Appendix E

Government agency submissions

WestConnex

NSW GOVERNMENT | Department of Primary Industries

OUT13/37750

Mr Dominic Crinnion
Infrastructure Projects-Roads
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

dominic.crinnion@planning.nsw.gov.au

Dear Mr Crinnion,

WestConnex Stage 1(b) (M4 East) (SSI 13_6307)
Request for input into Director General Requirements

I refer to your letter dated 5 December 2012 to the Department of Primary Industries in respect to the above matter.

Comment by Fisheries NSW
Fisheries NSW advise no further requirements.

For further information please contact Carla Ganassin, Conservation Manager (Wollongong office) on 4254 5527, or at: carla.ganassin@dpi.nsw.gov.au.

Comment by NSW Office of Water
The NSW Office of Water provides the following comments, and further details in Attachment A:

(i) the Office of Water recommends the environmental assessment be required to include:
- Assessment of impacts on surface and ground water sources (both quality and quantity), watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts,
- Proposed surface and groundwater monitoring,
- Details of water proposed to be taken (including through inflow and seepage) from each water source as defined by the relevant water sharing plan,
- Assessment of any water licensing requirements,
- A detailed and consolidated site water balance,
- Consideration of relevant policies and guidelines,

(ii) By way of specific comment, the soil and water section of the draft DGRs should be amended to include details on:

- impacts on groundwater flow,
- the volume of groundwater that will be taken (including inflows), and
- measures proposed to minimise groundwater ingress.

For further information please contact Richard Nevill, Senior Water Regulation Officer – Projects (Parramatta office) on 8388 7570, or at: richard.nevill@water.nsw.gov.au.

Comment by Crown Lands

The preliminary report notes that a number of public parks or reserves may be affected. Crown Lands advise:

(i) the environmental assessment should clearly identify all Crown land including Crown road and waterway area to be affected by the proposal and the extent of that affect, and

(ii) Crown Lands has an application process associated with compulsory acquisition of Crown land under Section 29(4) of the *Land Acquisition Just Terms Compensation Act 1991* for any Crown lands needed for the project. Further information in respect to acquiring Crown lands can be obtained from the Crown Lands Business Centre (Newcastle) on 4937 9306 or at: acquisition@lands.nsw.gov.au.

For further information please contact Tutis Pereira, Property Service Officer (Parramatta office) on 8836 5347, or at: tutis.pereira@lands.nsw.gov.au.

Yours sincerely

Tony Heffernan
A/Executive Director Business Services

Attachment A

WestConnex Stage 1(b) (M4 East) (SSI 13_6307)

Request for Input into Director General Requirements
Additional comment by the NSW Office of Water

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1. Relevant Legislation

The Environmental Impact Statement (EIS) should take into account the objects and regulatory requirements of the *Water Act 1912* and *Water Management Act 2000* (WMA 2000), as applicable. Proposals and management plans should be consistent with the Objects (s.3) and Water Management Principles (s.5) of the *WMA*.

2. Water Sharing Plans (WSPs)

The proposal is located within the area covered by the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (2011)* and the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources (2011)*. The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the WSPs including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection, water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP.
- Provide a detailed and consolidated site water balance.

3. Relevant Policies and Guidelines

The EIS should take into account the following policies (as applicable):

- Guidelines for Controlled Activities on Waterfront Land (2012);
- Aquifer Interference Policy (2012);
- NSW State Rivers and Estuary Policy (1993);
- NSW State Groundwater Policy Framework Document (1997);
- NSW State Groundwater Quality Protection Policy (1998);
- NSW State Groundwater Dependent Ecosystems Policy (2002); and
- Department of Primary Industries Risk Assessment Guidelines for Groundwater Dependent Ecosystems (2012).
- NSW Water Extraction Monitoring Policy (2007)
- Australian Groundwater Monitoring Guidelines (2012)

Refer:
http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/default.aspx

The EIS needs to demonstrate the proposal is consistent with the spirit and principles of these policy documents.

4. Licensing Considerations

The EIS is required to provide:

- Identification of water requirements for the life of the proposed project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site - i.e. evaporative loss from open voids).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source (as defined by the relevant water sharing plans) and all water supply works to take water.

- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages.
- Details on the location, purpose, size and capacity of any new proposed dams/storages.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10 % of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

5. Groundwater Assessment

To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources including:

- The predicted highest groundwater table at the site.
- Works likely to intercept, connect with or infiltrate the groundwater sources.
- Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- A description of the flow directions and rates and physical and chemical characteristics of the groundwater source.
- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of the quality of the groundwater for the local groundwater catchment.
- An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).
- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.

- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.
- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

6. Groundwater Dependent Ecosystems

It is suggested the EIS considers the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:
  - the effect of the proposal on the recharge to groundwater systems;
  - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
  - the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- Provide safeguard measures for any GDEs.

7. Watercourses and Riparian Land

The EIS should consider the NSW Office of Water *Guidelines for Controlled Activities on Waterfront Land (2012).*

The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- Scaled plans showing the location of:
  - watercourses and top of bank;
  - riparian corridor widths to be established along the creeks;
  - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
  - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
  - proposed location of any asset protection zones.
- Photographs of the watercourses.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A description of the design features and measures to be incorporated to mitigate potential impacts.

End Attachment A

NSW EPA

Our reference: DOC13/91335
Contact: Rhian Tough 02 9995 6817

Dominic Crinnion
Planning Officer, Infrastructure Projects
NSW Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Dear Dominic,

RE: WestConnex – M4 East (SSI 13_6307) - Recommended Environmental Assessment Requirements

Thank you for your request on the 9th of December for the Environment Protection Authority (EPA) for input to the Director General Requirement's for the environmental Assessment (EA) for WestConnex M4 East (1b).

EPA has considered the details of the project as provided by the Department of Planning and Infrastructure and identified the information required to assess the project (Attachment 1). The proponent should ensure that the environmental assessment is sufficiently comprehensive to enable the EPA to determine the extent of the impacts of the project.

The key issues requiring assessment for this project are summarised below:

1. Environmental protection licence is required to carry out the scheduled development work for the scheduled activity of road construction and extractive activities.
2. Environment protection licence issues, including water, air, noise, waste etc.
3. Other broad environment protection or conservation issues of concern in the proposed project
4. Actions that will be taken to avoid or mitigate impacts or compensate for unavoidable impacts in 1-3 above

In carrying out the assessment the proponent should refer to the relevant guidelines listed in the Attachment 1, as well as any relevant industry codes of practice and best practice management guidelines.

The EPA requests one electronic copy of the EA for assessment. Please send the copy to our referral mailbox- planning.matters@environment.nsw.gov.au. If you have any queries regarding this matter please contact Rhian Tough on 9995 6817

Yours sincerely

19/12/13

Frank Garofalow
Manager Infrastructure
Environment Protection Authority

PO Box 668 Parramatta NSW 2124
Level 13, 10 Valentine Avenue, Parramatta NSW 2150
Tel: (02) 9995 5000 Fax: (02) 9995 6900
ABN 43 692 285 758
www..epa.nsw.gov.au

EPA's Recommended Environmental Assessment Requirements (EARs)

WestConnex - M4 East (1b)

TABLE OF CONTENTS

1 Environmental Impacts of the Project

1. Impacts related to the following environmental issues need to be assessed, quantified and reported on:

   - Air Issues
     - Air quality
     - Greenhouse gas
   - Noise and vibration
   - Waste including hazardous materials and radiation
     - Waste EARs for waste facilities
     - General waste
   - Water and Soils
     - Acid sulfate soils
     - Contaminated sites
     - Soil issues - general
     - Water quality

   Environmental assessments (EAs) should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines is at Attachment 1.

2 Licensing Requirements

1. On the basis of the information submitted to date, it appears the proposal is a scheduled activity (Road Construction and Extractive Activities) under the *Protection of the Environment Operations Act 1997* (POEO Act) and will therefore require an Environment Protection Licence (EPL) if approval is granted. The EA should address the requirements of Section 45 of the POEO Act determining the extent of each impact and providing sufficient information to enable EPA to determine appropriate limits for the EPL.

2. Should project approval be granted, the proponent will need to make a separate application to EPA for an EPL for the proposed facility prior to undertaking any on site works. Additional information is available through EPA's *Guide to Licensing* document (www.environment.nsw.gov.au/licensing/licenceguide.htm).

