SCHEDULE 1

WESTERN SYDNEY ORBITAL

CONDITIONS OF APPROVAL

The following acronyms and abbreviations are used in these conditions:

AGL	Australian Gas and Light Company
AIIA	Ancillary Infrastructure Impact Assessment
ANZECC	Australian and New Zealand Environment Conservation Council
ARI	Average Recurrence Interval
ARMCANZ	Agriculture and Resources Management Council of Australia and New Zealand
ASS	Acid Sulfate Soils
ASSMC	Acid Sulfate Soils Management Council
CASA	Civil Aviation Safety Authority
CFEMP	Construction Framework Environmental Management Plan
CLG	Community Liaison Group(s)
CMS	Construction Method Statements
CNVMP	Construction Noise and Vibration Management Plan
CPI	Consumer Price Index
Department, the	Department of Planning
Director-General, the	Director-General of the Department of Planning or delegate
Director-General's Report	the report of the Director-General of the Department of Planning dated February 2002
DLWC	Department of Land and Water Conservation, NSW
DoP	Department of Planning
DoT	Department of Transport
EIS	*The Western Sydney Orbital Environmental Impact Statement* prepared for the RTA by Sinclair Knight Merz and PPK Environment and Infrastructure Pty Ltd, dated October 2000
EMP	Environmental Management Plan
EMR	Environmental Management Representative
EP& A Act	*Environmental Planning and Assessment Act 1979*
EPA	NSW Environment Protection Authority
ICLR	Independent Community Liaison Representative
L_{Aeq} 9hour	Equivalent continuous (constant) sound level over 9 hour period from 10pm to 7am
L_{Aeq} 15 hour	Equivalent continuous (constant) sound level over 15 hour period from 7am to 10pm
m	Metre
mm	Millimetre
Minister, the	Minister for Planning
NPWS	National Parks and Wildlife Service, NSW
NSW	New South Wales
OEMP	Operational Environmental Management Plan
PAD	Potential Archaeological Deposit
Proponent	Roads and Traffic Authority
Relevant Councils	Any one or more of the following Councils as applicable: Liverpool City Council, Fairfield City Council, Blacktown City Council and Baulkham Hills Shire Council.

Representations Report	*The Western Sydney Orbital Representations Report'* prepared by RTA Operations for the RTA and dated 17 September 2001
RIC	Rail Infrastructure Corporation
RTA	Roads and Traffic Authority
SCA	Sydney Catchment Authority
SEPP	State Environmental Planning Policy
SIEC	Sydney International Equestrian Centre
SREP	Sydney Regional Environmental Plan
STA	State Transit Authority
Substantial Construction	Does not include survey, acquisitions, fencing, test drilling/test excavations, building/road dilapidation surveys, minor surveys, minor clearing except where endangered ecological communities or threatened flora or fauna species would be impacted, establishment of site compounds in generally cleared, highly disturbed or non environmentally sensitive areas, minor access roads, minor adjustments to services/utilities, noise mitigation measures and other minimal environmental/community impact activities.
SWC	Sydney Water Corporation
SWMP	Stormwater Management Plan
TMP	Traffic Management Plan
Vs	Versus
WSRP	Western Sydney Regional Park

General

1. The Project shall be carried out in accordance with:

   (a) the Project contained in the Environmental Impact Statement (EIS), and as modified by the Representations Report;
   (b) all identified Sub Plans, safeguards and mitigation measures identified in the EIS and Representations Report;
   (c) the Director-General's Report;
   (d) the Conditions of Concurrence granted by the NPWS; and
   (e) the conditions of approval granted by the Minister.

   Despite the above, in the event of any inconsistency with the Project as described in the EIS and/or Representations Report, the conditions of approval granted by the Minister and Conditions of Concurrence by the NPWS shall prevail.

   These conditions do not relieve the Proponent of the obligation to obtain all other approvals and licences from all relevant authorities required under any other Act. Without affecting the generality of the foregoing, the Proponent shall comply with the terms and conditions of such approvals and licences.

   It shall be the ultimate responsibility of the Proponent to ensure compliance with all conditions of approval granted by the Minister.

Staging of Specific Construction Works

2. Nothing in these conditions shall be interpreted as preventing compliance with any Condition of Approval for a separate section of the Project where the appropriate documentation/approvals have been obtained for a specific construction work site or section but not necessarily the entire project.

Note:
The intention of this Condition is to enable construction project work to proceed without having first obtained approvals relating to other work sites, sections or stages of construction work provided that there is no significant interaction between the work sites, sections or stages or significant adverse cumulative impacts.

Compliance

General

3. The Proponent shall comply with, or ensure compliance with, all requirements of the Director-General in respect of the implementation of any measures arising from the conditions of this approval. The Proponent shall bring to the attention of the Director-General any matter that may require further investigation and the issuing of instructions from the Director-General. The Proponent shall ensure that these instructions are implemented to the satisfaction of the Director-General within such time that the Director-General may specify.

Pre-Construction Compliance Report

4. At least one month prior to commencement of substantial construction (or within such period as otherwise agreed by the Director-General), the Proponent shall submit to the Director-General a compliance report detailing compliance with all relevant conditions that apply prior to commencement of substantial construction and shall address:

   (a) the dates of submissions of the various studies and/or requirements of various relevant conditions, and their approval and terms of approval; and
   (b) action taken and/or proposed to implement the recommendations made in terms of approvals and/or studies.

Pre-Operation Compliance Report

5. At least one month prior to the opening to traffic on the Project, the Proponent shall submit to the Director-General a compliance report detailing compliance with all relevant conditions that apply prior to commencement of operation and shall include:

   (a) results of environmental monitoring required under this Approval including interpretation and discussion by a suitably qualified person;
   (b) a record of all complaints and the action taken to mitigate all such complaints;
   (c) recommendations in regard to compliance issues; and
   (d) action taken and/or proposed to implement the recommendations made in terms of approvals and/or studies.

