the EPLR Network would be an access denied road. Consultation would be undertaken with key stakeholders during the Project Approval stage to confirm the access status of the EPLR Network.

Concept Plan implies locations are subject to change which is inconsistent with the draft SEPP

If the amended alignment is accepted by the DoP it is expected that the draft SEPP would be amended to reflect changes to the road alignment in the EPLR Network as detailed in the Preferred Project Report (refer Section 4 of this report). Within the broad framework of the proposed road corridor, the road alignment would be further refined if required during the Project Approval Stage to further minimise impact to natural and man made habitat and structures as well as to maximise the development potential of parcels of adjoining land.
Road Corridor and Infrastructure

A typical cross section is provided in Appendix C and is consistent with the existing road cross section in the Penrith Council area and recent proposal for road widening along Old Wallgrove Road. As a result of consultation with potentially affected property holders the width of the proposed road corridor has been reduced from 40m to 30m (refer Section 4) on the assumption that road batters would be incorporated within private properties, similar to the strategy adopted by Penrith City Council for the upgrade of the section of Lenore Lane east of Erskine Park Road. Batter slopes and batter spill for sections of the proposed EPLR Network would be further investigated and confirmed during the detailed design/project approval stage. The extent of the median strip and opportunities for landscaping with endemic species would also be further investigated during the detailed design phase. Any such design will also need to take into account the road safety issues and on going maintenance aspects of the road infrastructure.

The impact of the construction of road and associated infrastructure within the proposed EPLR Network on flood levels including Probable Maximum Flood would be further investigated during the detailed design/project approval phase. The road level of the bridge crossing at Ropes Creek has been approximated to provide a nominal 1m freeboard to the underside of the bridge structure for a 1 in 100 year ARI flood event. Further, consideration of climate change scenarios (potential for increases in rainfall duration and intensity) on specific design components such as bridges would also be considered during the detailed design phase.

Bus, Pedestrian, Cycleway Access

A shared pedestrian/cycle path would be provided on all routes of the EPLR Network. A connection plan identifying external connections with adjoining networks is provided as Figure 3. Appendix C provides a cross section showing the proposed allocation of the shared path and bus facilities within the 30m corridor.

Details for the location of the shared path, pedestrian facilities and bus access arrangements would be further investigated and confirmed during the detailed design/project approval stage.

Extent of the Proposed EPLR Network

Surrounding road upgrades have been considered and identified in the current analysis. Details of the improvements are included in Figure 4.1 of the EA and Table 4.9 and Figure 4.5 of Working Paper No 2: Traffic Study of the EA. Details associated with upgrade works on roads surrounding the WSEH do not form part of this project, however they would be further investigated and confirmed during the Project Approval stage.

With respect to the proposed Archbold Road connection, the proposed EPLR Network extends to Sargents Road to join to the southern extent of the existing Archbold Road. The existing Archbold Road is listed as one of the external roads that would require upgrading (refer Figure 4.1 of the EA and Table 4.9 and Figure 4.5 of Working Paper No 2: Traffic Study of the EA).

The proposed Archbold Road connection is an important link to support the projected traffic demand without which other parallel north-south and east-west routes would be subject to additional traffic and congestion as outlined in Section 2.2.2.

Design of Road

It should be noted that the preferred project (as defined in Section 4 of this report) has been developed in consideration of the results of additional specialist investigations as detailed in Section 3 of this report.

During the Project Approval phase detailed design would be undertaken for individual components of the EPLR Network based on further detailed studies. These studies would be based on the proposed standard cross section as outlined in Appendix C. Refinements to this cross section would be made if required. Further detailed studies would include identification of the need and extent of mitigation works, including for noise attenuation, flood mitigation and management of flora and fauna and heritage aspects.

Road Hierarchy

Based on traffic modelling results, the roads within the EPLR Network are required to be four lane divided carriageways. No hierarchical system is proposed at the Concept Plan stage. This would be the role of the relevant local Council at the Project Approval stage. Nevertheless, it is anticipated that Councils would be consistent in their approach with respect to classification of these roads and that these roads are likely to be either sub-arterial or collector roads.

2.2.8 Potential Impact on Infrastructure and Easements

Issues Raised

Submission Numbers: 6, 30, 32, 34, 42.

In summary, the respondents raised the following issues:

- Need to identify water related assets within the road corridor and assess any adverse impacts associated with the construction of the proposed road and incorporate appropriate mitigation measures (6, 42);

- Need to identify liabilities for the construction phase and planned operational life of the roadway (32);

- Transgrid in relation to the Transgrid Sydney West substation site request that due to potential impact of increased traffic on the security of the site that the proposed link road be repositioned away from the substation and that any future link road be positioned to the west of the site (34);

- Warragamba Prospect Pipelines :
  - Management and maintenance of pipelines in terms of access (42) ;
  - Integrity and Security of the pipelines (6, 42);

- Pipelines should be protected by security fencing for any development adjacent to or crossing the corridor (42);
- SCA should be identified as property owner of the Warragamba Prospect pipelines and corridor (42);

- Road may provide a corridor for future transmission line routes between Integral Energy's major electrical assets, ensuring that critical supply to significant developments is made available in the future (30).

Response

As described in Section 2 of the EA and Section 3 of Working Paper No 1 physical constraints including existing and proposed utilities infrastructure were taken into account in development of the Concept Plan for the proposed EPLR Network. This included existing transmission towers, a proposed Transgrid 500kV line and existing and proposed Sydney Water supply pipelines. Design refinements identified in Section 4 of this report have also been developed in consideration of transmission towers and other utility infrastructure. The design changes and refinement in general have resulted in reduced impact to existing infrastructure such as overhead power and transmission lines and associated structures.

Warragamba – Prospect Pipelines No 1 & 2 (Sydney Water Supply Pipelines)

- Due to the proposed biodiversity corridor within the Penrith LGA, a bridge crossing location is recommended to minimise impact on flora and fauna corridors;

- Both the western and eastern north-south alignments (N-S Link and Old Wallgrove Road respectively) would need to cross the existing twin 2100mm diameter water supply pipelines for the future connection to the SWP;

- Based on work-as-executed plans obtained from Sydney Water/ Sydney Catchment Authority, the eastern crossing at Old Wallgrove Road is concrete encased and as such it is not envisaged that any further protection works would be required for the pipeline in this location. However, this is to be confirmed during the detailed design phase; and

- Consultation would be undertaken with the SCA to address security and liability issues during construction and operational phases of the project.

Electricity Transmission Easements

- Given the close proximity of the TransGrid sub-station, the local environment is dominated by electricity transmission easements. The proposed road network alignments have been developed to have a minimum impact on the electricity utilities;

- Any proposal to accommodate Integral Energy transmission lines within the proposed road corridor would be considered during Detailed Design and Project Approval stage.

- TransGrid and Integral Energy utilities have been identified within the area and consultation was undertaken with both authorities;

- The proposed road network has been developed to avoid electricity towers and provide as much clearance as possible between the road boundary and electricity tower structure. Relocation of towers has been avoided;

- The proposed road network alignments endeavor to cross under the overhead HV cables at locations close to the electricity towers where sag is at a minimum. This is desirable as cable sag can vary with ambient temperature;

- The vertical alignment endeavors to be in cut or at ground level at locations where the alignment and overhead cables intersect; and

- The proposed road network endeavors to intersect the cables and easements on a perpendicular alignment where possible.

Old Wallgrove Road (adjacent to Electricity Sub-Station)

- The existing road reserve in the vicinity of the sub-station is in the order of 18m wide. The local constraints consist of: electrical stanchions on both sides of the reserve; the narrow road reserve and a secure building to the west.

- There are two existing stanchions to the east of the road reserve that are offset 5-6m from the road boundary and therefore restrict widening possibilities. To accommodate widening on the east, relocation of the stanchions would be required and it is understood that this would not be a desirable option to utility authorities;

- Widening to the west is recommended. There is approximately 38m between the existing eastern road boundary and the western HV stanchions. This is considered sufficient to provide for proposed widening and adequate horizontal clearance between the road boundary and electricity stanchion;

- A proposed road corridor of 30m is recommended to provide adequate horizontal clearance between road boundary and western stanchions and maintain the existing building; and

- During the Project Approval Stage, as part of addressing Transgrid's concerns measures would be taken to protect the electricity assets.