SPECIFIC ISSUES

3 Air Issues

3.1 Air quality

The EA should include a detailed air quality impact assessment (AQIA). The AQIA should:

1. Assess the risk associated with potential discharges of fugitive and point source emissions for all stages of the proposal. Assessment of risk relates to environmental harm, risk to human health and amenity.

2. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to:
    a. proposal location;
    b. characteristics of the receiving environment; and
    c. type and quantity of pollutants emitted.

3. Describe the receiving environment in detail. The proposal must be contextualised within the receiving environment (local, regional and inter-regional as appropriate). The description must include but need not be limited to:
    a. meteorology and climate;
    b. topography;
    c. surrounding land-use; receptors; and
    d. ambient air quality.

4. Include a detailed description of the proposal. All processes that could result in air emissions must be identified and described. Sufficient detail to accurately communicate the characteristics and quantity of all emissions must be provided.

5. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits and points.

6. Include considerations of emergency and abnormal activities should be assessed, and the mitigation and management options that will be used to prevent, control, abate or minimise potential impacts should be described.

7. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment.

8. Include air dispersion modelling where there is a risk of adverse air quality impacts, or where there is sufficient uncertainty to warrant a rigorous numerical impact assessment. Air dispersion modelling must be conducted in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (2005) http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf.

9. Demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations (POEO) Act (1997)* and the *POEO (Clean Air) Regulation (2010)*.

10. Provide an assessment of the project in terms of the priorities and targets adopted under the NSW State Plan 2010 and its implementation plan Action for Air.

11. Detail emission control techniques/practices that will be employed by the proposal.

12. Consider mobile plant in the assessment of air quality impacts

13. Consider a qualitative construction air quality impact assessment when assessing the feasibility of managing spoil underground and/or within sheds on the surface. It is considered that a quantitative construction air quality impact assessment is required if there is substantial handling of spoil on the surface and not inside sheds.

14. Air quality modelling scenarios approaches should be canvassed with the Inter-Agency Regulatory Group to obtain in-principle support for the approach-the ventilation strategy is of particular interest.

3.2 Greenhouse gas

1. The EA should include a comprehensive assessment of, and report on, the project's predicted greenhouse gas emissions (tCO2e). Emissions should be reported broken down by:
   a) direct emissions (scope 1 as defined by the Greenhouse Gas Protocol – see reference below),
   b) indirect emissions from electricity (scope 2), and
   c) upstream and downstream emissions (scope 3)

   before and after implementation of the project, including annual emissions for each year of the project (construction, operation and decommissioning).

2. The EA should include an estimate of the greenhouse emissions intensity (per unit of production). Emissions intensity should be compared with best practice if possible.

3. The emissions should be estimated using an appropriate methodology, in accordance with NSW, Australian and international guidelines (see below).

4. The proponent should also evaluate and report on the feasibility of measures to reduce greenhouse gas emissions associated with the project. This could include a consideration of energy efficiency opportunities or undertaking an energy use audit for the site.

Guidance Material

- The Greenhouse Gas Protocol: Corporate Standard, World Council for Sustainable Business Development & World Resources Institute http://www.ghgprotocol.org/standards/corporate-standard
- National Greenhouse Accounts (NGA) Factors, Australian Department of Climate Change (Latest release), http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx

- National Greenhouse and Energy Reporting System, Technical Guidelines (latest release) http://www.climatechange.gov.au/en/government/initiatives/national-greenhouse-energy-reporting/tools-resources.aspx
- National Carbon Accounting Toolbox http://www.climatechange.gov.au/government/initiatives/ncat.aspx
- Australian Greenhouse Emissions Information System (AGEIS) http://ageis.climatechange.gov.au/

4 Noise and Vibration

1. In relation to noise, the following matters should be addressed (where relevant) as part of the Environmental Assessment.

General

2. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline (*DECC, 2009). http://www.environment.nsw.gov.au/noise/constructnoise.htm

3. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006). http://www.environment.nsw.gov.au/noise/vibrationguide.htm

4. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZEC, 1990). http://www.environment.nsw.gov.au/noise/blasting.htm

5. Noise and vibration from ventilation stacks should be assessed, and the mitigation and management options that will be used to prevent, control, abate or minimise potential impacts should be described.

Industry

6. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises should be assessed using the guidelines contained in the *NSW Industrial Noise Policy* (EPA, 2000) and *Industrial Noise Policy Application Notes.* http://www.environment.nsw.gov.au/noise/industrial.htm

Road

7. Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999). http://www.environment.nsw.gov.au/noise/traffic.htm

Noise from new or upgraded public roads should be assessed using the *Environmental Criteria for Road Traffic Noise* (EPA, 1999).
http://www.environment.nsw.gov.au/noise/traffic.htm

5 Waste

5.1 General Waste

The EA should:

1. Include a detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots.

2. Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste.
   Note: All waste must be classified in accordance with *EPA's Waste Classification Guidelines*.

3. Identify, characterise and classify all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling.
   Note: All waste must be classified in accordance with *EPA's Classification Guidelines*.

4. Include a commitment to retaining all sampling and classification results for the life of the project to demonstrate compliance with *EPA's Waste Classification Guidelines*.

5. Provide details of how waste will be handled and managed onsite to minimise pollution, including:

   a) Stockpile location and management
      - Labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste).
      - Proposed height limits for all waste to reduce the potential for dust and odour.
      - Procedures for minimising the movement of waste around the site and double handling.
      - Measures to minimise leaching from stockpiles into the surrounding environment, such as sediment fencing, geofabric liners etc.

   b) Erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation at the

site during works. The EA should show the location of each measure to be implemented. The Proponent should consider measures such as:

- Sediment traps
- Diversion banks
- Sediment fences
- Bunds (earth, hay, mulch)
- Geofabric liners
- Other control measures as appropriate

The Proponent should also provide details of:

- how leachate from stockpiled waste material will be kept separate from stormwater runoff;
- treatment of leachate through a wastewater treatment plant (if applicable); and
- any proposed transport and disposal of leachate off-site.

6. Provide details of how the waste will be handled and managed during transport to a lawful facility. If the waste possesses hazardous characteristics, the Proponent must provide details of how the waste will be treated or immobilised to render it suitable for transport and disposal.

7. Include details of all procedures and protocols to be implemented to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.

8. Include a statement demonstrating that the Proponent is aware of EPA's requirements with respect to notification and tracking of waste.

9. Include a statement demonstrating that the Proponent is aware of the relevant legislative requirements for disposal of the waste, including any relevant Resource Recovery Exemptions, as gazetted by EPA from time to time.

10. Outline contingency plans for any event that affects operations at the site that may result in environmental harm, including: excessive stockpiling of waste, volume of leachate generated exceeds the storage capacity available on-site etc.

6 Water and Soils

6.1 Acid Sulfate Soils

1. The potential impacts of the development on acid sulfate soils must be assessed in accordance with the relevant guidelines in the *Acid Sulfate Soils Manual* (Stone *et al.* 1998) and the *Acid Sulfate Soils Laboratory Methods Guidelines* (Ahern *et al.* 2004).

2. Describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

6.2 Contaminated Sites Assessment and Remediation

1. The EA should include an assessment of the contaminated site that is conducted in accordance with the guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*, for example: *Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000), Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006), Sampling Design Guidelines (EPA, 1995), National Environment Protection (Assessment of Site Contamination) Measure 1999* (or update).

2. The EA should provide the details on how the site contamination will be remediated and/or managed so that the site is, or can be, made suitable for the proposed use.

3. All reports should be prepared in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites* (EPA, 2000).

4. The EA should specify whether or not a site auditor, accredited under the *Contaminated Land Management Act 1997*, has been or will be engaged to issue a site audit statement to certify on the suitability of the current or proposed uses.

6.3 Soil issues - general

The EA should include:

1. An assessment of potential impacts on soil and land resources should be undertaken, being guided by *Soil and Landscape Issues in Environmental Impact Assessment* (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to:
   a. Soil erosion and sediment transport - in accordance with *Managing urban stormwater: soils and construction,* vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008).
   b. Mass movement (landslides) – in accordance with *Landslide risk management* guidelines presented in Australian Geomechanics Society (2007).

c. Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets which includes *Site Investigations for Urban Salinity* (DLWC, 2002).