   The period of one month referred to in this condition above may be altered as agreed by the Director-General.

Project Commencement

6. The Proponent shall notify the Director-General and all relevant authorities in writing of the Project commencement both in terms of construction and operation at least 1 weeks prior to the relevant commencement date.

Dispute Resolution

7. The Proponent shall endeavour, as far as possible, to resolve any dispute between relevant public authorities arising out of the implementation of the conditions of this approval. Should this not be possible, the matter shall be referred firstly to the chief executives and directors of the agencies involved. If the matter cannot be resolved then it shall be referred to the Minister for resolution. The Minister's determination of the disagreement shall be final and binding on all parties.

Complaints Procedures

8. Prior to the commencement of construction, the Proponent shall institute, publicise and list with a telephone company a 24 hour toll-free complaints contact telephone number, which would enable any member of the general public to reach a person who can arrange appropriate response action to the complaint within two hours during all times construction is being undertaken.

9. The Proponent shall record details of all complaints received during construction and ensure that at least a verbal response on what action is to be undertaken is provided to the complainant within 2 hours when Project construction works are being undertaken (unless the complainant agrees otherwise) and a detailed written response within seven (7) calendar days. Information on all complaints received and response times shall be made available to the EMR daily and on request to the Director-General and relevant government agencies. The Proponent shall nominate an appropriate person(s) to receive, log, track and respond to complaints within the specified timeframe in accordance with Condition No. 8. The name and contact details of this person(s) shall be provided to the relevant Council(s) and the Director-General upon appointment or upon any changes to that appointment, but at least one week prior to the commencement of substantial construction.

Advertisement of Activities

10. Prior to the commencement of construction, and then at three (3)-monthly intervals, the Proponent shall advertise in relevant local newspapers, the nature of the works proposed for the forthcoming three months, the areas in which these works are proposed to occur, the hours of operation and a contact telephone number.

    The Proponent shall ensure that the local community and businesses are kept informed (by appropriate means such as: local newsletters, leaflets, newspaper advertisements, and community noticeboards, etc.) of the progress of the Project, including any traffic disruptions and controls, construction of temporary detours and work required outside the nominated working hours, including noisy works, prior to such works being undertaken.

11. The Proponent shall establish a Project internet site prior to the commencement of construction and maintain the internet site until 12 months after opening of the Project to traffic. This internet site shall contain monthly updates of work progress, consultation activities and planned work schedule, including but not limited to:

    (a) a description of relevant approval authorities and their areas of responsibility;
    (b) a list of environmental management reports that are publicly available and the executive summaries of those reports;

(c) minutes of community liaison group meetings;
(d) contact names and phone numbers of the Project communications staff; and
(e) 24 hour toll-free complaints contact telephone number.

Updates of work progress, construction activities and planned work schedule shall be provided more frequently where significant changes in the noise impacts are expected.

Communication and Consultation

Community Involvement Plan

12. The Proponent shall prepare a Community Involvement Plan for the construction period, which would be in place prior to commencement of construction. The Community Involvement Plan shall set out the community communications and consultation procedures and protocols for the Project, which shall comply with the obligations under the approval from the Minister, other approvals, licences and permits. The Community Involvement Plan shall also include but not necessarily be limited to:

    (a) details of the communication protocols and procedures and consultation team appointed to manage and implement the Plan during the consultation period including qualifications and experience;
    (b) details of how the Plan would address the complexities of the timing and staging of different activities across the Project including cumulative impacts;
    (c) details of the role of the Independent Community Liaison Representative (ICLR) and demonstration of how the independence of this representative will be maintained;
    (d) a crisis and issues management plan identifying the range of consultation activities to be undertaken to minimise community reaction to construction activities;
    (e) maintenance and updating of the established stakeholder database with identification of the local community likely to be affected by the Project, including identification of residences, businesses and other sensitive land uses and the specific communication needs of this community (ie. language translation, disabled access etc);
    (f) procedures for the establishment and functioning of the Community Liaison Groups in accordance with Condition No. 13;
    (g) procedures for informing users of the affected road network of planned traffic arrangements including temporary traffic switches;
    (h) procedures for informing the local community of planned investigation and construction operations;
    (i) provisions for dealing with complaints (particularly night time) and response requirements as specified in Condition No. 9. This should include the respective protocols for the EMR, ICLR, Contractors, and any other relevant stakeholders in handling complaints and independent dispute resolution;
    (j) provision for the Proponent's attendance and participation in all groups and public meetings forming part of the Community Involvement Plan; and
    (k) the provision of training for all employees and sub-contractors on the requirements of the Community Involvement Plan.

Community Liaison Groups

13. Four (4) Community Liaison Groups (CLG) or as otherwise agreed by the Director-General shall be formed prior to the commencement of construction of that section of the Project. The purpose of the CLGs is to discuss detailed design issues and methods for minimising the impact on the

local community during the construction stage. All CLGs shall include the Environmental Management Representative, representatives from the RTA, the contractor, relevant local community groups, and Councils unless otherwise agreed by the Director-General.

Issues for discussion shall include, but not be limited to, flora and fauna protection; noise control measures; access arrangements, air and water quality; public transport impacts and opportunities; landscaping requirements and any other issues relevant to the impact of the implementation of the project on the community.

The Group may make comments and recommendations about the design and implementation of the Project, which shall be considered by the Proponent. In the event of any dispute between the Group and the Proponent, the Proponent's decision shall be considered as final so long as it is not inconsistent with these conditions.

Unless otherwise agreed to by the Director-General the CLGs shall be maintained for at least 12 months after the opening to traffic on the Project.