Works to be considered would include relocation of the low voltage over head power lines located to the west of Old Wallgrove Road and provision of a new road access to the building.

2.2.9 Bus Access Arrangements

Issues Raised

Submission Numbers: 10, 32, 33.

In summary, the respondents raised the following issues:

- Need to substantiate projected usage (32);

- Proposed implementation strategy is problematic and may delay implementing bus services if Councils and private developers are responsible for subsequent detailed planning, design and project approval components of the various roads (33);

- Public transport needs to be viewed on a network wide basis (33);

- Due to lack of detail in terms of staging it is difficult to assess public transport issues (33);

- There is an absence of a detailed transport management and accessibility plan and modelling to justify the levels of trips predicted (32);

- The proposal needs to be consistent with SEPP 59 which provides mode split targets (33);

- Bus routes need to lead directly into the area (10).

Response

As described in Section 4.6 of the EA the EPLR Network would facilitate bus access via the NWP lands in a manner consistent with the Ministry of Transport's plan to improve bus access between the Blacktown and Mt Druitt centres. The proposed Erskine Park Link Road would act as an east west spine for NWP lands off which buses could penetrate further into the local road network if required. This road would be at least 4 lanes wide in order to facilitate bus and general traffic movement. A feeder service to link with Liverpool Parramatta T-Way to the east of the Hub could feasibly operate subject to patronage demand and Ministry of Transport approval.

Only a small proportion of total trips into and out of the site are predicted to be by bus and as such dedicated bus only lanes would not be warranted.

2.2.10 Implementation Staging and Funding

Issues Raised

Submission Numbers: 19, 26, 28, 32, 33, 38, 39, 40.

In summary, the respondents raised the following issues:

- Proposed road upgrades on Mamre and Erskine Park Roads should be undertaken concurrently with development of the land south of the water pipeline (19);

- Staging of development should ensure that development generated traffic does not exceed capacity in the network north of the pipeline (26, 40);

- Staging Plan should be prepared to ensure that each precinct in the Hub is able to achieve its development potential (39);

- Suggestions in relation to staging options provided in Submission 39;

- Proposed implementation strategy is problematic in that if Councils and private developers are responsible for subsequent detailed planning, design and project approval components of the various roads, fragmentation of development may occur (33);

- Further detail should be provided on the appropriate staging of future road works (39);

- Need to integrate the network with existing and future development (28, 32);

- Need to identify funding strategy (28, 38, 39);

- Need to identify responsibility for the funding and implementation of the various components of the network (26, 39).

Response

Implementation Staging

The RTA has identified an EPLR Network that would provide the best traffic outcome with appropriate connections to the external road network. The proposed road network provides road corridors for the key link roads within the NWP. It is anticipated that road construction would be staged to suit the Hub development and ultimately be a four lane road similar to the recently constructed Lenore Lane. The predicted traffic volumes for the North-South Link Road indicate that a staged construction could be implemented whereby under the first stage, 2 lanes are constructed with upgrading to ultimate 4 lanes to suit the timeframe for development of adjoining parcels of land (refer Figure 4).

Suggestions in relation to staging options provided in Submission 39 are consistent with the approach adopted in the Concept Plan. In general, applications for project approval would address the road requirements to service the precincts together with any necessary ancillary works. These would take into account more localised features and the interaction of the stages of the network with the existing and proposed connecting roads.

Connections to the external road network would be required early in the staging strategy to provide unimpeded access in and out of the NWP as development occurs. Improvements to the external road network as identified in Table 4.9 and Figure 4.5 Working Paper 2: Traffic Study of the EA would need to be incorporated in the staging strategy to match the development of the EPLR Network.

Funding

The funding strategy is being developed by the DoP in consultation with major stakeholders to work out how best to deliver the necessary infrastructure for the Hub.

2.2.11 Traffic

Issues Raised

Submission Numbers: 1, 2, 4, 5, 7, 9, 12, 13, 17, 19, 21, 23, 26, 29, 32, 33, 35, 36, 37, 39, 40.

In summary, the respondents raised the following issues:

- Modelling:
  - There appears to be inconsistency between the stakeholder modelling reports in relation to land use, trip generation rates and distribution and assumed network changes. The impacts have been assessed in terms of peak hour movements and not total weekday/weekend traffic (29);
  - Without the southern link the modelling confirms that there is insufficient capacity in the network north of the pipeline. Without the southern connection traffic volumes will be higher than forecast (26);
  - No traffic volume information has been provided on the section of Archbold Road between Sargents Road and Great Western Highway (26);
  - Assessment needs to investigate the need for additional links to cater for expected traffic and the routes that may be used for the potential Badgerys Creek Airport (32);
  - Option analysis incomplete – Need to consider an option that includes the southern east-west link road without the Archbold Road east side ramps to allow implications of the southern east-west link road to be assessed in the absence of the additional connection points to the M4 at Archbold Road (37).

- Impact of access points to the M4 from Archbold Road:
  - Addition of extra entry/exit point at Archbold Road would slow down traffic as there would be 6 entry/exit points within approximately 2km of the M4 between Roper Road and Wallgrove Roads (17);
  - Traffic impacts on the capacity of the M4 should be considered further. Additional on loading ramp from Archbold Road to the M4 could exacerbate traffic congestion at the existing M4/Erkine Park Road interchange (32);
  - Need to address congestion issues on the M4 east of Erskine Park Road, during peak time and whether there is capacity to accommodate the extra traffic from the redevelopment via Archbold and Wallgrove Roads (32);

- Intersection analysis:
  - Needs to be undertaken to identify the improvement required to accommodate the traffic demand that will be generated from NWP and SWP of the Hub (19, 33, 35, 36, 39, 40);
  - The OWR/Wallgrove Road/M7 Motorway interchange needs to be assessed to see if it is capable of accommodating the long-term requirements of the Hub network (32, 36, and 39).

- Impact on external roads
  - Increased traffic in Minchinbury (1, 22, 24);
  - Archbold Road is bordered by houses that would be affected by any increased traffic to the road (2, 4, 5, 7, 9, 12, 13, 17, 21, 23);
  - Increase in truck movements (17, 21).

Response

Overview

In order to define the road network required within the NWP, strategic traffic modelling was undertaken by the RTA to identify the traffic demand for the NWP and the traffic that would access the SWP through the NWP. Several options were tested to identify a preferred network.

The RTA 2004/05 base year and 2006 M7 response models were assessed to examine the modelling methodology and the ability of the model to replicate existing traffic conditions in the vicinity of the Hub. The future year 2016 modelling was reviewed, with a particular focus on the local area assumptions including details of land use, trip generation, trip distribution and road network improvements.

In March 2007, the NSW State Government released an 'Action Plan for Sydney's Employment Lands' covering the whole of the Sydney Region. A feature of the action plan is the announcement by the State Government of the Western Sydney Employment Lands Investigation Area (WSELIA) in the area between the Hub and Badgerys Creek to the north of Elizabeth Drive.

Since exhibition of the EA, supplementary EMME/2 and SIDRA modelling has been prepared by the RTA in response to revised land use assumptions based on projected employment numbers (EA modelling was based on assumed developable areas) including Western Sydney Employment Lands Investigation Area (WSELIA) and assessment of the impact of the revised modelling assumptions to confirm if the capacity of the proposed 4 lane divided carriageway is adequate to serve the proposed NWP/SWP developments.

Modelling

The RTA previously based its assumptions regarding the Hub developments on information provided by Blacktown City Council, Penrith City Council and the DoP. This assumption was based on developable areas within the various precincts. More recent trip tables forecasts have been received by the RTA and these are used in the supplementary modelling work as detailed in Appendix B.

Trip forecasts show that developments in the Hub will generate a total of 16,843 trips by 2016. The spread of trip forecasts in the NWP and SWP, including 5,245 trips in the Eastern Creek precinct, 4,098 trips in the Ropes Creek precinct, 3,539 trips in the Erskine Park Employment Area and 3,961 trips will be generated in the area of lands south of the Sydney Water pipeline.

The split of the total generated trips is assumed to be approximately 20% productions and 80% attractions, which is based on trip data for the nearby industrial areas of Minchinbury, Huntingwood and Wetherill Park.