2. A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified soil and land resource impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

3. Where required, add any specific assessment requirements relevant to the project.

6.4 Water

Describe Proposal

1. Describe the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.

2. Demonstrate that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.

3. Where relevant include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

Background Conditions

4. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal.

5. State the Water Quality Objectives for the receiving waters relevant to the proposal. These refer to the community's agreed environmental values and human uses endorsed by the NSW Government as goals for ambient waters (http://www.environment.nsw.gov.au/ieo/index.htm). Where groundwater may be impacted the assessment should identify appropriate groundwater environmental values.

6. State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality (http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality).

7. State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.

Impact Assessment

8. Describe the nature and degree of impact that any proposed discharges will have on the receiving environment.

9. Assess impacts against the relevant ambient water quality outcomes. Demonstrate how the proposal will be designed and operated to:
    - protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
    - contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.

10. Where a discharge is proposed that includes a mixing zone, the proposal should demonstrate how wastewater discharged to waterways will ensure the ANZECC (2000) water quality criteria for relevant chemical and non-chemical parameters are met at the edge of the initial mixing zone of the discharge, and that any impacts in the initial mixing zone are demonstrated to be reversible.

11. Assess impacts on groundwater and groundwater dependent ecosystems.

12. Describe how stormwater will be managed both during and after construction.

Monitoring

13. Describe how predicted impacts will be monitored and assessed over time.

Attachment 1 – Guidance Material

Title	Web address
Relevant Legislation	
Contaminated Land Management Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+140+1997+cd+0+N
Environmentally Hazardous Chemicals Act 1985	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+14+1985+cd+0+N
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
Licensing	
Guide to Licensing	www.environment.nsw.gov.au/licensing/licenceguide.htm
Air Issues	
Air Quality	
Approved methods for modelling and assessment of air pollutants in NSW (2005)	http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+428+2010+cd+0+N
Greenhouse Gas	
The Greenhouse Gas Protocol: Corporate Standard, World Council for Sustainable Business Development & World Resources Institute	http://www.ghgprotocol.org/standards/corporate-standard
National Greenhouse Accounts (NGA) Factors, Australian Department of Climate Change (Latest release),	http://www.climatechange.gov.au/publications/greenhouse-acctg/national-greenhouse-factors.aspx
National Greenhouse and Energy Reporting System, Technical Guidelines (latest release)	http://www.climatechange.gov.au/en/government/initiatives/national-greenhouse-energy-reporting/tools-resources.aspx
National Carbon Accounting Toolbox	http://www.climatechange.gov.au/government/initiatives/ncat.aspx
Australian Greenhouse Emissions Information System (AGEIS)	http://ageis.climatechange.gov.au/
Noise and Vibration	
Interim Construction Noise Guideline (DECC, 2009)	http://www.environment.nsw.gov.au/noise/constructnoise.htm

Title	Web address
Assessing Vibration: a technical guideline (DEC, 2006)	http://www.environment.nsw.gov.au/noise/vibrationguide.htm
Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990)	http://www.environment.nsw.gov.au/noise/blasting.htm
Industrial Noise Policy Application Notes	http://www.environment.nsw.gov.au/noise/traffic.htm
Environmental Criteria for Road Traffic Noise (EPA, 1999)	http://www.environment.nsw.gov.au/noise/traffic.htm
Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (DECC, 2007)	http://www.environment.nsw.gov.au/noise/railinfranoise.htm
Environmental assessment requirements for rail traffic-generating developments	http://www.environment.nsw.gov.au/noise/railnoise.htm
Waste, Chemicals and Hazardous Materials and Radiation	
Waste	
Environmental Guidelines: Solid Waste Landfills (EPA, 1996)	http://www.environment.nsw.gov.au/resources/waste/envguidlns/solidlandfill.pdf
Draft Environmental Guidelines - Industrial Waste Landfilling (April 1998)	http://www.environment.nsw.gov.au/resources/waste/envguidlns/industrialfill.pdf
Waste Classification Guidelines (DECC, 2008)	http://www.environment.nsw.gov.au/waste/envguidlns/index.htm
Resource recovery exemption	http://www.environment.nsw.gov.au/waste/RRecoveryExemptions.htm
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps	http://canri.nsw.gov.au/download/
Acid Sulfate Soils Manual (Stone et al. 1998)	Manual available for purchase from: http://www.landcom.com.au/whats-new/the-blue-book.aspx Chapters 1 and 2 are on DP&I's Guidelines Register at: Chapter 1 Acid Sulfate Soils Planning Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf Chapter 2 Acid Sulfate Soils Assessment Guidelines: http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	http://www.derm.qld.gov.au/land/ass/pdfs/lmg.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Contaminated Sites Assessment and Remediation	
Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.planning.nsw.gov.au/DevelopmentAssessments/RegisterofDevelopmentAssessmentGuidelines/tabid/207/language/en-US/Default.aspx

Title	Web address
Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000)	http://www.environment.nsw.gov.au/resources/clm/97104consultantsglines.pdf
Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006)	http://www.environment.nsw.gov.au/resources/clm/auditorglines06121.pdf
Sampling Design Guidelines (EPA, 1995)	Available by request from EPA's Environment Line
National Environment Protection (Assessment of Site Contamination) Measure 1999 (or update)	http://www.ephc.gov.au/taxonomy/term/44
Soils – general	
Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)	http://www.dnr.nsw.gov.au/care/soil/soil_pubs/pdfs/tech_rep_34_new.pdf
Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008)	Vol 1 - Available for purchase at http://www.landcom.com.au/whats-new/publications-reports/the-blue-book.aspx Vol 2 - http://www.environment.nsw.gov.au/stormwater/publications.htm
Landslide risk management guidelines	http://www.australiangeomechanics.org/resources/downloads/
Site Investigations for Urban Salinity (DLWC, 2002)	http://www.environment.nsw.gov.au/resources/salinity/booklet3siteinvestigationsforurbansalinity.pdf
Local Government Salinity Initiative Booklets	http://www.environment.nsw.gov.au/salinity/solutions/urban.htm
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf

NSW GOVERNMENT
Heritage Council of New South Wales

3 Marist Place
Parramatta NSW 2150

Locked Bag 5020
Parramatta NSW 2124
DX 8225 PARRAMATTA

Telephone: 61 2 9873 8500
Facsimile: 61 2 9873 8599

heritage@heritage.nsw.gov.au
www.heritage.nsw.gov.au

Contact: Lily Chu
Phone: 02 9873 8595
Email: lily.chu@heritage.nsw.gov.au

Job ID No: A1782821
File number: 13/19967
Your ref: SSI – 13_6307; 13/19753-1

Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Dominic Crinion

Dear Mr Crinion

RE: WEST CONNEX – M4 EAST – INPUT INTO DIRECTOR-GENERAL'S REQUIREMENTS

The Heritage Division of the Office of Environment and Heritage is responding on behalf of the NSW Heritage Council to your request for key issues and assessment requirements for the M4 East project which extends from Homebush Bay Drive to Ashfield Park.

The Heritage Division provides the following advice in relation to historic heritage only. Separate advice in relation to Aboriginal heritage will be provided by the relevant persons in the Office of Environment and Heritage.

The Heritage Division has reviewed the report titled *"West Connex – M4 East Homebush Bay Drive to Parramatta Road and City West Link – State Significant Infrastructure Application Report – November 2013. (SSI report)"*

It is requested that the following key issues and assessment requirements are addressed, and that the draft DGRS are amended as recommended:

Key issues and assessment requirements:

Impact on Yasmar – State Heritage Register item

- It is understood from the Planning Focus Meeting that there will be an exit portal at the eastern end of Yasmar and that this would involve 'cut and cover' across the Yasmar frontage and 'regreening' to reinstate original levels.

- The SSI report identifies the significance of Yasmar, particularly being the "*only surviving* relatively *intact estate still fronting Parramatta Road."* Given such significance, the route and location of exit portals should be deviated to **avoid** any physical or visual impact on the significant landscape setting including the formal entry gates and mature Moreton Bay Figs possibly dating from 1870.

- An assessment of significance will need to be undertaken for the EIS, including an assessment of all affected landscape elements. It is requested that there be an assessment of the policies within the Conservation Management Plan for Yasmar (prepared by Godden Mackay Logan), along with any other relevant policy documents for Yasmar.