14. The Proponent shall:

(a) establish appropriate representative CLGs, having considered the Guidelines for the Establishment of the Community Liaison Groups (see Attachment 1);
(b) nominate a chair to be approved by the Director–General;
(c) allow the Group to make comments and recommendations about the implementation of the development and environmental management plans, monitor compliance with conditions of this approval and other matters relevant to the operation of the development during the term of the approval;
(d) ensure that the Group has access to the necessary plans and information for such purposes; and
(e) consider the recommendations and comments of each Group and provide a response to each Group and the Director-General.

The Proponent shall as applicable review the need, relevance, effectiveness and membership of the CLGs at 6 monthly intervals or at other times as agreed by the Director-General. Following this review and if justified the Proponent shall seek the approval of Director-General to disestablish any CLG. The Proponent shall bear all costs associated with the establishment and ongoing function of the Group.

Independent Community Liaison Representative

15. The Director-General shall approve the appointment of the person(s) nominated by the Proponent to serve as the Independent Community Liaison Representative (ICLR), for the duration of the construction period. In considering the appointment the Director-General shall take into account the qualifications of the ICLR particularly their experience in facilitation, mediation and dispute resolution.

The role of the ICLR will include but not be limited to:

(a) confirm and monitor that the Proponent meets all the communication and consultation obligations outlined in the approved Community Involvement Plan and as they arise during the course of the Project;
(b) attend as a facilitator local community liaison group meetings;

(c) be available for direct contact from the community during all hours that construction works are undertaken and/or that the Display Centres are open as specified in Condition No. 16;
(d) draw to the attention of the EMR and the Proponent all community complaints and issues; and
(e) assist the Proponent to mediate the resolution of dispute that can not be resolved by the EMR or the Proponent in consultation with the community.

The Proponent shall bear the cost of employment of the ICLR.

Display Centres

16. Three (3) display centres or as otherwise agreed to by the Director-General shall be established no later than three (3) months prior to substantial construction of any discrete section of the Project, staffed and maintained at least until commencement of operation of the Project. The display centres shall be open between 10:00 am and 6:00 pm Monday to Friday and 10:00 am to 1:00 pm on Saturdays. Up-to-date photographs, diagrams, samples and other suitable material shall be provided at each display centre, covering at least:

    (a) noise and retaining wall locations, details and finishes;
    (b) landscape concept, cross section treatments, perspective views and details;
    (c) bridges;
    (d) overall architectural and landscape design theme; and
    (e) temporary works affecting businesses, residences, pedestrians and public transport users.

    A dedicated Personal Computer internet access point to the internet site shall be provided in each display centre. A phone line shall be provided allowing direct contact from any display centre to the centre where the ICLR is based.

17. Prior to the opening of the display centres, the Proponent shall prepare a schedule that ensures that the ICLR(s) is available for discussion for a defined and advertised period at each of the display centres referred to in Condition No. 16. The CLGs shall be advised and the schedule advertised in local newspapers prior to the opening of the display centres and prior to any changes to the schedule.

Environmental Management

Environmental Management Representative

18. Prior to the commencement of construction, the Director- General shall approve the appointment of the person nominated to serve as the Environmental Management Representative (EMR). In considering the appointment, the Director- General shall take into account:

    (a) the qualifications and experience of the EMR including demonstration of general compliance with the principles of AS/NZS ISO 14012:1996 Guidelines for Environmental Auditing : Qualification Criteria for Environmental Auditors;
    (b) the role and responsibility of the EMR; and
    (c) the authority and independence of the EMR including details of the Proponent's internal reporting structure.

    The EMR shall have responsibility for:

    (a) considering and advising on matters specified in the conditions of approval and compliance

with such;

(b) certifying the environmental/community impacts as minor for all activities defined by the Proponent as not constituting substantial construction;
(c) reviewing and approving the Proponent's induction and training program for all persons involved in the construction activities and monitor implementation;
(d) periodically monitoring the Proponent's environmental activities to evaluate the implementation, effectiveness and level of compliance of on-site construction activities with the EMP and associated plans and procedures, including carrying out site inspections at least fortnightly;
(e) reporting monthly to the Director-General;
(f) recording and providing a written report to the Proponent of non-conformances with the EMP and require the Proponent to undertake mitigation measures to avoid or minimise any adverse impacts on the environment or report required changes to the EMP;
(g) directing the Proponent to stop work immediately where considered necessary, if in the view of the EMR an unacceptable impact on the environment is likely to occur, or require other reasonable steps such as the authorisation of hold points to be taken to avoid or minimise any adverse impacts;
(h) reviewing corrective and preventative actions to ensure the implementation of recommendations made from the audits and site inspections;
(i) reviewing minor revisions to the EMP and CMS;
(j) providing reports to the Department on matters relevant to the carrying out of the EMR role as necessary including notifying the Director-General of any stop work notices; and
(k) endorse the Operational EMP in accordance with Condition of Approval No. 26.

The EMR shall immediately advise the Proponent and the Director-General concurrently of any major issues resulting from the construction of the Project that have not been dealt with expediently or adequately by the Proponent.

The EMR shall be available during construction activities at the site and be present on-site during any critical construction activities as defined in the relevant Environmental Management Plan (EMP) or Construction Method Statements (CMSs).

Environmental Management System

19. The Proponent shall ensure the appointment of construction and/or operation head contractors that have a demonstrated capability and experience in the implementation of an Environmental Management System prepared in accordance with the AS/NZS ISO 14000 series or BS7750-1994 certified by an accredited certifier and/or have a proven environmental management performance record.