The proposed WSELIA development area is represented by three TDC travel zones, which have been refined to six sub-divided zones in the EMME/2 model. The WSELIA development area includes the following precincts and zoning system:

- Mount Vernon: Zones - 303831 – 303836;
- Badgerys Creek North: Zone - 307321; and
- Horsley Park: Zone - 820.

Trip forecasts show that developments in WSELIA will generate a total of 6,449 trips by 2016. Figure 2.2 (refer Appendix B) shows the spread of trip forecasts, including 4,270 trips in the Mount Vernon precinct, 1,340 trips in the Horsley Park precinct and 839 trips will be generated in Badgerys Creek North precinct.

Trips generated by WSELIA equates to 6,449 vehicles in the 2 hour AM Peak period, comprising of 4,262 trips arriving at the developments and 2,178 trips departing during the morning peak.

Supplementary 2016 EMME/2 models were developed to determine if the previously defined EPLR Network will continue to be required to service revised assumptions of traffic generated from SWP and NWP of the Hub and WSELIA.

The conclusion of the revised traffic analysis was that the modelling provided further evidence to support the 4 lane divided carriageway option as shown on Concept Plan for the proposed EPLR Network (refer Appendix B).

Impact of Access Points to the M4 from Archbold Road

During the Project Approval stage the proponents will develop microsimulation models to test the operational impact of traffic generated from the NWP on the surrounding road network, including the M4 Motorway.

The modelling will assess the impact of the NWP using key performance indicators including a review of travel times along individual road sections and the capacity, delay, queue lengths and throughput at key intersections.

The data will be broken down into vehicle classification and by 15 minute time periods to assess the average impact over the peak hour and evaluate individual time periods within the peak.

Figures 4.3 and 4.4 Working Paper 2: Traffic Study of the EA showed the inbound and outbound traffic flows to/from the NWP on Archbold Road for the AM and PM peak respectively.

Figure 2.3 of the *Maunsell Supplementary Traffic Study (refer Appendix B)* shows the 2016 AM Peak inbound and outbound traffic flows to/from the NWP on Archbold Road based on the updated modelling. Revised Option B1 was modelled with the WSELIA development and external road network upgrades, as summarised below:

Revised Option B1: M7 Hub and WSELIA with external road upgrades

Option	2016 AM Peak Link Volumes on Archbold Road			
	NWP		Between Sargents Road and Great Western Highway	
	Inbound	Outbound	Inbound	Outbound
Revised Option B 1	2001	392	1695	526

Intersection Analysis

The operational performance of key intersections on the EPLR Network was assessed using *SIDRA Intersection 3.2*. SIDRA is a widely accepted analytical tool for evaluating alternative signalised and unsignalised intersection designs in terms of the Degree of Saturation (DoS), queue lengths and Level of Service (LoS).

The volume-to-capacity (V/C) analysis of 2016 modelled link volumes provided further evidence to support the preferred four lane divided carriageway road network option, which provides spare capacity for future year traffic growth.

As a result, SIDRA models were developed for the worst case modelling scenario using 2031 AM peak traffic volumes extracted from the Option B1 EMME/2 model, which includes the Hub & WSELIA developments with external road upgrades.
SIDRA models were developed for the following three key intersections on the EPLR Network:

- Wallgrove Rd | Old Wallgrove Rd;
- Old Wallgrove Rd | New Southern Link Rd; and
- Wallgrove Rd | M7 Motorway Ramp.

Appendix B provides details of the layout and SIDRA results for each intersection, including the modelled cycle time, turning volumes, the performance of each approaching arm and movement, and a summary of the results of each intersection as a whole.

In summary, the results of the SIDRA modelling indicate that all of the 3 intersections on the EPLR Network would operate with an appropriate Level of Service, acceptable vehicle delays and will have sufficient capacity to accommodate forecast traffic movements that will be generated by the Hub and WSELIA developments.

The intersection analysis undertaken as part of this study was based on the strategic model and would be reassessed during the Project Approval stage before finalising the configuration of intersections on the EPLR Network.

Impact on External Roads

During Detailed Design and Project Approval stage further traffic modelling would be undertaken on external road impacts in consultation with local councils. The outcome of this work would form part of the detailed design of the roads and intersections.

2.2.12 Terrestrial and Aquatic Ecology

Issues Raised

Submission Numbers: 10, 15, 27, 42.

In summary, the respondents raised the following issues:

- Potential impact on biodiversity corridor, the proposed crossing should be removed or implemented with safeguards (10);
- Need for further studies (27);
- Proposed ramps at Archbold Road and M4 should be removed as this constitutes largest threat to endangered ecological communities (10);
- Riparian corridors should be protected/enhanced (15);
- Biodiversity Offset package should be developed by the Proponent (27);
- RTA should provide commitment to protection of the Erskine Park Biodiversity Corridor in relation to the establishment of this conservation buffer between the various proposed developments and the pipelines (42).

Response

Section 5 of the EA and Working Paper No 1 – Road Alignment and Constraints identified environmental constraints in relation to the proposed EPLR Network based on information available at the time of preparation of that report. The EA described how further assessments would be undertaken including assessment of potential impacts on the Erskine Park Biodiversity Corridor during the Detailed Design phase/Project Approval stage.

The Statement of Commitments includes the following measures to be undertaken during the Project Approval stage by others (refer Section 5):

- Pollution control measures to deal with spills of liquid and chemicals during road operation;
- Additional surveys as required;
- Retention, where possible of patches of remnant vegetation including any communities identified adjacent to the ramps to be located at the junction of the M4 Motorway and Archbold Road;
- Maintenance of the habitat corridor for Ropes Creek and associated tributaries;

- Evaluation of the need for a Compensatory Habitat Package and develop and implement that Package if required;

- Assessment of aquatic habitats according to the DPI (Fisheries) Habitat Scheme to determine the appropriate bridge design for Ropes Creek;

- Review of riparian buffer zone requirements for Ropes Creek; and

- In addition to taking measures during detailed design and construction to minimise or avoid impacts, other measures include vegetation clearing protocols, compensating for loss of habitat, post-construction rehabilitation and translocation of Cumberland Land Snails.

With respect to the location of the ramps at the intersection of the M4 Motorway with Archbold Road, Section 2.2.2 addresses the issue of alternatives and the need for the ramps. During the Detailed Design/Project Approval phase detailed flora and fauna investigations would be undertaken to assess the impact on endangered species, populations and communities and identify possible mitigation measures.

2.2.13 Air Quality

Issues Raised

Submission Numbers: 1, 7, 9, 10, 11, 13, 14, 17, 21, 25, 27.

In summary, the respondents raised the following issues:

- Background data on existing environment needs to be updated to represent existing background conditions (10, 11, 27);

- Major upgrading of existing access roads would increase 24 hour traffic flow greatly, which in turn would lead to more noise and pollution for residents adjacent to the EPLR Network (especially Archbold Road) (1, 7, 9, 13, 14, 17, 21, 25).

Response

The following air quality information (provided by Holmes Air Sciences) updates the information provided in Section 5.8 of the EA.

The Department of Environment and Climate Change (DECC) operate a number of monitoring sites throughout the Sydney region. The closest monitoring station with the most recent data is St Marys, approximately seven kilometres to the north west of the study area. Pollutants measured at this site are ozone (O_3), nitrogen dioxide (NO_2) and particulate matter (PM_{10}) by tapered element oscillating microbalance (TEOM). Summaries of these data are published in quarterly air quality monitoring reports by the DECC. Table 2.3 presents an annual summary of these data from 2000 to 2007 (only the first months of data are currently available for 2007).

Table 2.3
Annual Summary of St Marys Monitoring Data from 2000 to June 2007

	O_3 (pphm)		NO_2 (pphm)		PM_{10} (µg/m^3)	
	Maximum (1-hour)	Maximum (4-hour)	Maximum (1-hour)	Annual Average	Maximum (24-hour)	Annual Average
Goal	*10*	*8*	*12*	*3*	*50*	*30*
2000	15.8	*	5.0	0.8	*	14.7
2001	14.6	*	4.8	0.8	*	17.2
2002	11.9	9.3	4.5	0.9	113	21.3
2003	9.3	8.1	4.6	0.8	211	16.5
2004	14.2	12.8	4.4	0.7	49	17.0
2005	11.3	9.1	6.3	0.8	55	18.8
2006	12.4	10.9	10.9	0.7	71	19.5
2007	12.3	10.5	2.8	0.7	45	18.0

** indicates there are no data for this month*

It can be seen from Table 2.3, that both the 1-hour and 4-hour ozone goals are exceeded at some point in each of the years listed. When examining the monthly data it is evident that these exceedances all occurred in the summer months. Ozone is a powerful oxidant, formed in the atmosphere in the presence of sunlight, nitrogen oxides and reactive hydrocarbons. It is therefore not uncommon to see elevated levels of ozone during the warmer months. Ozone is not a primary emission from motor vehicles but a regional pollutant, being a major component of photochemical smog. Levels of NO_2 did not exceed the air quality goals at any time. This is the case for both the maximum 1-hour average as well as the annual average.