- In the event that Yasmar is affected by the project, all alternative route options need to be documented in the EIS and the preferred route justified with measures to mitigate and manage impacts. It will be expected that the significant landscape setting at the front of Yasmar be reinstated. An investigation into appropriate soil depths and whether figs can be transplanted is required. Detailed architectural and landscape drawings of the portal exit and its relationship with Yasmar will be required with the EIS so that the Heritage Division can make a proper assessment of the impacts.

- It is also understood that there could be up to three ventilation stacks along the M4 east extension and that one is proposed at the Yasmar exit portal. Section 4.4.1 of the SSI Report suggests that tunnel air discharges could be through the tunnel portals instead of ventilation stacks. This needs to be investigated and documented in the EIS with adequate consideration given to design and heritage impacts in conjunction with operational requirements (air quality and energy efficiency).

- If a ventilation stack is required, consider relocation away from Yasmar and integration with other buildings or structures to minimise the visual impact. Detailed drawings shall be submitted with the EIS.

Impact on Ashfield Park – local item, but possibly of State significance

- It is proposed to remove a strip off Ashfield Park to accommodate a tunnel entry ramp. The extent of impact is unclear at this stage.

- Ashfield Park is an intact layout dating from 1904 with significant plantings, including two avenues of majestic Canary Island Date Palms which were possibly donated by the renowned amateur horticulturist Hermann Finckh.

- Further route assessment should be undertaken to **avoid** impacts on the Park. All tunnel entry options shall be documented and assessed in the EIS.

- In the event that the Park is affected, the EIS shall be accompanied by a detailed heritage assessment of all affected landscape elements. Detailed landscape design drawings of the interface between the park and the road widening shall be submitted with the EIS, with photomontages of views to and from the Park. The formal axis and plantings must be reinstated.

General heritage impacts

- The Heritage Division notes the large scale impact that the project will have on heritage items, conservation areas and historic buildings, structures, landscape and public domain elements (mature street trees, milestones, sandstone kerbs). Measures must be taken to **avoid** and minimise demolition and significant impacts to these intact historic settings and their intangible cultural heritage values.

- The urban design policies adopted by the RTA in its document "Beyond the Pavement" shall be incorporated in the design and assessed in the EIS. Similarly, the "Landscaping Guideline" prepared by RTA shall be adopted.

- Where portals, acoustic walls and new roads will adjoin heritage properties, appropriate materials, treatments and finishes will be required to minimise impact and complement heritage areas. Such details shall form part of the EIS. For example, the State

significant heritage item "The Bunyas" in Rogers Avenue, Haberfield could have a direct frontage to the widened Parramatta Road. Such impacts will need to be addressed.

- The necessary and relevant assessments shall be carried out to ensure that vibration, excavation and works will not cause any damage or structural issues to nearby heritage items. The alignment should be modified to avoid such impacts and mitigation and management measures outlined and implemented.

Impacts on Archaeology

- The appropriate archaeological assessments shall be carried out and submitted with the EIS. If they exist, archaeological zoning plans or archaeological management plans shall be consulted.

- The archaeological assessments shall include future mitigation strategies for all identified archaeological impacts that would arise from the project.

- The EIS shall include detail on the use of Concord Oval as a construction site and potential impacts on archaeology associated with the 1838-1843 Longbottom Convict Stockade.

Further assessments

- The Heritage Division concurs with the proposed further assessments outlined in section 4.8.3 of the SSI report.

- In particular, a systematic field survey in the project area shall be carried out. This should include any buildings, works, relics (including relics underwater), gardens, landscapes, views, trees or places of non-Aboriginal heritage significance. A statement of significance and an assessment of the impact of the proposal on the heritage significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual.

  The field survey and assessment should be undertaken by a qualified practitioner/consultant with historic sites experience. The Heritage Division's website http://www.heritage.nsw.gov.au/13_subnav_07.cfm can provide lists of suitable consultants.

- The EIS shall include a Heritage Impact Statement addressing the heritage significance of all affected sites and an assessment of any impacts the development may have upon this significance. This assessment should include natural areas and places of Aboriginal, historic or archaeological significance. It should also include a consideration of wider heritage impacts in the area surrounding the site.

- The EIS shall include detailed mapping of all affected heritage items (and conservation areas etc) and those in the vicinity and how they are affected by the proposal. Draft items shall also be included and identified. The proposed road layout shall be superimposed onto the heritage map.

- The Heritage Council maintains the State Heritage Inventory which lists items protected under the *Heritage Act 1977* (including those listed on the NSW State Heritage Register) and other statutory instruments. This register can be accessed through the Heritage Division website. It should be noted that the legal standing of items listed on the State

Heritage Register can also be provided by applying for a section 167 Certificate through the Heritage Branch home page.

You should consult lists maintained by the Office of Environment & Heritage, the National Trust of Australia (NSW), the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999* and the local council in order to identify any identified items of heritage significance in the area affected by the proposal. Please be aware, however, that these lists are constantly evolving and that items with potential heritage significance may not yet be listed.

Recommended amendments to draft DGRs (in bold and strikethrough):

Heritage – including but not limited to:

- impacts to *State and local historic heritage* (including conservation areas, built heritage**, landscapes** and archaeology) should be assessed. Where impacts to State or locally significant historic heritage are identified, the assessment shall:
    - outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the guidelines in the *NSW Heritage Manual* (Heritage Office and Department of Urban Affairs and Planning 1996),
    - **document route options and justify preferred routes (where significant heritage is affected, particularly at Yasmar and Ashfield Park),**
    - be undertaken by a suitably qualified heritage consultant(s) with relevant heritage expertise (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria),
    - include a statement of heritage impact for all heritage items (including significance assessment). **This should include detailed mapping of all heritage items and how they are affected by the proposal.**
    - consider impacts from vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape**, views** and vistas, and architectural noise treatment, ~~and~~
    - **include detailed architectural and landscape drawings that address the mitigation measures,**
    - develop an appropriate archaeological assessment methodology, including research design, in consultation with the Department and the Heritage Council of New South Wales, to guide physical archaeological test excavations and include the results of these excavations; **and**
    - **provide future mitigation strategies for all identified archaeological impacts which would arise from the project.**

Thank you for the opportunity to comment. If you wish to discuss any of the matters raised, please contact Lily Chu at the Heritage Division.

Yours sincerely

20/12/13
Ed Beebe
Acting Conservation Manager, Heritage Division
Office of Environment & Heritage
As Delegate of the Heritage Council of NSW

NSW GOVERNMENT | Health

TRIM Ref H2013/116835

Mr Dominic Crinnon
Planning Officer
Infrastructure Projects
NSW Department of Planning & Infrastructure
23-33 Bridge Street, Sydney, NSW 2000
GPO Box 39
Sydney NSW 2001
dominic.crinnon@planning.nsw.gov.au

BY EMAIL

Dear Mr Crinnon

RE: Application for DGRs for WestConnex – M4 East SSI 13_6307

Thank you for the Department's letter of 5 December 2013 to Dr Richard Broome and the opportunity to provide input to the Director General's Environmental Assessment Requirements (DGRs) for the proposed WestConnex - M4 East. NSW Health recommends that the following key issues should be considered during the assessment process.

Air Quality

General

The proponent should provide a comprehensive assessment of the human health risks associated with the tunnel's impact on local and regional air quality during construction and operation.

As with our other recent comments for tunnel road projects consideration should be given to a range of pollutants including PM2.5, PM10, TSP, CO, NO2 and other nitrogen oxides, volatile organic compounds (e.g. BTEX) and ozone. Relevant short and long term exposure periods should be considered depending on the pollutant. Consideration should also be given to the impact of odours.

NSW Ministry of Health
ABN 92 697 899 630

73 Miller St North Sydney NSW 2060
Locked Mail Bag 961 North Sydney NSW 2059
Tel. (02) 9391 9000 Fax. (02) 9391 9101
Website. www.health.nsw.gov.au

When assessing the potential health impacts, both incremental changes in exposure from existing background pollutant levels and the cumulative impacts of project specific and existing pollutant levels should be addressed at the location of receivers.

Exposure should be assessed at the location of the most affected receivers and also for other sensitive receptors such as childcare centres, schools, hospitals and aged care facilities. Consideration should also be given to the size of the population exposed to increased concentrations of air pollutants.