Ancillary Infrastructure Impact Assessment

20. At least two (2) months prior to substantial construction of any discrete section of the Project the Proponent shall complete an Ancillary Infrastructure Impact Assessment (AIIA). The AIIA shall be updated as detailed design for each section is completed. The AIIA shall address the environmental impacts of all ancillary facilities associated with the Project including but not limited to:

    (a) construction compound(s);
    (b) concrete or asphalt batch plant(s);
    (c) noise mitigation;

(d) service centre(s);
(e) toll facilities/gantries;
(f) off motorway cycleway facilities;
(g) sedimentation basins;
(h) flood detention basins/constructed wetlands; and
(i) variable message/speed limit signs.

The findings of the AIIA in relation to recommended mitigation or safeguard measures shall be incorporated into the reports required in accordance with Condition Nos. 21 and 22.

The AIIA shall also assess the additional impacts on any endangered ecological communities and threatened flora and fauna species and shall incorporate findings into negotiations with the NPWS on mitigation measures, including compensatory habitat as appropriate.

The AIIA shall be prepared in consultation with DLWC, EPA, NPWS, local Councils and the CLGs. The AIIA shall require the approval of the Director-General and shall be made publicly available.

Construction Framework Environmental Management Plan

21. Prior to the commencement of substantial construction, a Construction Framework Environmental Management Plan (CFEMP) shall be prepared, following consultation with the EPA, DLWC, NPWS, Department of Transport relevant councils and all relevant utility/service providers. The Construction Framework EMP shall be prepared in accordance with the conditions of this approval, all relevant Acts and Regulations and accepted best practice management Sub Plans.

    The Construction Framework EMP shall require approval by the Director-General prior to the commencement of substantial construction or within such time as otherwise agreed to by the Director-General. The Construction Framework EMP shall be certified by the EMR as being in accordance with the Conditions of Approval and all undertakings made in the EIS and Representations Report, prior to seeking approval of the Director-General.

    The Construction Framework EMP shall include:

    (a) reference and proposed timeframes for all the Sub Plans required under this Approval;
    (b) the role of the EMR;
    (c) details of the community communication and consultation process and identification of the role of the ICLR;
    (d) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to compliance with the Construction Framework EMP;
    (e) a matrix of Construction Method Statements (CMS) required to construct the Project, including an assessment of the predicted level of risk and potential level of public interest posed by each CMS and indicative timeframes for completion; and
    (f) propose a response timeframe for all CMS to be approved by the Director-General.

    The Construction Framework EMP shall be made publicly available.

Construction Method Statements

22. The Proponent shall prepare in consultation with the relevant government agencies and the CLGs, Construction Method Statements (CMS) for all construction methods and/or major construction work sites to be utilised during construction in accordance with the Framework Construction EMP required by Condition No. 21. The Director-General shall nominate the CMSs that will require approval by the Director-General. Those CMSs not requiring the approval of the Director-General shall require the certification of the EMR as being in accordance with the Conditions of Approval and all undertakings made in the EIS and Representations Report. Any CMS to be approved by the Director-General shall be submitted to the Department following certification by the EMR no less than one (1) month prior to the proposed commencement of the relevant construction activities.

23. Each CMS shall include, but not be limited to:

    (a) construction activities and processes associated with the relevant construction site(s), including staging and timing of the proposed works;
    (b) length (time) of construction;
    (c) specific hours of operation for all key elements including off-site movements;
    (d) cover specific environmental management objectives and strategies for the main environmental impacts and include, but not be limited to: noise and vibration; air quality; flora and fauna, riparian management, water quality; erosion and sedimentation; access and traffic including public transport; property acquisition and/or adjustments; heritage and archaeology; groundwater; acid sulfate soils; spoil stockpiling and disposal; waste/resource management; weed management; flooding and stormwater control; geotechnical issues; visual screening, landscaping and rehabilitation; hazards and risks; energy use, resource use and recycling; and utilities; and
    (e) address, but not be limited to:
        (i) identification of the statutory and other obligations which the Proponent is required to fulfil during Project construction, including all approvals and consultations/agreements required from other authorities and stakeholders, and key legislation and policies which control the Proponent's construction of the Project;
        (ii) measures to avoid and/or control the occurrence of environmental impacts;
        (iii) measures (where practicable and cost effective) to provide positive environmental offsets to unavoidable environmental impacts;
        (iv) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to compliance with the CMS;
        (v) site specific environmental management techniques and processes for all construction in respect of permanent and/or temporary works;
        (vi) site specific monitoring, inspection and test plans for all activities and environmental qualities which are important to the environmental management of the Project, including performance criteria, tests, and protocols (eg. frequency and location);
        (vii) identification of affected residents and consultation/notification requirements;
        (viii) locational details of important elements such as temporary noise barriers; sedimentation basins and facilities; detention basins and/or constructed wetland; portable offices and amenities; truck, plant and materials storage; access locations; provision of site hoardings etc;
        (ix) environmental management instructions for all complex environmental control processes which do not follow common practice or where the absence of such instructions could be potentially detrimental to the environment;

(x) steps the Proponent intends to take to ensure that all Plans and Sub Plans are being complied with;
(xi) the provision of safe pedestrian and cyclist access to at least the same standard that existed prior to commencement, without due inconvenience to pedestrians and cyclists for periods longer than 24 hours during the construction stage;
(xii) safety, security and crime management measures;
(xiii) consultation requirements with relevant government agencies; and
(xiv) community communication, consultation and notification strategy (including local community, businesses, relevant government agencies, and all relevant Councils), and complaint handling procedures.

Specific requirements of the main environmental system elements referred to in (d) shall be as required under the conditions of this approval and/or as required under any licence or approval. All CMSs shall be made publicly available.