The measurements for PM_{10} show that there were exceedances of the maximum 24-hour average goal of 50 µg/m^3. Measurements of 24-hour averages only began in 2002 and show exceedances occurred in all years except 2004 and 2007 (from January to June). Again, looking at the monthly table it shows that these major exceedances (in 2002 and 2003) occurred in the summer months at times when bushfires and dust storms are present.

In November/December 2002 there was severe bushfire activity in Sydney resulting in the elevated PM_{10} levels at that time. On the 20 March 2003, the Bureau of Meteorology reported that Sydney "experienced thick raised dust" significantly reducing visibility in the CBD and the western suburbs. This is likely to be the cause of the high level measured during that month.

In 2005 and 2006, the exceedances were not as high and may be the result of localised activity such as building demolition or construction, or higher winds in the area which increase wind erosion from exposed dust sources such as landfill, quarry or building sites.

Annual average levels remained below their goal of 30 µg/m^3 in all years.

In summary, air quality in the Erskine Park area is generally good. Levels of nitrogen dioxide are below their relevant air quality goals, as are annual average PM_{10} levels. There are exceedances of the ozone goals but these occur in the warmer months when increased sunshine contributes to the formation of ozone. This is not uncommon in Sydney. There are also some exceedances of the 24-hour PM_{10} goal but these can generally be attributed to short-term events such as bushfires and dust storms.

As outlined in the Statement of Commitments (refer Section 5) during the project environmental assessment and detailed design stage, dispersion modelling of vehicle emissions for selected road sections would be undertaken and assessed in accordance with the relevant regulatory guidelines.

2.2.14 Noise and Vibration

Issues Raised

Submission numbers: 1, 2, 4, 5, 7, 8, 9, 12, 13, 14, 17, 18, 21, 22, 23, 25, 31.

In summary, the respondents raised the following issues:

- Major upgrading of existing access roads would increase 24 hour traffic flow greatly, which in turn would lead to more noise and pollution for residents adjacent to the EPLR Network - especially Archbold Road (1, 2, 4, 7, 8, 9, 12, 13, 14, 17, 18, 21, 22, 23, 25, 31);

- Health and lifestyle impact (dramatically increased noise and vibration) that will place stress on people and buildings as a result of opening up Archbold Road (2, 14);

- Already experience substantial vibration due to heavy vehicle traffic on Archbold Road at all hours of the day and night even though there is a 3 tonne limit signage (5);

- There is a need for noise levels to be monitored and, if required, acoustic treatment introduced to protect existing development (12).

Response

The project would result in increased traffic movements on existing roads where connections are made to the proposed EPLR Network. This would include increased traffic movements along the existing section of Archbold Road, Minchinbury. This would likely to result in increased noise levels adjacent to the road.

A supplementary traffic assessment has been undertaken based on updated land use and employment/population forecasts provided by DoP. This report indicated that AM peak hour (inbound) trips are indicative of worst case traffic volumes on the EPLR Network. For the revised option C arrangement, Erskine Park Link Road was found to have the highest traffic volumes in the AM peak – accommodating approximately 39% of the traffic (3377 inbound trips) using the EPLR Network. Archbold Road was found to accommodate approximately 20% of the traffic (1712 inbound trips).

The EPLR Network would be required to comply with all relevant noise and vibration guidelines. Further detailed investigations would be undertaken during the Detailed Design and Project Approval phase. This would include noise and vibration assessments that would assess construction noise and operational traffic noise and identify appropriate mitigation measures in line with relevant guidelines, including the DECC's *Environmental Criteria for Road Traffic Noise* (ECTRN) and the RTA's *Environmental Noise Management Manual* (ENMM).
Compliance with these guidelines would require that noise levels for a new arterial road be limited to 55dBA ($L_{Aeq,\ 15hr}$) between 7am and 10pm and 50dBA ($L_{Aeq,\ 15hr}$) between 10pm and 7am.

2.2.15 Heritage

Issues Raised

Submission numbers: 42.

- Warragamba Prospect Pipelines :
  - Part of the original 1940s pipeline is located under Old Wallgrove Road (42);

- The Warragamba-Prospect Pipelines No 1 & 2 are listed in the SCA's draft Section 170 Heritage and Conservation Register as potentially of State significance (42).

Response

As identified in Section 2.2.8 above, both the western and eastern north-south alignments (N-S Link and Old Wallgrove Road respectively) would need to cross the existing twin 2100mm diameter water supply pipelines for the future connection to the SWP. Consultation would be undertaken with the SCA to ensure protection of the heritage values associated with the pipelines during construction and operational phases of the project.

2.2.16 Need for Additional Studies

Issues Raised

Submission Numbers: 27, 33, 35.

In summary, the respondents raised the following issues:

- Prior to design of the road network being finalised detailed assessment of threatened species including *Pimelea spicata* is required (27);
- Prior to design of the road network being finalised detailed assessment of Aboriginal Cultural Heritage is required (27);
- Prior to design of the road network being finalised detailed assessment of noise impact is required (27);
- Preliminary contamination assessment should be undertaken/completed for all areas likely to be traversed by the new road. Where investigation indicate the site may be contaminated further contamination investigation should be undertaken (27);
- Assessment needs to be undertaken of how the proposed network will affect water quality and what measures will be implemented to mitigate these impacts. Impacts on the project on the environmental values and the water quality of the Hawkesbury Nepean River system need to be assessed (27);
- Following completion of additional studies the environmental risks of the project should be reassessed (27);
- Analysis of implications of the EPLR on the local road network and hierarchy nominated in the Eastern Creek Business Park Precinct Plan be undertaken prior to determination (26, 35);
- Measures for public transport provisions and travel demand management strategies should be included in the Statement of Commitments for the Project Approval Stage (33).

Response

In response to issues raised in submissions, the draft Statement of Commitments provided in the EA has been updated. The Statement of Commitments provides an outline of the additional studies that would be undertaken as part of the Detailed Design/Project Approval phase. The studies would include flora and fauna, heritage, water quality, site contamination, air quality and noise assessments. The results of the studies would be used as input to the detailed design phase and development of appropriate mitigation measures. Flood studies will also be

undertaken in addition to more detailed assessment of climate change and broader consideration of the principles of Ecologically Sustainable Development (ESD) as part of the detailed design.

Section 3 provides a summary of the outcome of additional studies undertaken in relation to traffic modelling and Aboriginal heritage.

As described in the EA, the route of the proposed EPLR Network has been selected to limit disturbance to flora and fauna including populations/species identified on relevant databases and minimise potential impacts where creek crossings are required. Detailed studies would be undertaken during the Project Approval stage in accordance with the requirements of the DoP, DECC and the relevant Council. Where potential impacts are identified mitigative measures would be incorporated in the design and offsets identified as appropriate.

During construction of the roads and associated infrastructure environmental management measures will be implemented to ensure that there is no impact on water quality in particular with respect to the crossing of Ropes Creek.

Potential for site contamination will be assessed during the investigations undertaken in the detailed design phase.

During the detailed design phase noise impact assessments would be undertaken in accordance with the DECC Industrial Noise Policy and the RTA Environmental Noise Management Manual.

With respect to European heritage the SCA has advised that part of the original 1940s pipeline is located under Old Wallgrove Road. The Warragamba-Prospect Pipelines No 1 & 2 are listed in the SCA's draft Section 170 Heritage and Conservation Register as potentially of State significance. The detailed design phase for the proposed EPLR Network will include measures to protect the values associated with this section of the pipeline.

2.2.17 Proposed Mitigation Measures

Issues raised

Submission Numbers: 3, 6, 10, 15, 16, 17, 21, 23, 26, 27, 32, 34, 42.