Under the heading 'Air Quality' third dot point we suggest that a better wording for the DGRs would be "consideration of the additional health risk from air pollutants should be expressed in health terms such as additional mortality or morbidity estimated to be associated with the increase in pollutant exposure of the affected population following the approach described in *Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (2012)."*

Impacts during operation

A detailed description should be provided of the location, configuration and design of all emissions sources including ventilation stack(s) and tunnel portals.

It is noted that these outlets are not yet identified but as with other road tunnels this is likely to be the issue of most concern and the following point should be considered:

1. Emissions should be modelled for the range of potential ventilation scenarios involving variable contributions of stack and portal emissions, and for a range of traffic conditions.
2. Modelling should account for the range of expected climatic conditions around proposed ventilation stacks and portals.
3. Modelling should account for the range of vehicle numbers and relative contributions of heavy/light and diesel vehicles.
4. Air quality models should be appropriate to the scenario.

Consideration should be given to all feasible mitigation measures in addition to stack ventilation, such as filtration of emissions prior to discharge, and a rationale provided for inclusion or exclusion of these measures.

An assessment should be made of in tunnel air quality and the human health effects of potential exposure scenarios for vehicle occupants (including infants, children and adults) and motorcyclists using the tunnel. Pollutants considered should include CO,

PM2.5, PM10 and NO2 and exposures levels estimated from the range of traffic flows that may be experienced.

An assessment should be made of the impact of operation of the tunnel on regional air quality.

Impacts during construction

A detailed description should be provided of potential emissions sources relating to construction including dust from unpaved service locations, dust from transport of spoil and emissions from non-road diesel engines.

Consideration should be given to all feasible mitigation measures.

Noise and vibration

NSW Health notes and concurs with the draft DGR's requirements for noise and vibration. We note with approval that the draft DGRs include a requirement to consider sleep disturbance.

Traffic and Transport

We note that the draft DGRs includes a requirement to consider the opportunities to integrate cycleway and pedestrian elements with surrounding networks. We consider that these considerations are important to preserve and enhance the opportunities for physical activity both for commuters and residents.

Thank you for the opportunity to comment and to attend the Planning Focus Meeting on 12 December 2013. Should you require any further information, please contact Professor Wayne Smith on 9391 9040.

Yours sincerely

Professor Wayne Smith
Director Environmental Health Branch
Health Protection NSW

19 December 2013

NSW GOVERNMENT | Office of Environment & Heritage

Your reference : SSI13/6307
Our reference : DOC13/90799
Contact : Marnie Stewart ph 9995 6868

Ms Kylie Seretis
Manager - Roads
Infrastructure Projects
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Att: Dominic Crinion

Dear Ms Seretis,

Re: Request for input to the Director General's environmental assessment requirements (DGRs) for the WestConnex - M4 East (SSI 13_6307)

I refer to your request to the Office of Environment and Heritage (OEH) for input to the Director General's Assessment Requirements for the WestConnex – M4 East (SSI13_6307). OEH provides the following comments in relation to floodplain management, biodiversity and Aboriginal cultural heritage.

Floodplain management

A hydrology and hydraulic assessment shall be prepared for mainstream and overland flow paths associated with major drainage for sub-catchments including the project vicinity within Powells Creek, Hen and Chicken Bay and Dobroyd Canal sub-catchments.

The assessment is to address flooding behaviour for existing and developed conditions for the full range of flood sizes up to and including the probable maximum flood (PMF). The assessment should also examine both construction and operational phases and shall include:

- A comprehensive understanding of flood risk to people and properties for the full range of the floods up to the probable maximum flood (PMF) event including both construction and operational phases.
- The impact of the proposal on the existing flood behaviour including any potential reduction of floodway and flood storage areas or redistribution of flow which may result in increased flood levels on adjacent, downstream and upstream areas. This should be addressed for all proposed works on the flood prone land.
- An assessment of the impacts of earthworks and filling within the flood prone land up to the PMF level. Earthworks within the floodplain have the potential to alter the flood behaviour and impact the surrounding areas, therefore the assessment should be based on understanding of cumulative flood impacts of both construction and operational phase. Also filling should be limited to flood fringe areas, which are to be identified in accordance with the Floodplain Development Manual (2005)

PO Box 644 Parramatta NSW 2124
Level 6, 10 Valentine Ave Parramatta NSW 2150
Tel: (02) 88376000 Fax: (02) 9995 6900
ABN 30 841 387 271
www.environment.nsw.gov.au

- Details of the stormwater drainage infrastructure and overland flow paths associated with the proposed project. The assessment should examine both construction and operational stages.

- Identification of appropriate mitigation measures to offset potential flood risk arising from the project. Any proposed permanent mitigation work should be modelled and assessed on an overall catchment basis in order to overcome any adverse impact on surrounding properties and ensure the measure fits its purpose and meets the criteria of the Council where it is located.

- Identification of temporary mitigation measures that may be implemented to protect the project's works during construction activities. Proposed temporary mitigation works would be assessed in regard to its affectation on flooding behaviour and surrounding properties during construction.

- An assessment of the impacts of potential stockpile areas should be carried out to address their temporary impacts on flood behaviour and the surrounding environment. (Ideally, stockpile areas should be located in low flood risk areas i.e. above the 100 year ARI flood level).

- A sensitivity analysis to determine the potential impacts from climate change on flooding behaviour.

- An Emergency Response Plan (ERP) to manage larger floods considering mainstream and overland flow (local flooding) should be prepared in consultation with the State Emergency Services (SES) and relevant councils in the early stage of the construction works. The ERP would address flood evacuation needs during both construction and operational phases to ensure that safe evacuation can be achieved. Safety of construction personnel during construction stages should also be adequately addressed in the EPR to ensure that flood risk to personnel and damages to project works during construction is minimised.

Consideration should be given to locating the tunnel's openings outside the flood prone land taking into account both mainstream flooding and local overland flow paths. The Flood Development Manual (2005) identifies flood prone land as land susceptible to flooding by the probable maximum flood (PMF) event.

Relevant Policies and Guidelines

- NSW Government Flood Prone Land Policy (1984) as set out in the Floodplain Development Manual (2005)
- "Practical Consideration of Climate Change" (DECCW, 2007)
- Section 117(2) Local Planning Direction 4.3 "Flood Prone Land"
- Planning circular PS 07-003 "New guideline and changes to section 117 direction and EP&A Regulation on flood prone land"

Biodiversity

The NSW Government has developed the NSW offset principles for major projects (state significant development and state significant infrastructure), which are available on OEH's website here; http://www.environment.nsw.gov.au/biocertification/offsets.htm These were released on 17 July 2013 and are to be used in assessing impacts to biodiversity and determining acceptable offsets for state significant development and state significant infrastructure projects.

OEH recommends the following be included in the Director-General's Requirements for the preparation of an Environmental Impact Statement (EIS). Further details about the assessment required is provided in Attachment 1.

1. The EIS should address impacts on flora and fauna, including threatened species, populations and endangered ecological communities and their habitats, in accordance with OEH's Threatened Species Survey and Assessment Guidelines (available at:

http://www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm) and any relevant draft or final recovery plans.

This should include potential indirect impacts on the Grey-headed Flying Fox camp at Duck River.

2. Any steps taken to mitigate or offset any identified impacts to the environment should also be detailed in the EIS. The NSW offset principles for major projects (state significant development and state significant infrastructure) are to be used in assessing and determining the adequacy of any offsets.

Note: The guidelines for the Supplementary Measures (Principle 6) are currently being developed by OEH. Until the guidelines are finalised, OEH should be consulted in regards to the application of this principle if it is being considered in the preparation of the EIS.

Aboriginal Heritage

OEH recommends the following be included in the Director-General's Requirements for the preparation of an EIS:

- The EIS should address Aboriginal Heritage in accordance with the Draft *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (2005).
- Impacts on Aboriginal cultural heritage must be avoided where possible. Where it is not possible, mitigation strategies must be explored in consultation with Aboriginal stakeholders.

If you have any queries regarding this matter please contact Marnie Stewart, Senior Regional Operations Officer on 9995 6868.

Yours sincerely,

S. Harrison 20/12/13

SUSAN HARRISON
Senior Team Leader Planning
Greater Sydney Region
Regional Operations

Attachment 1

Biodiversity impacts can be assessed using either the BioBanking Assessment Methodology (scenario 1) or a detailed biodiversity assessment (scenario 2). The requirements for each of these approaches are detailed below.