Environmental Monitoring – Construction

24. The Proponent shall submit to the Director-General a report(s) in respect of the environmental performance of the construction works and compliance with the Construction Framework EMP, all relevant CMSs and any other relevant conditions of this approval. The reports shall be prepared six months after the start of substantial construction and thereafter at six monthly intervals or at other such periods as requested by the Director-General to ensure adequate environmental performance over the duration of the construction works. The report(s) shall include, but not be limited to, information on:

    (a) applications for consents, licences and approvals, and responses from relevant authorities;
    (b) implementation and effectiveness of environmental controls and conditions relating to the work undertaken;
    (c) identification of construction impact predictions made in the EIS and any supplementary studies and details of the extent to which actual impacts reflected the predictions;
    (d) details and analysis of results of environmental monitoring;
    (e) number and details of any complaints, including summary of main areas of complaint, action taken, response given and intended strategies to reduce complaints of a similar nature; and
    (f) any other matter relating to the compliance by the Proponent with the conditions of this approval or as requested by the Director-General.

    The report(s) shall be provided to the EPA, DLWC, NPWS, relevant Councils and any other relevant government agency nominated by the Director-General. The report(s) shall also be made publicly available.

25. The Proponent shall ensure that it has an internal audit system and that internal audits are undertaken and endorsed by the EMR every three (3) months to ensure compliance with the EMP, the conditions of approval and all other relevant licences and approvals. Each audit must be completed within 6 weeks of the end of the 3 month period and be made available to the Director-General upon request.

Operational Environmental Management Plan

26. An Operational Environmental Management Plan (OEMP) shall be prepared and approved by the Director-General prior to the opening of the Project to traffic. The Plan shall be prepared in

consultation with the EPA, DLWC, NPWS, Department of Transport, relevant Councils and any other relevant government agency nominated by the Director-General. The Plan shall be prepared in accordance with the conditions of this approval, all relevant Acts and Regulations and accepted best practice management Sub Plans.

The OEMP shall be endorsed as being in accordance with the conditions of approval by the EMR prior to seeking approval of the Director-General.

The OEMP shall address at least the following issues:

(a) identification of the statutory and other obligations which the Proponent is required to fulfil, including all licences/approvals and consultations/agreements required from authorities and other stakeholders, and key legislation and policies which control the Proponent's operation of the Project;
(b) sampling strategies and protocols to ensure the quality of the monitoring program, including the specific requirements of DLWC, EPA and NPWS;
(c) monitoring, inspection and test plans for all activities and environmental qualities which are important to the environmental performance of the Project during its operation, including a description of potential site impacts, performance criteria, specific tests and monitoring requirements, protocols (eg. frequency and location) and procedures to follow;
(d) steps the Proponent intends to take to ensure compliance with all plans and procedures;
(e) consultation requirements, including relevant government agencies, the local community and Councils, and complaints handling procedures; and
(f) strategies for the main environmental impacts including, but not limited to: noise; water quality; erosion and sedimentation; access and traffic; groundwater; settlement; waste/resource management/removal/disposal; hydrology and flooding; visual screening, landscaping and rehabilitation; hazards and risks; and energy use, resource use and recycling.

Specific requirements for some of the main environmental system elements referred to in (f) shall be as detailed under the conditions of this approval and/or as required under any licence or approval.

The OEMP shall be made publicly available.

All sampling strategies and protocols undertaken as part of the Operational EMP shall include a quality assurance/quality control plan and shall be approved by the relevant regulatory agencies to ensure the effectiveness and quality of the monitoring program. Only accredited laboratories can be used for laboratory analysis.

Note:
The Director-General shall provide a response to the Operational EMP within one (1) month of receipt of all relevant information from the Proponent assuming receipt of adequate and sufficient information. If a request is made by the Director-General for additional information, the period of time that elapses between the date on which the Proponent receives the request and the date on which the additional information is provided to the Director-General, shall not be taken into account in the one (1) month period referred to above.

Environmental Impact Audit Report

27. An Environmental Impact Audit Report shall be submitted to the Director-General, 12 months, 2 and 7 years from the Project opening to traffic or as otherwise agreed to by the Director-General. The Environmental Impact Audit Report shall be prepared by an independent person(s) or organisation approved by the Director-General and paid for by the Proponent. The Report shall assess the key impact predictions made in the EIS and any supplementary studies and detail the extent to which actual impacts reflect the predictions during the first 12 months of operation and any other periods as required. The Report shall provide details on actual versus predicted impacts for all key issues identified in the EIS. The suitability of implemented mitigation measures and safeguards shall also be assessed. The Report shall also assess compliance with the Operational EMP.

    The Report shall discuss results of consultation with the local community in terms of feedback/complaints and issues of concern raised on the construction and operation phases of the Project. The Proponent shall comply with all reasonable requirements of the Director-General, EPA and other relevant authorities with respect to any reasonable measure arising from, or recommendations in, the report.

    The Report shall be made publicly available.

Major Project Design Issues

28. The Project shall be opened to traffic as a complete Project between the M5 and the M2 operating as described in the Representations Report.

29. The Project shall be constructed and operated to accommodate a maximum of four (4) through traffic lanes (two through lanes in each direction).

30. The Proponent shall ensure that the recommendations contained within the 'Road and Interchange Design Review' (Arup, January 2002) conducted for the Department are made available to tenderers and the Proponent shall demonstrate how such recommendations have been specifically considered during the detailed design process. A summary of these considerations shall be included as part of the AIIA detailed in Condition No. 20.

31. During the detailed design process, the Proponent shall investigate alternative designs and alignments for the M5 to Project ramp westbound and the Project to M5 eastbound with an objective of minimising the footprint, bulk and scale. In assessing alternative designs the Proponent shall consider the recommendations in the 'Road and Interchange Design Review' (Arup, January 2002) referred to in Condition No. 30 and issues in relation to design speeds, safety, visual impacts, noise impacts, flooding, landtake, access and impacts on flora and fauna. The proposed final design shall be completed within 12 months of the date of this approval unless otherwise agreed by the Director-General. The study shall be prepared in consultation with NPWS, DLWC, Liverpool Council and the Director-General.