In summary, the respondents raised the following issues:

- Appropriate erosion and sediment control measures are required for the construction of individual roadway components (3);

- Waterway crossings:
  - Should be designed so they do not obstruct fish passage and are in compliance with relevant guidelines (Ref NSW DPI) (3);
  - Crossing of Ropes Creek should include safeguards to retain biodiversity values (15, 26);
  - Crossing of water courses should follow design principles for Categories 1 and 2 Watercourses (15);

- Prior to construction, consultation be undertaken by the RTA with Sydney Water and apply for any water and/or sewer adjustment (6);

- Crossings of the pipelines should use a bridge structure (42);

- Archbold Road:
  - Acoustic treatment needed on Archbold Road to protect residents and ALDI office. Noise attenuation measures should be applied along the entire length of Archbold Road between the M4 and the Great Western Highway (12);
  - Noise monitoring required (21);
  - Maintain 3t limit on Archbold Road (17, 21, 23);
  - Provide traffic control devices to ensure residents have easy and safe access from Robinson Street to Archbold Road (21);
  - Install signs asking drivers to limit compression braking in the vicinity of homes which either back on to or run off Archbold Road (17, 21, 23);

- Management and maintenance of pipelines in terms of access, integrity and security of the pipelines. Any crossings of the pipeline should use a bridge structure. Upgrade of Old Wallgrove Road needs to provide for safe crossing by SCA and contractor vehicles (42);

- Stormwater management and water quality management measures and bridge design need to assess Department of Water and Energy, BCC and PCC requirements (32);

- Any groundwater dependent ecosystems should be identified and any potential impacts identified (15);

- Measures should be investigated to improve the ecological sustainability of the project (27);

- Biodiversity corridors must provide movement of fauna and development should take account of displacement of fauna (10, 16);

- If approved improvements have been identified in relation to arrangements at the Transgrid site (34);

- Draft Statement of Commitments - studies should be undertaken prior to final approval not during final project approval (27).

Response

The EA included a Draft Statement of Commitments which has been revised in response to issues raised in submissions including those listed above.

In the context of the Statement of Commitments it must be noted that the RTA, while Proponent of this Concept Plan would not be the Proponent of the individual road components for the Project Approval stage. Hence, the Statement of Commitments detailed in this report relates to the Project Approval stage which would be undertaken by others (e.g. relevant Councils or private developers).
Detailed design studies will be undertaken during the Project Approval phase for individual components of the EPLR Network. These studies will identify the need and extent of mitigation works including noise attenuation, erosion and sedimentation control measures, safeguards to retain biodiversity values at the crossing of Ropes Creek and flood mitigation works. In addition, environmental investigations would confirm the extent of any mitigation works required in relation to ecological and heritage aspects.

With respect to the road crossing of the Warragamba Prospect water pipelines this is to be further investigated and confirmed during the Project Approval stage. This would include details with regard to the provision for safe crossing by Sydney Catchment Authority and contractor vehicles.

Transgrid has provided conditions in relation to access to its property on Old Wallgrove Road which would mitigate potential impacts on operation of its site. These requirements would be included in the design phase for this component of the EPLR Network.

With respect to flora and fauna, the management and mitigation measures would ensure direct and indirect impacts of the proposed EPLR Network are minimised including actions to avoid, ameliorate and compensate any effects on habitat.

With respect to potential noise impacts to Archbold Road residents a detailed noise study will be undertaken during the Project Approval stage as detailed in Section 2.2.14. Mitigation measures such as noise walls along the back fences or architectural treatment of houses could be considered if required.

3 ADDITIONAL INVESTIGATIONS

Submissions received in response to the public exhibition of the EA raised the issue of the need for more detailed investigations in relation to the assessment of the EPLR network.

As outlined in Section 4 of the EA for the purpose of the Concept Plan no detailed design has been undertaken of the road, intersections, interchanges and other structures associated with the EPLR Network. Subsequent to approval of the Concept Plan, as part of the Project Approval stage, detailed planning and design would be undertaken for the various roads within the EPLR Network. It is envisaged that project approval would be undertaken by the relevant local Councils or by the private developers. The environmental assessment for the EA was based on a desk top evaluation of publicly available information including aerial photography and other environmental databases (refer Section 5.1 of the EA). A more detailed level of assessment would be undertaken during the Project Approval stage for each project element.

In response to issues raised regarding the requirement for additional investigations, the RTA has undertaken the following additional specific studies:

- *Western Sydney Employment Hub – Proposed Erskine Park Link Road Network, Supplementary Traffic Study*, December 2008, Maunsell Australia Pty Ltd; and

- *Western Sydney Employment Hub – Proposed Erskine Park Link Road Network, Aboriginal Heritage Review*, November 2008, Navin Officer Heritage Consultants Pty Ltd.

Notwithstanding the preparation of the above studies, the revised Statement of Commitments (refer Section 5 below) provides an outline of the additional studies that would be undertaken as part of the Detailed Design/Project Approval phase. The studies would include flora and fauna, heritage, water quality, site contamination, air quality and noise assessments. The results of the studies would be used as input to the detailed design phase and development of appropriate environmental management measures.

3.1 TRAFFIC MODELLING

At the request of the DoP the traffic modelling presented in the EA has been updated on the basis of more recent land use and employment/population forecasts (including employment forecasts and WSELIA) for the Hub and to confirm if the proposed 4 lane divided carriageway is adequate to serve the proposed SWP/NWP developments.

Supplementary traffic modelling has been undertaken based on the recent information as detailed in Appendix B of this submissions report to determine if the EPLR Network as proposed in the EA would continue to adequately service the WSEH based on revised (updated) traffic volumes identified for and generated from the NWP, SWP and WSELIA.

The Concept Plan for the proposed EPLR Network includes a 4 lane divided road to serve the proposed NWP | SWP developments. Analysis of the results for the revised modelling options, based on updated employment forecasts supports the preferred road network option with 4 lanes for all of the road links. The report also identifies the potential for staging of the internal north – south A link.

The intersection modelling also indicates that three key intersections on the proposed EPLR Network would operate with an appropriate Level of Service, acceptable vehicle delays and would have sufficient capacity to accommodate forecast 2031 traffic movements generated by the Hub and WSELIA developments.

3.2 ABORIGINAL HERITAGE

A desktop Aboriginal heritage review was conducted for the EA which noted that the alignment of the roads within the EPLR Network had been selected to avoid those areas with known/and or potential archaeological and cultural/social significance (refer Section 5.10 and Working Paper No 1 – Road Alignment and Constraints of the EA). It was also noted that detailed investigations would be undertaken in relation to Aboriginal archaeology and cultural/social significance during the Project Approval stage of the individual component roads of the EPLR Network. This would involve further consultation with the Aboriginal community and surface and subsurface investigations.

Following review of the submissions received and consultation with the DoP, Navin Officer Heritage Consultants was commissioned to undertake a further review of potential Aboriginal Heritage constraints for the EPLR Network. The review included literature and database review, and fieldwork (which included a 'walk-over' of the site with Aboriginal representatives and archaeological sensitivity analysis).

The RTA extended invitations to various Aboriginal community representatives to participate in the site 'walkover' based on a list of registered interested parties and the proceedings of previously conducted Aboriginal Focus Group (AFG) meetings.

The Aboriginal Heritage Review identified thirty Aboriginal heritage recordings within the Erskine Park Link Road study area. Four of these were new recordings made as a consequence of the field inspection conducted for the review; the other 26 recordings were identified as a consequence of previous investigations in the area.

Of the thirty recordings within the study area:

- Eleven are situated in areas where construction impact would not be anticipated;
- Thirteen have already been the subject of assessment and have subsequently been impacted by recent construction works, or are subject to current section 90 (of the *National Parks and Wildlife Act, 1974*) Consent to Destroy permits from the DECC; and
- Six, including surface scatters and potential archaeological deposits, would be subject to direct impact by the construction of the proposed EPLR Network. These sites have not yet been subject to construction impact or had consent to destroy applied for, or approved by, the DECC.

For the known surface occurrences of Aboriginal artefacts within the footprint of the proposed corridor for the EPLR Network (excluding existing sites / items that are already the subject of Section 90 "Consent to Destroy" permits), impact would likely involve the whole "site" in most cases. This is largely due to each site being identified as an "artefact scatter" containing no more than two surface artefacts in each case. With respect to Potential Archaeological Deposits (PADs), impact would only be partial due to the larger size and continuity of the landforms involved.