The BioBanking Assessment Methodology can be used either to obtain a BioBanking statement, or to assess impacts of a proposal and to determine required offsets without obtaining a statement. In the latter instances, if the required credits are not available for offsetting, appropriate alternative options may be developed in consultation with OEH officers and in accordance with OEH policy.

Scenario 1 - Where a proposal is assessed using the BioBanking Assessment Methodology (BBAM):

1. Where a BioBanking Statement is being sought under Part 7A of the *Threatened Species Conservation* Act 1995 (TSC Act), the assessment must be undertaken by an accredited BioBanking assessor (as specified under Section 142B (1)(c) of the TSC Act 1995) and done in accordance with the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECCW, 2008). To qualify for a BioBanking Statement a proposal must meet the improve or maintain standard.

1a. The EIS should include a specific Statement of Commitments that reflects all requirements of the BioBanking Statement including the number of credits required and any DG approved variations to impact on Red Flags.

2. Where the BioBanking Assessment Methodology is being used to assess impacts of a proposal and to determine required offsets, and a BioBanking Statement is not being obtained, the EIS should contain a detailed biodiversity assessment and all components of the assessment must be undertaken in accordance with the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECCW, 2008).

2a. The EIS should include a specific Statement of Commitments which:
- is informed by the outcomes of the proposed BioBanking assessment offset package;
- sets out the ecosystem and species credits required by the BioBanking Assessment Methodology and how these ecosystem and/or species credits will be secured and obtained;
- if the ecosystem or species credits cannot be obtained, provides appropriate alternative options to offset expected impacts, noting that an appropriate alternative option may be developed in consultation with OEH officers and in accordance with OEH policy;
- demonstrates how all options have been explored to avoid red flag areas;
- includes all relevant 'BioBanking files (e.g. *.xml output files), data sheets and documentation (including maps, aerial photographs, GIS shape files, other remote sensing imagery etc.) to ensure OEH can conduct an appropriate review of the assessment.

3. With regard to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify and assess any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.

4. Any steps taken to mitigate or offset any identified impacts to the environment should also be detailed in the EIS. The NSW offset principles for major projects (state significant development and state significant infrastructure) are to be used in assessing and determining the adequacy of any offsets. http://www.environment.nsw.gov.au/biocertification/offsets.htm

Note: The guidelines for the Supplementary Measures (Principle 6) are currently being developed by OEH. Until the guidelines are finalised, OEH should be consulted in regards to the application of this principle if it is being considered in the preparation of the EIS.

Scenario 2 - Where a proposal is assessed outside the BioBanking Assessment Methodology:

1. The EIS should include a detailed biodiversity assessment, including assessment of impacts on threatened biodiversity, native vegetation and habitat. This assessment should address the matters included in the following sections.

2. A field survey of the site should be conducted and documented in accordance with relevant guidelines, including:
   - the *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna - Amphibians* (DECCW, 2009)
   - *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004), and
   - Threatened species survey and assessment guideline information on www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm.

   If a proposed survey methodology is likely to vary significantly from the above methods, the proponent should discuss the proposed methodology with OEH prior to undertaking the EIS, to determine whether OEH considers that it is appropriate.

   Recent (less than five years old) surveys and assessments may be used. However, previous surveys should not be used if they have:
   - been undertaken in seasons, weather conditions or following extensive disturbance events when the subject species are unlikely to be detected or present, or
   - utilised methodologies, survey sampling intensities, timeframes or baits that are not the most appropriate for detecting the target subject species,

   unless these differences can be clearly demonstrated to have had an insignificant impact upon the outcomes of the surveys. If a previous survey is used, any additional species listed under the TSC Act since the previous survey took place, must be surveyed for.

   Determining the list of potential threatened species for the site must be done in accordance with the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004) and the *Guidelines for Threatened Species Assessment* (Department of Planning, July 2005). The OEH Threatened Species website http://www.environment.nsw.gov.au/threatenedspecies/ and the *Atlas of NSW Wildlife* database must be the primary information sources for the list of threatened species present. The BioBanking Threatened Species Database, the Vegetation Types databases (available on OEH website at http://www.environment.nsw.gov.au/biobanking/biobankingtspd.htm and http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm, respectively) and other data sources (e.g. PlantNET, Online Zoological Collections of Australian Museums (http://www.ozcam.org/), previous or nearby surveys etc.) may also be used to compile the list.

3. The EIS should contain the following information as a minimum:
   a. The requirements set out in the *Guidelines for Threatened Species Assessment* (Department of Planning, July 2005).
   b. Description and geo-referenced mapping of study area (and spatial data files), e.g. overlays on topographic maps, satellite images and /or aerial photos, including details of map datum, projection and zone, all survey locations, vegetation communities (including classification and

methodology used to classify), key habitat features and reported locations of threatened species, populations and ecological communities present in the subject site and study area.

c. Description of survey methodologies used, including timing, location and weather conditions.
d. Details, including qualifications and experience of all staff undertaking the surveys, mapping and assessment of impacts as part of the EIS.
e. Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status.
f. Description of the likely impacts of the proposal on biodiversity and wildlife corridors, including direct and indirect and construction and operation impacts. Wherever possible, quantify these impacts such as the amount of each vegetation community or species habitat to be cleared or impacted, or any fragmentation of a wildlife corridor.
g. Identification of the avoidance, mitigation and management measures that will be put in place as part of the proposal to avoid or minimise impacts, including details about alternative options considered and how long term management arrangements will be guaranteed.
h. Description of the residual impacts of the proposal. If the proposal cannot adequately avoid or mitigate impacts on biodiversity, then a biodiversity offset package is expected (see the requirements for this at point 6 below).
i. Provision of specific Statement of Commitments relating to biodiversity.

4. An assessment of the significance of direct and indirect impacts of the proposal must be undertaken for threatened biodiversity known or considered likely to occur in the study area based on the presence of suitable habitat. This assessment must take into account:
   a. the factors identified in s.5A of the EP&A Act, and
   b. the guidance provided by *The Threatened Species Assessment Guideline – The Assessment of Significance (DECCW, 2007)* which is available at: http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf

5. With regard to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify and assess any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.

6. Any steps taken to mitigate or offset any identified impacts to the environment should also be detailed in the EIS. The NSW offset principles for major projects (state significant development and state significant infrastructure) are to be used in assessing and determining the adequacy of any offsets. http://www.environment.nsw.gov.au/biocertification/offsets.htm

   Note: The guidelines for the Supplementary Measures (Principle 6) are currently being developed by OEH. Until the guidelines are finalised, OEH should be consulted in regards to the application of this principle if it is being considered in the preparation of the EIS.

STRATHFIELD COUNCIL

65 Homebush Road, Strathfield NSW 2135
PO Box 120, Strathfield NSW 2135 | P 02 9748 9999 | F 02 9764 1034
E council@strathfield.nsw.gov.au | www.strathfield.nsw.gov.au | ABN 52 719 940 263

20 December 2013

Frankie Liang

Kylie Seretis
Manager – Roads Infrastructure Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Ms Seretis

RE: APPLICATION FOR DGRS FOR WESTCONNEX – M4 EAST SSI 13_6307

I refer to your letter dated 5 December 2013 inviting Council's input to the Director General Requirements (DGRs) key issues and assessment requirements regarding the above project.

Council has undertaken an initial review of the *WestConnex – M4 East Homebush Bay Drive to Parramatta Road and City West Link State Significant Infrastructure Application Report*, and provides the following comments on key issues and assessment requirements as attached.

If you have any question regarding this letter, please contact Council's Graduate Strategic Planner, Frankie Liang on 9748 9995.