32. Prior to construction the Proponent shall investigate alternative design treatments to address potential flooding issues and environmental impacts for the section of the Project between Camden Valley Way and Cowpasture Road.

The assessment as a minimum shall include:

(a) results of consultation with EPA, DLWC, NPWS, and relevant Councils;
(b) changes to hydraulic and hydrological regimes including any additional areas inundated, inundation times, inundation depths, number of properties impacted and damage estimates;
(c) review of current and future landuses in consultation with the Department and relevant Councils;
(d) impacts on vegetated areas including riparian zones and any endangered ecological communities and/or threatened flora and fauna;
(e) visual impacts;
(f) severance including relative vehicular and pedestrian access between existing and future development on both sides of the Project; and
(g) a cost benefit assessment prepared in accordance with the Department's Draft Guideline 'Economic Effects and Evaluation in Environmental Impact Assessment' and include the relative costs related to any flooding impacts, spoil acquisition and transport costs, costs of landtake for any detention basins and environmental costs associated with alternative designs.

The primary objective of the alternative design treatment shall be to minimise increases in afflux as a result of the Project and to minimise environmental impacts.

The assessment shall nominate a preferred design which shall require the approval of the Director-General.

33. If archaeological and anthropological investigations in the vicinity of the Plumpton Ridge area or other PADs reveal that these sites have a high Aboriginal heritage significance and would be significantly impacted by the Project, the Proponent shall in consultation with relevant Aboriginal communities, NPWS and the Department of Aboriginal Affairs prepare an assessment of possible route re-alignment alternatives or other appropriate measures. These investigations shall be complete within six (6) months from the date of this approval unless otherwise agreed by the Director-General and the findings of any report require the approval of the Director-General.

34. Prior to construction the Proponent shall conduct an investigation into the feasibility, impact and cost effectiveness of using vertical walls or other treatments to minimise the footprint of the Project in the vicinity of adjacent endangered ecological communities, threatened flora locations, Aboriginal heritage areas and non-indigenous heritage sites. The investigation shall be prepared in consultation with NPWS and the Director-General.

35. The Proponent shall consult with Liverpool City Council and bus operators to ensure that the Project is designed to the satisfaction of the Director-General to allow for future connections across the Project in relation to any proposed development in the Hoxton Park aerodrome area or surrounds between chainage 5500 and 7500 as shown in Sheets 3 and 4 from the Representations Report.

Public Transport Enhancement Measures

Pre-construction Stage

36. The Proponent shall, in consultation with the DoT, design the Project to accommodate the future provision of public transport facilities. Consideration shall include but not be limited to, the

requirements for bus and light rail stops/stations, bridge crossings, vertical and horizontal clearances and alignments, and pedestrian and bicycle access such that retrofitting for dedicated public transport use is not precluded in the future.

37. During the detailed design process, the Proponent shall investigate in consultation with the Department of Transport, infrastructure required for the establishment of any regular bus services on the Project between Richmond Road and the M2, and for interchanges with other public transport services which intersect the Project such as the proposed Parramatta-Mungerie Park Transitway, the proposed Blacktown-Castle Hill Transitway and the potential future extension of the Liverpool to Parramatta Transitway to Edmondson Park.

38. The Proponent shall consult all affected schools in relation to all practicable measures to be taken to avoid undue disruption from altered school bus services during construction.

Construction Stage

39. In accordance with the findings in Condition No. 37, the Proponent shall consult with the Department of Transport and if required by the Department of Transport arrange for the provision of all relevant infrastructure to ensure that bus services can operate on the Project between Richmond Road and the M2 immediately after opening. Provision of infrastructure shall include but not be limited to covered bus stops, safe bus set-down areas, timetable information facilities, bicycle and pedestrian access facilities, lighting and, if required, car parking provisions and bicycle lockers.

40. At least six months prior to the opening to traffic on the WSO the Proponent shall identify, in consultation with potentially affected bus companies, relevant Councils, the CLGs and Department of Transport any roads or intersections surrounding and across the Project where the predicted level of traffic as a result of the Project would affect existing bus services. The investigation shall identify any required bus measures including the consideration of bus priority measures to minimise impacts. The investigation shall be reviewed 12 months following the opening of the Project to traffic.

Operation Stage

41. The Proponent shall install as soon as practicable, in consultation with the Department of Transport, dedicated bus lanes and facilities including but not limited to covered bus stops, pedestrian access and bicycle facilities, lighting and, if required, car parking provisions and bicycle storage between Richmond Road and the M2 should the following occur:

    - Predicted or measured midblock volume/capacity ratios reach or exceed Level of Service D during the morning or afternoon peak period for any section between Richmond Road and the M2; and
    - Stated preference surveys indicate potential patronage levels equivalent to or higher than those achieved at the M2 east of Windsor Road during the M2s first 12 months of operations. Preference surveys shall be undertaken prior to substantial construction in consultation with the Department of Transport.

42. Five (5) years after the opening of the Project to traffic and every ten (10) years subsequently up to 25 years, the Proponent shall review the potential demand for dedicated public transport services on the Project to the satisfaction of the Department of Transport and shall implement

any such measures as agreed between the Proponent and the Department of Transport.