It should be noted that the artefact occurrences were interpreted to be indicative of low density subsurface artefact occurrences which are likely to extend beyond the confines of the recorded surface artefact distribution, and also beyond the proposed development footprint.

None of the Aboriginal community representatives present during the field inspection indicated that the study area contained sites or places of Aboriginal cultural value which, to their knowledge, would definitely preclude the placement and construction of the proposed EPLR Network as proposed in the Preferred Project Report (refer Section 4). However, there was considerable discussion about the varying archaeological sensitivity of the landforms traversed. It

was generally conceded that construction related ground surface disturbance across much of the undeveloped portion of the study area could be expected to disturb subsurface archaeological material at varying densities and significance.

It was concluded that, based on the current knowledge of the known and predicted archaeological resource potentially impacted by the proposed EPLR Network, the Aboriginal cultural heritage values of the study area do not present a permanent constraint to proceeding with the EPLR Network as currently proposed. This conclusion was conditional on the conduct of standard cultural heritage management strategies and protocols being followed with regard to future detailed assessments and impact mitigation.

The following mitigation and management measures will also be undertaken:

- Liaison and consultation with the registered Aboriginal interested parties should continue with regard to the assessment and management of Aboriginal cultural heritage values in the study area;
- Proponents need to avoid direct impact to the deposits within the defined conservation area located immediately north of, and adjacent to the eastern end of the east-west component of the EPLR Network. This area has been reserved as part of a group of representative samples of archaeologically sensitive landforms from the Eastern Creek Business Park; and
- A program of subsurface archaeological testing in relation to identified PADS to define the nature and significance of any archaeological material present and determine an appropriate management strategy.

4.1 PROPOSED CHANGES

Since exhibition of the EA for the Concept Plan for the proposed EPLR Network, there have been revisions to the alignment of the proposed EPLR Network alignment that take into account issues raised in submissions to the exhibition of the EA. The route has primarily been deviated to meet landholder requirements in relation to minimising the impact on the development potential of land within the NWP of the Hub. Meetings to discuss proposed refinements to the EPLR Network alignment have been held with representatives of Penrith City Council, the Land Management Branch of DoP, Fitzpatrick Investments, Jacfin Pty Ltd, Aboriginal groups, Westlink M7 and Goodman.

The proposed route of the EPLR Network has been refined as described below and as illustrated in Figure 1. In addition to the specific changes identified below, a "global change", reducing the proposed corridor from 40 metres to 30 metres is applicable to the whole Erskine Park Link Road Network. The reduction in width of the proposed road corridor would be achieved by incorporating road batters within the boundaries of the properties adjoining the proposed EPLR Network.

4.1.1 Archbold Road Connection

The southern portion of the Archbold Road corridor has been realigned further to the east. The realignment differs from that proposed in the EA in the following ways:

- The intersection of Archbold Road and Erskine Park Link Road has moved approximately 50 metres to the north;
- For approximately one kilometre from its intersection with the Erskine Park Link Road corridor, the Archbold Road corridor retains a more direct 'north/south' orientation (approximately 100 metres further to the east) than that originally proposed in the EA.

4.1.2 Erskine Park Link Road

The Erskine Park Link Road alignment has been refined in the area between its intersection with the proposed North – South Link Road in the west and approximately 100 metres east of its intersection with Archbold Road. In between these two intersections, the refined alignment of Erskine Park Link Road differs from that proposed in the EA in the following ways:

- From west to east, the alignment curves initially in a north-east direction before curving back to an easterly alignment until its intersection with Archbold Road, where it essentially realigns with the corridor as proposed in the EA; and
- The point where the refined Erskine Park Link Road alignment crosses Ropes Creek is approximately 150 metres further north than that described in the EA.

4.1.3 North – South Link Road

The refined alignment of the proposed North South Link Road alignment differs from that proposed in the EA in the following ways:

- It has been realigned by up to 50 metres further east, although the location of its proposed intersection with Erskine Park Link Road is essentially as described in the EA, as is the location where the North South Link Road crosses the Sydney Water Supply Pipeline easement.

Figure 1 provides an illustration of the proposed changes in relation to the EPLR Network as proposed in the EA.

Appendix E provides detailed drawings of the proposed alignment of the EPLR Network.

Appendices C and F provide a Typical Cross Section for the road corridor and Concept Plans for the proposed intersections.

Figure 5 shows the revised EPLR Network corridor which forms the basis of this Preferred Project Report.

4.2 ENVIRONMENTAL ASSESSMENT OF PROPOSED CHANGES

As outlined in Section 5 of the EA the environmental assessment of the Concept Plan for the proposed EPLR Network was prepared based on a review of existing available information (literature review) in addition to a review of various databases, including DECC databases. Appendix D presents the environmental constraints diagram showing the revised EPLR Network alignment.

The potential environmental impacts of the proposed alignment changes are considered in Sections 4.2.1 to 4.2.3 below. Where the potential environmental impact of the proposed design refinement is considered to be consistent with that originally identified in the EA, no further discussion is provided below. As such, only those environmental issues considered to be affected to a greater or lesser extent than that described in the EA are discussed below.

The impact assessment provided below has been undertaken at a level that is generally consistent with that undertaken for the EA and is considered appropriate for a Concept Plan design. Aboriginal heritage, however, has been assessed in more detail, as discussed in Section 3 and in the text below.

During the Detailed Design and Project Approval phase, further (and more detailed) environmental investigations would be undertaken in accordance with the revised Statement of Commitments (refer Section 5). Further studies would include but not be limited to flora and fauna, heritage, water quality, site contamination, air quality and noise and vibration. The results of these studies would be used as input to the detailed design phase and development of appropriate mitigation measures.

Note Regarding Aboriginal Heritage

As discussed above, a detailed Aboriginal heritage assessment has been undertaken since the preparation of the EA. As such, the assessment of the modifications proposed in this PPR is more detailed than the assessment of the design in the EA.

It should also be noted that this section considers only those Aboriginal sites or items within the study area that have not already been impacted by local development. Section 7.2 of the *Aboriginal Heritage Review* indicates that there are eight sites that have been identified by previous investigations within the study area that fit this criterion. One of these sites has been assessed as having high scientific (archaeological) significance while the other sites are of low or medium archaeological significance. In addition to the sites identified by previous investigations, the *Aboriginal Heritage Review* has identified a further three artefact sites of low local significance and one PAD site whose significance can only be determined by further archaeological

subsurface testing.

4.2.1 Archbold Road Connection

General

The refined alignment for the Archbold Road corridor would be approximately 2775 metres in length compared with approximately 2900 metres for the Archbold Road corridor as proposed in the EA. Based on a corridor footprint of 30 metres, this 125 metre reduction in corridor length equates to a reduction in the direct footprint of this element of the EPLR Network by approximately 0.38 hectares. This would generally have a positive effect on the extent of impact relating to most environmental aspects within the study area.

Aboriginal Heritage

Based on a review of Figure 6.10 of the *Aboriginal Heritage Review,* the refined Archbold Road alignment would potentially affect two sites (RCAS 1 and RCAS 4). However, it is likely that the Archbold Road alignment as identified in the EA would have affected four sites (RCAS 1, RCAS 4, RCAS 10 and BSW 10).

It should be noted that the PAD site (EP PAD 2) identified in the *Aboriginal Heritage Review* would not be affected by this proposed modification.

As such it is considered that this proposed modification would reduce the impact on the number of known items / sites of Aboriginal heritage within the study area compared to the Archbold Road alignment as proposed in the EA.

Traffic / Noise

The refined alignment for the Archbold Road corridor would not change the volume or mix of traffic using the proposed EPLR Network. It should also be noted that when considering the revised land use and employment/population forecasts provided by DoP, the refined alignment for the Archbold Road corridor would not alter intersection performance or require any change compared with those identified in the EA in relation to entry/exit points within the proposed EPLR Network.

The refined alignment would, however, be approximately 100 metres further away from the eastern side of the existing Erskine Park residential area. This may result in a reduced noise and/or vibration impact for some residents living along the eastern side of the Erskine Park residential area during both construction and operation. However, the extent to which the refined Erskine Park Link Road alignment would influence the local noise environment may negate any positive noise impacts associated with the refined Archbold Road alignment for residents in the south-eastern corner of Erskine Park residential area.