Yours sincerely

DAVID BACKHOUSE
GENERAL MANAGER

KEY ISSUES & ASSESSMENT REQUIREMENTS FOR WESTCONNEX – STAGE 1(B) (M4 EAST) PROJECT

STRATHFIELD COUNCIL COMMENTS

Key Issues	The Environmental Assessment (EA) must address the following key issues: 1. Traffic and Transport Impacts • Provide a detailed traffic impact analysis (e.g. micro and macro modeling) to demonstrate how the M4 East and its associated tunnel project impact on a) Parramatta Road and associated current streets within the Strathfield LGA (bounded by Pippita rail line, LGA western boundary and Concord Road to the east). b) new entry/exist road treatment at intersection of Homebush Bay Drive and M4, new tunnel entry/exit adjacent to Underwood Road, and other changes that impact the surrounding road networks, e.g. at Leicester Avenue/Concord Road and Parramatta Road intersections. c) the existing surrounding regional road network, such as Centenary Drive/Roberts Road and Arthur St, Pomeroy Street, Bridge Road, Subway Lane, Leicester Avenue and Council's section of Parramatta Road. • The analysis should also include the impact on the existing access arrangements from the Motorway/Parramatta Road to surrounding residential, commercial precincts during the construction period. • The impact on Strathfield LGA of the staging and completion of stage 1(a) currently planned at 2017 and stage 1(b) currently planned at 2019 needs to be assessed. This is because during this 2 year period, there will be additional traffic capacity and therefore increased traffic volume on M4 west of Concord Road prior to the M4 East tunnel completion, which is likely to lead to increased traffic congestion and 'rat running' during this period. • It is noted that the Strathfield region experiences significant traffic congestion and delays particularly including: a) Centenary Drive/Homebush Bay Drive which would be further impacted when the Enfield Intermodal Logistics Centre commences operating. b) The north south entries to the area access the Parramatta Road Corridor including Leicester Avenue, Subway Lane, Bridge Road, Underwood Road and the intersection of Arthur Street and Centenary Drive. 2. Noise and Vibration • Provide a quantitative assessment of the potential construction,

	operation and traffic noise impact of the project. This assessment should include consideration of hours of operations and vehicle movements, particularly in the M4 East project and associated off ramps etc. where it runs through existing and proposed medium-high density residential areas in the Homebush area, north and south of the M4 Corridor. 3. Land Use and Property • A detailed assessment on the land use and property values should be undertaken to determine the potential impacts of the proposed M4 East and associated tunneling works on the land use and adjoining development and impacts on directly affected property owners and the adjacent property owners. These impacts particularly relate to the property acquisition to create new tunnel entry/exit ramp adjacent to Underwood Road area. 4. Air Quality & Air Pollution Impact • A detailed air quality impact statement of the project both covering the construction and operational stage should be prepared for the proposed M4 East and associated tunneling works. 5. Urban Design and Visual Impact • Provide an Urban Design Report/Visual Impact Statement to assess (and mitigate) the impacts of the proposed M4 East and associated tunneling works on the adjacent areas of the Parramatta Road Corridor. This includes the existing Medium/High Density Residential and Mixed Use zoned areas. 6. Hydrology and flooding • The flood study for Powells Creek and Saleyards Creek catchment completed by Council in 1998 indicates the extent of flooding along Powells Creek and Saleyards Creek within the Strathfield Local Government Area (LGA). • A flood study for the project shall be prepared by a suitably qualified hydraulics engineer competent in the catchment flood study and hydraulics analysis. • The study would need to include assessment of the existing drainage conduits and overland flows for all durations of storm events up to and including 1 in 100 years ARI. The study should also include comment on the flood levels in the vicinity of the project up to and including PMF and demonstrate that the project has no adverse effects on the adjoining properties as a result of flooding and stormwater runoff, and there is adequate protection for the proposal against the ingress of stormwater runoff. 7. Vegetation and Trees/Biodiversity • Provide detailed management plans to minimize the impact of the surrounding Threatened Ecological Communities/Threatened

	species subject to the location and impact of the proposed works. 8. Heritage • Provide a Heritage Impact Assessment to safeguard and protect items of Heritage Significance. There are a number of local listed items in the proximity of the project area and located along Council's section of Parramatta Road. 9. Consultation • Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007, in particular surrounding commercial and residential areas and Strathfield Municipal Council.
Assessments Requirements	The relevant Council's planning policies and documents to be addressed: • Strathfield Local Environmental Plan 2012; • Strathfield Development Control Plan 20 (Parramatta Road Corridor); • Strathfield's Green Amenity Factor – interim policy • Strathfield Comprehensive Development Control Plan 2005 (including Part L - Water Sensitive Urban Design); and • Strathfield Council Stormwater Management Policy

Ashfield Council

20 December 2013

Kylie Seretis
Manager Roads Infrastructure Projects
Development Assessment Systems & Approvals
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Kylie

Application for DGRs for WestConnex – M4 East SSI 13_6307

I refer to your recent letter seeking Council input into the preparation of Director General's environmental assessment requirements (DGRs) for the WestConnex M4 East proposal. Ashfield Council appreciates the opportunity to provide input in this process.

Please find attached comments from the Council on the Draft DGRs that were provided and discussed at the Planning Focus Meeting held last week.

Please contact me should you have any queries concerning the comments.

Yours faithfully

Phil Sarin
Director Planning & Environment

260 Liverpool Road Ashfield NSW 2131 DX 21723 Ashfield Tel (02) 9716 1800 info@ashfield.nsw.gov.au
PO Box 1145 Ashfield NSW 1800 ABN 11211068961 Fax (02) 9716 1911 www.ashfield.nsw.gov.au

Ashfield Council

Draft Director General Requirements for WestConnex - M4 East SSI 13-6307

The purpose of the Environmental Impact Statement includes that of providing an explanation of the externalities that would result from the proposal, and to explain how these will be addressed. In terms of how this would affect the Ashfield LGA, the following additional matters need to be considered and specified in the Director General's Environmental Assessment Requirements.

1.0 DGR: General Requirements.

1.1 Precise extent of work, including excavations for roadway and portal, and identifying all properties affected

With regard to point 2 and *"a detailed description of the project".*

This requirement must ensure that adequate detail is provided to show the extent of land excavation required for the portals and their entry/exit lanes, and all ancillary works, during both the construction stage, and post completion portal operational stage. This must include both plan drawings and section drawings, produced at an adequate drawing scale, large enough to make the information clear, easy to read and understand. This will enable proper evaluation by the public and Council of how the works will affect surrounding properties and nearby areas, and how this will affect future planning for those areas.

1.2 Investigation and analysis of all construction options

With regard to point 2 and *"an analysis of feasible alternatives to the carrying out of the project and project justification".*

The DGRs must require the EIS to analyse and evaluate alternative construction methods to establish a proposed method of construction which causes a minimal amount of surface disruption and external environmental impacts. It is understood there are likely to be two principal construction options for the creation of the roadway tunnels – i.e. the use of a 'roadheader' or 'borer' approach. The 'roadheader' approach involves the use of multiple machines locates at various points along the tunnel alignment which can allow excavation to occur concurrently at various points and requires multiple surface connections through which spoil will be taken to disposal locations. The alternative, 'borer' approach involves the use of a much larger boring machine which will commence excavation at one end of the tunnel and work through to the end point of the tunnel. This approach is likely to require fewer surface connections along the tunnel alignment.

The EIS should therefore include a detailed evaluation of both construction options plus any other tunnel excavations options that may be employed. The analysis must include advantages/disadvantages for each options and a detailed analysis of external impacts and mitigation measures.

2.0 DGR: Key Issues. Traffic and Transport

2.1 Traffic impacts on local streets during and after construction works.

With regard to *"an assessment and modelling of operational traffic .....impacts on the local and regional road network"* and *"construction traffic and transport impacts of the project".*

Detailed plans and traffic modelling must be provided showing how local, state and regional roads and streets in the Ashfield LGA will be affected during construction works, post completion of Stage 1 works, post completion of the final project (i.e. with all tunnel sections in place) and how increased and changed traffic impacts will be managed. The traffic modelling must be undertaken at a sufficient scale and level of detail (e.g. Nano Modelling) to describe the local impacts of the proposal compared with the current base situation. In addition, the modelling should be sufficiently fine grained to demonstrate the interactions between vehicles, pedestrians and cyclists at a local level on the hierarchy of the streets and roads outlined above.

The modelling must also analyse the impact arising from proposed road closures along the corridor and particularly around tunnel portals. This needs to include accessibility around Ashfield Park.

The boundary for this area and degree of traffic modelling must be sufficiently broad and go well beyond the immediate Parramatta Road corridor. It is considered that as a minimum the following areas are included in the traffic modelling:

- All state, regional and collector roads and local streets north of Parramatta Road within the Ashfield LGA
- All state, regional and collector roads, and local streets south of Parramatta Road, including Croydon Road, Bland Street, Liverpool Road, Elizabeth Street and Sloane Street.
- Key state roads and collector roads south of Liverpool Road including Milton Street, Holden Street, Queen Street.
- The Longport Street /Carlton Crescent/ Smith Street, Summer Hill locality.
- All local streets which might be affected by 'rat runs' between collector roads.