Freight

43. Twelve (12) months after the opening to traffic on the Project, the Proponent shall prepare a report on the use of the Project by heavy vehicles. Should the report indicate a usage rates generally inconsistent with those predicted at opening in the report titled 'Western Sydney Orbital – Traffic Report' (Masson Wilson and Twiney, January 2002) the Proponent shall prepare a freight enhancement strategy to encourage higher usage on the Project. The strategy shall include but not be limited to investigations into:
    (a) the cost effectiveness and feasibility of innovative tolling including at least the option of reducing the toll for heavy vehicles to encourage heavy vehicle use of the Project;
    (b) advertising and promotional methods to encourage use; and
    (c) methods to discourage heavy vehicle use on alternative routes such as the Cumberland Highway.

    The review of heavy vehicle usage, reporting and any recommended strategies shall be prepared to the satisfaction of the Director-General and shall be reviewed on a two (2) yearly basis to 25 years after opening to traffic on the Project. The Proponent shall comply with any request of the Director-General in relation to the outcomes of the study.

Tolling

44. A tolling system shall be implemented which:

    (a) is compatible with the existing standard for electronic tolling adopted throughout Sydney and Australia; and
    (b) makes adequate provision for casual users.

45. All buses (including school buses) providing scheduled public passenger transport services shall be exempt from all Project tolls.

46. Emergency service vehicles responding to emergencies and bicycles shall be exempt from all Project tolls.

Flora and Fauna

Pre-Construction

47. Prior to construction commencement, the Proponent shall undertake targeted surveys for microchiropteran bats, in particular the Greater Broad-nosed Bat (*Scoteanax ruepellii*), Eastern Freetail Bat (*Mormopterus norfolkensis*) and the Grey-headed Flying Fox (*Pteropus poliocephalus*) along the proposed alignment. In particular, surveys shall focus on the identification of roost sites outside of the Project footprint but within the Project reserve. Survey methodology, timing and effort shall be in consultation with the Director-General and NPWS. The Proponent shall not remove any threatened bat roost sites outside of the Project footprint but within the Project reserve.

48. The Proponent shall ensure that a compensatory habitat package is negotiated prior to construction and complies with the conditions of concurrence issued by the NPWS. The

compensatory habitat package shall be approved by the NPWS Manager of Conservation Programs and Planning Division, Central Directorate. The compensatory habitat package shall be based on the criteria outlined in Section 2.3.7 of the NPWS concurrence issued on 14 September 2001 and any additional finding as identified in Condition No. 20.

49. As part of the Framework Construction EMP, the Proponent shall prepare a detailed Flora and Fauna Management Sub Plan in consultation with the NPWS. The Sub Plan shall be prepared prior to construction and shall identify requirements for seed collection, strategies for minimising vegetation clearance and protection of vegetated areas outside the direct impact zone, controlling impacts due to spills, spread of debris and refuse, movement and storage of materials and equipment, vegetation and soil clearing for construction, revegetation of cleared areas, weed control including aquatic species and handling of any fauna.

50. A part of the Flora and Fauna Management Sub Plan referred to in Condition No. 49, the Proponent shall prepare a detailed threatened Species Management Procedure(s) to the satisfaction of the NPWS and the Director-General. The Procedures shall be prepared prior to commencement of construction activities and shall identify requirements for minimising habitat disturbance, appropriate remediation of degraded habitat, monitoring procedures, training of construction personnel, etc.

Construction

51. The Proponent shall undertake all works as part of the Project in accordance with the conditions stated in Section 9 of the Concurrence Report issued by the Director-General of the NPWS on 14 September 2001.

Endangered or Threatened Species

52. Endangered ecological communities and threatened species habitat located adjacent to the Project footprint and that may otherwise be impacted upon by the construction of the Project shall be fenced and access to these areas prohibited. The fencing shall be installed concurrent with or immediately following the pegging of the limit of clearing and shall be in advance of any substantial clearing of the road footprint. The fencing shall be clearly visible to machinery operators. The fencing shall remain in place delineating the limit of clearing until construction completion. All employees and contractors shall be made aware of any sensitive areas in relation to endangered ecological communities and/or threatened species.

53. A qualified ecologist shall be consulted on the location of individual rare or threatened plants or communities or the Cumberland Land Snail (*Meridolum corneovirens)*, to ensure minimal disturbance to native vegetation, to provide direction on methods for relocation and/or replacement plantings, and to initiate and undertake rehabilitation works as soon as practicable.

54. If, during the course of construction, the Proponent becomes aware of the presence of any threatened species which are likely to be significantly affected and are not recognised in an existing concurrence from NPWS for the Project under the *Threatened Species Conservation Act 1995*, or listed under the *Fisheries Management Amendment Act 1997*, the Proponent shall immediately consult with the NPWS and/or NSW Fisheries as appropriate. Following this consultation, the Proponent shall meet all requirements as directed by the Director-General prior to recommencement of any works likely to affect any threatened species.

Vegetation

55. The clearing of vegetation shall be limited to areas that need to be used for construction of the Project. Cleared vegetation must be reused or recycled to the greatest extent practicable. No burning of cleared vegetation shall be permitted. Reuse options include removing millable logs, recovering fence posts, and mulching and chipping unusable vegetation waste for on-site use such as landscaping. All reasonable measures to use any surplus vegetation shall be undertaken including donation to community groups, distribution to the local community, etc.

56. Landscaping and revegetation shall utilise seed of locally native flora species or suitable tubestock grown from seed of locally native species to the satisfaction of a qualified ecologist or bushland regeneration officer.

57. Temporary revegetation shall be undertaken to stabilise disturbed areas. Progressive permanent revegetation shall be undertaken to stabilise completed works and allow adopted landscaping themes to be developed.

58. If permanent wetlands are constructed, macrophyte or water plant growth shall be undertaken within them, in accordance with the DLWC Constructed Wetlands Manual.