Overall, however, when focussing only on the refined Archbold Road alignment, it is considered that there would be a reduced noise impact compared to the Archbold Road alignment presented in the EA based on the greater distance retained (approx 100 metres) between the corridor alignment and the eastern extent of the Erskine Park residential area.

As identified throughout this report, further detailed investigations would be undertaken during the Detailed Design and Project Approval phase. This would include noise and vibration assessments that would assess construction noise and operational traffic noise and identify appropriate mitigation measures in line with relevant guidelines, including the DECC's *Environmental Criteria for Road Traffic Noise* (ECTRN) and the RTA's *Environmental Noise Management Manual* (ENMM).

Flora and Fauna

Working Paper No 1 of the EA identifies that the ecological values of the study area have been severely compromised by previous activities including land clearing, urban expansion and agricultural activities and that natural terrestrial habitat is generally restricted to remnant vegetation along Ropes Creek and isolated remnant patches. The refined alignment for the Archbold Road corridor would bring the alignment further away from Ropes Creek thereby reducing the potential for secondary (indirect impacts) to the riparian buffer and water quality of Ropes Creek during both construction and operation.

Based on available information it is considered unlikely that the extent of vegetation removal and direct impacts to threatened species would change compared with that identified in the EA.

Land use

A major reason for refinement of the Archbold Road alignment has been to minimise the impact of the EPLR Network on the development potential of land within the NWP of the Hub. In doing so, the proposed modification would likely reduce the incidence of property severance within the NWP. This together with a reduction in noise impact on residential areas would potentially have an improved socio-economic impact compared with that identified in the EA.

4.2.2 Erskine Park Link Road

General

Between its intersections with the proposed North South Link Road and Archbold Road, the refined Erskine Park Link Road alignment would be approximately 1300 metres in length compared with 1200 metres between the same two intersections as proposed in the EA. This 100 metre increase in corridor length equates to an increase in the direct footprint of this element of the EPLR Network by approximately 0.3 hectares. This would generate increased direct and indirect impacts that would include increased exposure of soils and potential for erosion and sedimentation and a consequent increase in potential for water quality impacts to occur, including in the vicinity of Ropes Creek.

Land Use

As identified in Section 4.2.1 above for refinement of the Archbold Road alignment, a major reason for refinement of the Erskine Park Link Road alignment has been to minimise the impact of the EPLR Network on the development potential of land within the NWP of the Hub. In doing so, the proposed modification would likely reduce the incidence of property severance within the NWP.

Aboriginal Heritage

Site BSW 10 and the periphery of PAD sites EP PAD 1 and EP PAD 2 as identified in the *Aboriginal Heritage Review* would be affected by this proposed alignment modification. Based on a review of Figure 6.10 of the *Aboriginal Heritage Review,* the extent of impact to BSW 10 and the two PAD sites affected by the refined alignment would be less than for the original Erskine Park Link Road alignment as proposed in the EA.

Overall however, the number of sites / areas of Aboriginal heritage significance impacted by both alignments would be the same and further specific Aboriginal Heritage assessment would be required during the Detailed Design and Project Approval phase.

Traffic / Noise

As is the case for the refined alignment for the Archbold Road corridor, the refined Erskine Park Link Road alignment would not change the volume or mix of traffic using the proposed EPLR Network. Further, the updated traffic volumes would not influence intersection performance compared with those described in the EA, and would not induce any change in relation to entry/exit points within the proposed EPLR Network.

The refined alignment would, however, be approximately 250 metres closer to the south-eastern extent of the existing Erskine Park residential area. It is recognised that the existing background noise levels in this general location would be typical of a residential or even rural residential area and that there would be an increase noise levels as a result of traffic, including heavy vehicles, using the EPLR Network. Without undertaking a detailed noise impact assessment, and without consideration of specific noise management measures that would be identified during the Detailed Design and Project Approval phase, it is not possible to identify the extent of the noise impacts associated with the refined design alignment.

Notwithstanding, appropriate mitigation measures would need to be introduced in line with relevant guidelines, including the DECC's *Environmental Criteria for Road Traffic Noise* (ECTRN) and the RTA's *Environmental Noise Management Manual* (ENMM). Compliance with these guidelines would require that noise levels for a new arterial road be limited to 55dBA ($L_{Aeq,\ 15hr}$) between 7am and 10pm and 50dBA ($L_{Aeq,\ 15hr}$) between 10pm and 7am. Where background noise levels already exceed these criteria, the new road should be designed so as to not increase existing noise levels by more than 0.5dB.

Flora and Fauna

As discussed in Section 4.2.1 above, Working Paper No 1 of the EA identifies that the ecological values of the study area have been severely compromised by previous activities. Comparing the alignment included in the EA (Appendix A of Working Paper No 1) and the revised alignment included in this report (Appendix D), the revised alignment would cross the creek line at an approximate 45 degree angle whereas the alignment proposed in the EA crosses almost perpendicular to the Ropes Creek channel. As such, the refined Erskine Park Link Road alignment would likely impact a greater area of riparian habitat associated with Ropes Creek. As such, the refined alignment would also have a greater footprint within the biodiversity corridor as identified in the Erskine Park Biodiversity Management Strategy.

Impacts to aquatic ecology are generally associated with water quality and habitat impacts (i.e. riparian/in-stream vegetation removal and erosion and sedimentation), which typically occur during the construction phase. Although the refined design would have an increased footprint at Ropes Creek, it is not anticipated that there would be a substantive change in the potential for impacts to aquatic ecology to occur compared with the design as proposed in the EA (i.e. the EA design and the refined design both require construction activities in close proximity to Ropes Creek).

Further ecological assessment would be undertaken during the Detailed Design and Project Approval phase that would include identification of appropriate flora and fauna mitigation measures.

4.2.3 North – South Link Road

Between its intersection with the proposed Erskine Park Link Road and the point where it crosses the Sydney Water supply pipeline easement, the refined North South Link Road alignment would be approximately 50 metres longer than the alignment proposed in the EA.

This 50 metre increase in corridor length equates to an increase in the direct footprint of this element of the EPLR Network by approximately 0.15 hectares.

This section of the EPLR Network is located in a sparsely vegetated sector of the study area. Notwithstanding, constraints mapping developed based on DECC vegetation mapping indicates that both the EA and refined alignments would traverse through an essentially equal area of Cumberland Plain Woodland (EEC).

As is the case for the other proposed refinements to the EA design, the refinement of the North – South Link Road alignment would have a reduced impact on the development potential of land within the NWP of the Hub.

When comparing the refined North – South Link Road alignment with that proposed in the EA, it is considered that potential impacts would be essentially the same.

4.3 SUMMARY OF ENVIRONMENTAL ASSESSMENT AND JUSTIFICATION

The proposed changes to the EPLR Network will assist in minimising the potential impacts of the proposed EPLR Network primarily in relation to minimising impacts on potentially affected landholders. The preferred project better realises its primary objective of developing a road network which links industrial lands within the NWP while improving the development potential within the NWP, justifying the proposed design refinements and the preferred project as a whole. When comparing the EA alignment with the preferred project alignment, impacts relating to a vast majority of environmental aspects would remain unchanged, while the number of potentially impacted known Aboriginal heritage items would be expected to reduce.

5 REVISED STATEMENT OF COMMITMENTS

The EA for the proposed EPLR Network identified a range of environmental outcomes and management measures that would be required to avoid or reduce environmental impacts associated with the construction and operation of components of the proposed EPLR Network.

After consideration of the issues raised in submissions to the exhibition of the EA, the draft Statement of Commitments for the EPLR Network (refer to Chapter 6 of the EA) has been revised. Should the project be approved, the revised commitments will guide the subsequent phases of the EPLR Network development.

As indicated previously, the RTA while Proponent of this Concept Plan would not be the Proponent of the individual road components for the Project Approval stage. Hence the Statement of Commitments detailed in this section relates to the Project Approval stage which would be undertaken by others (e.g. relevant Councils or private developers).