Works which are required in the future to be constructed to ameliorate the impacts of new additional regional traffic travelling through the Ashfield LGA will create a cost burden for Council. Therefore, the EIS must provide indicative examples and extent of the type of treatments required, make an estimate of their construction costs, and identify how the State Government intends to implement those works.

2.2 Public transport impacts during and after construction works

The modelling must identify impacts to public transport operations both during construction and post construction of the Stage 1 works. Should any changes be proposed to existing public transport routes or new public transport routes/links be created the modelling must identify such changes and impacts arising from the changes.

3.0 DGR: Key Issues. Air Quality

3.1 Tunnel Exhaust systems and filtration systems

Tunnel exhaust vent discharge will be a key community concern due to potential impacts on the health and well being of local residents. The exhaust vents are also likely to be tall, visually prominent structures.

The EIS must therefore include detailed consideration of the option of using 'vehicle emissions filtering' mechanisms for the tunnel exhaust systems. This must include a detailed proposal produced by an appropriately qualified expert(s), so that an adequate evaluation can be made of this option. It should also identify 'best practice' options for tunnel filtering in current use for projects of a similar scale to the Stage 1 works.
Any option for not using a 'vehicle emissions filtering' mechanism must show the position of exhaust vents, the number of properties which will be affected by emissions, and the degree of impact of those emissions on public health. Such an option must also provide evidence based data of appropriate scientific rigour to support no 'vehicle emissions filtering' mechanism for the Stage 1 works.

The EIS must include details of the position of exhaust vents, their heights, and visual treatments and the proposed method of exhausting vehicle emissions.

4.0 DGR: Key Issues. Soil and Water

4.1 Stormwater Flooding at Dobroyd Parade / Reg Coady Reserve Area

The EIS must give consideration to the 'Dobroyd Canal Flood Study October 2013', produced for Ashfield and Burwood councils by 'WMA Water', and whether it's findings will impact the position and design of the proposed Wattle Street portals. Consultation should therefore occur with the project consultants and Ashfield Council.

5.0 DGR: Key Issues. Urban Design and Visual Amenity

5.1 Urban Design and works to ameliorate the spatial impacts of the portals.

The portals and their 'land cuttings' for the associated entry and exit laneways have the potential to create a poor visual setting, including for adjacent residential areas in the Haberfield Conservation area. Vehicles using entry and exit laneways are also likely to create high levels of noise for adjoining properties, including nearby residences. The following details must therefore be provided in the EIS:

- the design of any 'noise screening walls or devices'.
- the design of 'noise screening walls or devices', accompanied with a report by a qualified acoustic engineer, explaining how effective they will be in reducing noise impacts for adjoining properties.
- how any residual areas which are part of the portal/roadway works will be treated and designed.
- how any visually exposed parts of the portal/slip lanes will be visually screened, such as side walls.
- landscaping treatments around the portal sites and entry/exit laneways.

In addition to plans and elevations, the above should be graphically demonstrated in three dimensions to enable the public to adequately evaluate the proposals.

5.2 Options for Ashfield Park

Ashfield Park is a listed local heritage item in Council's Local Environmental Plan and the principal area of public open space in the LGA. It is also serves as an important link to Haberfield to the north, including for pedestrians crossing at Parramatta Road. The park has high levels of use for both passive and active recreation purposes.

The Ashfield LGA is one of the most densely populated in the Sydney metropolitan area and has a disproportionately low level of public open space by comparison. In this context the loss of any existing open space, through the proposed project, is of great concern. In addition, the concept plan indicates that the entry lane into the westbound tunnel portal will run along the full frontage of the park on Parramatta Road. This is likely to require road closures at the park's two main connecting roads to Parramatta Road – Ormond Street and Orpington Street, significantly restricting access to the park.

Consideration should therefore be given as to whether it is feasible for the entry portals to be moved to the west, parallel to Parramatta Road, past Orpington Street, so as to eliminate any impact on Ashfield Park.

If the portals are to be located as proposed, and so make use of the northern strip of Ashfield Park, detailed designs must be produced that show how the Haberfield pedestrian link across Parramatta Road will be maintained. For example, will there be scope to bridge over any roadway cutting, and will the entry laneway roadway be designed to allow for this. Details should include 3 dimensional representation of potential pedestrian bridge structures and how they will be sympathetic and enhance the park setting. This should also include how the entry laneways will be visually screened.

The EIS must also detail how the any historic fixtures will be conserved, including using Burra Charter methodologies. This must include detail of how any historic structures will be temporarily relocated, such as the 1800s 'Milestone', and how they will be reinstalled.

6.0 DGR: Key Issues. Noise and Vibration

As stated above, vehicles using entry and exit laneways will create very high levels of noise and vibration for adjoining properties, including nearby residences. The following details must therefore be provided in the EIS:

- the design of 'noise screening walls or devices', accompanied with a report by a qualified acoustic engineer, explaining how effective they will be in reducing noise impacts for adjoining properties.

7.0 DGR: Key Issues. Heritage

7.1 Ashfield Park

As stated previously, Ashfield Park is a local heritage item, and this includes pathways, stairs and plantings affected by the proposed entry portal laneway. A historic 'Milestone' marker is also located near the corner of Ormond Street and Parramatta Road. The EIS must examine the heritage impact of the proposal on this historic park, its setting and whether or not the impacts of the proposal on the park can be effectively ameliorated or not.

The EIS must also detail how the any historic fixtures will be conserved, including using Burra Charter methodologies. This must include detail of how any historic structures will be temporarily relocated, such as the 1800s 'Milestone' marker, and how they will be reinstalled.

7.2 Yasmar site and impact on south part of site

The Yasmar site is an important State heritage listed site. The southern part of the Yasmar site will be affected by 'cut and cover' land excavations required for the exit ramp and eastbound tunnel portal opening. This part contains 1800's historic gates and side stone posts, and significant tree plantings.

The EIS must detail whether or not such works can be justified without compromising the heritage significance of the site and how the historic fixtures will be conserved, including using Burra Charter methodologies. This must include detail of how any historic structures will be temporarily relocated and how they will be reinstalled, including any future supporting bridging structure over the roadways below.

8.0 DGR: Key Issues. Consultation

When consultation is sought with Ashfield Council on the preparation of the EIS, prior to its finalisation, Council expects that adequate notification will be given for any meetings or feedback, so that an adequate and properly informed response can be provided.

Details should be provided on the general community consultation process. Given the likely significant impacts of the proposal, the public exhibition period for the EIS should be more than the statutory requirement of 30 days, and be at least a minimum period of two months. This would allow for the scheduling of public meetings and feedback sessions, and reporting to Council. It is also recommended that the DGRs require the project proponent to conduct a series of meetings/open house sessions across all affected LGAs with appropriate professional staff in attendance to provide an overview of the EIS and respond to specific questions from the community. This should occur over the first two weeks of the public exhibition period.

9.0 DGR: Other issues

9.1 Health Impact Assessment

It is critical that the health impacts of the WestConnex proposal are rigorously and systematically considered in the assessment process for this major roadway. There are significant physical and mental health implications associated with major roadways. These include:

- Air pollution – significant impacts on physical health (respiratory and cardiovascular health)
- Additional traffic noise – implications for mental health due to stress and loss of sleep
- Increased danger from traffic – implications for the community's health (especially vulnerable groups)
- Loss of open space – green space is crucial to human health; loss of parkland will mean that there is less space for both passive and active recreation
- Community severance and dislocation – this has implications for all community members, but particularly vulnerable groups (children, the aged, those with disabilities)
- Reduced neighbourhood amenity – mental and health implications

Given the magnitude of the WestConnex project, and its significant health implications, a health impact assessment must be undertaken in conjunction with or as part of the EIS and should therefore form part of the DGRs for the project.

9.2 Cumulative impacts

The DGRs should also specify a requirement for the EIS to address cumulative impacts of the proposal across all major issues – traffic, noise, vibration, social, health, visual, heritage, biodiversity, environmental, climate change, flooding, water quality, etc.

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