Table 5.1
Revised Statement of Commitments

Objective	Commitment
ENVIRONMENTAL MANAGEMENT – PROJECT APPROVAL / DETAILED DESIGN PHASE	
Flooding	
Minimise impacts of flooding	▪ During the Detailed Design and Project Approval phase flooding assessment of crossings and roadway will be undertaken for the individual road components.
Surface Water and Drainage	
	▪ Surface water drainage planning and controls will be developed in consultation with relevant Councils and the Department of Water and Energy. ▪ Road crossings over Category 1 and 2 watercourses would be designed in accordance with the requirements of the Department of Water and Energy. ▪ During the detailed design phase soil erosion and sediment controls will be designed to contain soils on-site.
Contaminated Soil Management	
Management of area of contaminated materials	▪ Areas of potential soil contamination would be assessed and appropriately managed.
Flora and Fauna	
Protection of flora and fauna	▪ Detailed design would seek to minimise impacts on biodiversity corridors and areas, conservation areas and areas containing endangered ecological communities and threatened flora and fauna species. ▪ Additional flora and fauna surveys will be undertaken to identify threatened species, populations and ecological communities and areas of other significant vegetation and potential habitat. ▪ Investigations will be undertaken to identify any potentially impacted groundwater dependent ecosystems.

Objective	Commitment
	▪ Detailed design will seek to retain patches of remnant vegetation. ▪ The need for a Compensatory Habitat Package will be investigated and if required will be developed and implemented. ▪ Assessment of aquatic habitats according to the DPI (Fisheries) Habitat Scheme to determine the appropriate bridge design for Ropes Creek.
Protection of aquatic ecosystems	▪ Design and construction of creek crossings to meet the requirements of the NSW DPI. ▪ Aquatic habitats will be assessed in accordance with DPI Fisheries Fish Habitat Scheme.
Minimise adverse impacts on aquatic habitat and fish species	▪ Construction to be guided by DPI Fisheries Policies and Guidelines on Bridge Culverts and Causeways.
Air Quality	
	▪ During the project environmental assessment and detailed design stage, dispersion modelling of vehicle emissions for selected road sections would be undertaken and assessed in accordance with the relevant regulatory guidelines.
Noise	
	▪ Noise impacts associated with road network operations will be assessed in accordance with the NSW Industrial Noise Policy, ECTRN and the RTA Environmental Noise Management Manual. ▪ Noise monitoring will be undertaken in accordance with the INP. ▪ Feasible and reasonable mitigation and management measures will be investigated to minimise noise impacts, including the section of Archbold Road to the north of the M4. Studies would be undertaken in accordance with the RTA Environmental Noise Management Manual, ECTRN and the NSW INP.
Heritage	
Minimise impact on Non-Aboriginal heritage sites	▪ Non-Aboriginal heritage items associated with the Warragamba Prospect Pipelines 1 & 2 will be protected, avoided and potential impacts managed.
Minimise the impact on Aboriginal heritage	▪ Detailed investigation and consultation with the Aboriginal community in relation to Aboriginal archaeology and cultural/social significance. ▪ Any Aboriginal heritage items directly affected will be managed in consultation with Aboriginal stakeholders and DECC. ▪ Aboriginal heritage sites and potential archaeological deposits will be clearly identified on drawings. ▪ Detailed design will ensure that all feasible and reasonable design and mitigation and management measures to minimise impact on Aboriginal cultural heritage objects and places are incorporated.
Visual and Landscaping	

Objective	Commitment
Maintenance of existing visual and landscape values Integrate urban design scheme for the project	▪ Development of mitigation measures in relation to landscaping and visual impact. ▪ Wherever possible, detailed design will seek to retain bushland including the Ropes Creek corridor and other biodiversity protection areas. ▪ Site revegetation and landscaping will predominantly incorporate native endemic species within the road corridor. ▪ Built elements and landscapes will be designed in consultation with a qualified and experienced urban design/landscape specialist and will be in accordance with the urban and landscape design objectives and principles for the project.
Land Acquisition	
	▪ As part of the SEPP approval process responsibility for the land acquisition will be reviewed by the Department of Planning.
Infrastructure	
	▪ Detailed design will seek to avoid potential impacts on existing infrastructure including utilities. ▪ Design of crossings over Warragamba-Prospect Pipelines No 1 & 2 (Sydney Water Supply Pipelines) would use a bridge structure and ensure protection of heritage values associated with the section of pipeline under Old Wallgrove Road. Safe crossings are to be provided for SCA and contractor vehicles. ▪ Access and protection of assets for the Transgrid site located on Old Wallgrove Road are to be designed in consultation with Transgrid.
Consultation	
	Project Approval Stage Consultation Programme: ▪ Stage 3 – The community will be updated on progress of project planning. Consultation will be undertaken with directly affected landholders and as appropriate with: ➢ Fairfield City Council; ➢ Penrith City Council; ➢ Blacktown City Council; ➢ Aboriginal groups; ➢ Sydney Water; ➢ Sydney Catchment Authority; ➢ Westlink M7; and ➢ Transgrid ▪ Stage 4 – Environmental Assessments of roads within the EPLR Network in accordance with the requirements of the Minister's determination.

Objective	Commitment
ENVIRONMENTAL MANAGEMENT – CONSTRUCTION	
	Suitably qualified and experienced personnel will develop and implement project specific environmental management plans and procedures in consultation with relevant government agencies.
Minimise water quality impacts	Erosion and sediment controls will be designed, installed, maintained and managed in accordance with the principles in Managing Urban Stormwater – Soils and Construction (Landcom 2006) and would include where appropriate: ▪ Installation of silt fences. ▪ Maintenance of buffer zones. ▪ Prompt revegetation and stabilisation of disturbed areas. ▪ Restrictions on equipment and vehicle movement outside the road corridor. ▪ Containment of spills and treatment of affected areas. ▪ Daily monitoring of site activities. ▪ Water quality monitoring as required. ▪ Planning and implementation of local drainage measures in consultation with adjacent property holders.
Protection of flora and fauna	▪ Site environmental management plans will show the location of biodiversity areas including identified threatened populations located in close proximity to the proposed alignment. These locations will be clearly identified and marked on site. ▪ Biodiversity management measures will be monitored to assess effectiveness. Where required additional feasible and reasonable management measures will be applied. The monitoring program will be developed and implemented in consultation with a suitably qualified and experienced ecologist.
Minimise air quality impacts	Dust suppression and avoidance measures will be implemented to minimise impact on air quality including, where appropriate: ▪ Disturbance of the minimum area necessary. Completed areas will be rehabilitated as soon as practicable after the completion of works. ▪ Maintain water sprays on stockpiles and use sprays to reduce the risk of airborne dust as required. ▪ Watering of active roads and traffic areas using water carts to minimise the generation of dust. ▪ The number of active unsealed roads should be minimised and clearly defined. ▪ Obsolete unsealed roads should be rehabilitated. ▪ Control of dust emissions during construction. ▪ Minimise construction time near any sensitive receptors.
Protection of heritage values	▪ All known heritage sites are to be identified on construction maps with protection measures. ▪ Site EMPs will show the location of heritage sites and places to be protected during construction. Sites will be fenced prior to any works in the area and in consultation with registered stakeholders, will be signposted (as no go zones).

Objective	Commitment
	▪ If any additional sites are located consultation would be undertaken with the relevant authority.
Monitoring	▪ The measures included in the Construction EMP will be continually monitored to ensure effectiveness and improved where deficiencies are identified. ▪ Where appropriate, an appropriate water quality monitoring programme will be developed for streams draining from the Hub lands. ▪ Monitoring of terrestrial ecosystems and water quality of local streams during construction and initial periods of operation. ▪ Monitoring will be undertaken during construction to assess the effectiveness of the air quality mitigation and management measures. Where required, additional feasible and reasonable mitigation and management measures will be used.
Minimise impacts from accidents	Spills will be contained immediately. Bunded areas will be used for: ▪ Storage of oils, chemicals, toxic substances, flammable and combustible liquids and contained spills; ▪ Potentially hazardous and contaminating activities (e.g. washing vehicles, plant and equipment, handling and pouring hazardous materials and liquids, etc.
Protection of Local Amenity	▪ Any local construction impacts including air and noise impacts would be minimised through implementation of control measures; ▪ Post-construction rehabilitation using native shrub and grass seed to rehabilitate disturbed areas.

6 REFERENCES

Landcom *Managing Urban Stormwater – Soils and Construction* 2006

RTA *Western Sydney Employment Hub Proposed Erskine Park Link Road Network Concept Plan Environmental Assessment* February 2008

FIGURES

APPENDICES