Visual Impacts, Landscaping and Urban Design

Pre-Construction

59. The Proponent shall prepare an Urban Design and Landscape Sub Plan as part of the Framework Construction EMP to the satisfaction of the Director-General. The Plan shall be prepared by a suitably qualified urban designer/landscape architect. The Plan shall present an integrated urban design for the Project, applying all design principles established in the EIS and associated documents. The Plan shall identify the key principles including but not limited to:

    (a) built elements including bridges and other structures, retaining walls, noise walls and toll infrastructure;
    (b) motorway and road furniture including safety barriers, kerbs, paving, signage, lighting, medians, emergency phones and breakdown facilities;
    (c) pedestrian and cycle elements including footpaths and paving, pedestrian crossings and fixtures (i.e. tree guards, seating, lighting, fencing and signage);
    (d) public transport facilities;
    (e) open space links;
    (f) a schedule of species to be used in landscaping; and
    (g) landscape elements including proposed treatments, finishes and materials of exposed surfaces (including colour specifications and samples).

    The plan shall be prepared in accordance with relevant environmental planning instruments including Sydney Regional Environmental Plan No. 31, any Plans of Management and masterplans.

60. As part of the preparation of Construction Method Statements as specified in Condition No. 22 and in accordance with the principles defined as a result of Condition No. 59 Urban Design and Landscape Plans (including cycleways) shall be prepared in consultation with relevant Councils and the Director-General and generally in accordance with any findings in Condition Nos. 109

and 112.

The Plan shall include, but not be limited to:

(a) sections and perspective sketches;
(b) methodology of landscaping works;
(c) built elements including bridges and other structures, retaining walls, noise walls and toll infrastructure;
(d) motorway and road furniture including safety barriers, kerbs, paving, signage, lighting, medians, emergency phones and breakdown facilities;
(e) pedestrian and cycle elements including footpaths and paving, pedestrian crossings and fixtures (i.e. tree guards, seating, lighting, fencing and signage);
(f) public transport facilities;
(g) open space links;
(h) landscape elements including proposed treatments, finishes and materials of exposed surfaces (including colour specifications and samples);
(i) timing and staging of works, methodology, monitoring and maintenance; and
(j) location and identification of existing and proposed vegetation including use of locally native species and target survival rates for plantings.

The Plan(s) shall consist of a report with accompanying annotated plans, sections and perspective sketches, photomontages and other illustrative material at a scale and level of detail which is adequate to convey the Project.

Specific Design Requirements

61. Prior to substantial construction and in accordance with Condition Nos. 59 and 60 the Proponent shall prepare an Urban Design and Landscape Strategy for the Regional Parklands area affected by the project between chainage 7500 as shown in Sheet 4 of the Representations Report and Elizabeth Drive. The Strategy shall be prepared in consultation with the Department, Greening Australia, Liverpool City Council and the CLG representing the area and shall require the approval of the Director-General.

    The Strategy shall include but no be limited to:

    a) measures to minimise the visual impacts of the Project to residents of Cecil Hills including tree planting or other landscape measures in accordance with Condition No. 56;
    b) consideration of noise barriers;
    c) appropriate access across the Project including the consideration of width, length and treatment for any overpasses, underpasses in accordance with Condition No. 112; and
    d) the consideration of community offsets related to the provision of the Project if reasonable and feasible.

    Any recommendations outlined in the Strategy shall be implemented in accordance with any requirements of the Director-General.

62. Unless otherwise agreed by the Director-General in accordance with Condition No. 61, the Proponent shall ensure that proposed pedestrian/cycleway access points across the Project between chainage 7500 and 10000 (as shown in Sheet 4 of the Representations Report) shall

be designed to be a minimum of 20 metres wide.

63. Bridge structures shall be designed to span the open space link at Lady Penhryn Park, Kings Langley so that a minimum 10 metres span width on either side of the watercourse exists.

64. The Proponent shall construct bridges across both Eastern and Breakfast Creeks without any fill or embankment on land between the creeks.

65. The Proponent shall consult with landholders in Erin Place, Casula and the EPA with regards to mitigation of impacts on natural light and shadowing of properties as a result of the Project. Consultation shall include, but not necessarily be limited to, the development of the noise management strategy (with regard to design of noise barriers) and preparation of detailed landscape and urban design management plans to the satisfaction of the Director-General and in accordance with Condition Nos. 59 and 90.

66. No commercial advertising except for direction purposes during construction shall be permitted within the road reserve for the Project during construction or when in operation.

67. All lighting for the motorway and off-motorway cycleway shall be designed, installed and operated as a minimum in accordance with the requirements of AS1158-Road Lighting and AS4282-Control of the Obtrusive Effects of Outdoor Lighting.

Landscaping

68. Prior to construction commencement, weed mapping of the road reserve shall be undertaken by a qualified ecologist or bushland regeneration officer. Topsoil stockpiled from locations where significant weed infestation is identified shall not be used in landscaping or rehabilitation unless it is sterilised or treated using accepted methods as specified by the ecologist or bushland regeneration officer.

69. Specific construction and operational landscape management sub-plans shall be prepared to the satisfaction of NPWS and the Director-General for the section of the Project adjacent to the Regional Parklands as defined in Sydney Regional Environmental Plan No. 31 including the Western Sydney Regional Park (WSRP) and the Sydney International Equestrian Centre, as part of the Urban Design and Landscape Plan(s) as specified in Condition No. 60. The sub-plans shall include mitigation, management and monitoring of the following as appropriate, but not be limited to:

    (a) landscaping sympathetic to the naturally occurring vegetation;
    (b) weed management to minimise potential impacts on the Regional Parklands or WSRP;
    (c) security and safety of WSRP visitors;
    (d) noise mitigation requirements;
    (e) incorporation of stormwater and drainage controls consistent with existing infrastructure and future planning for the Regional Parklands or WSRP;
    (f) potential linkages with current and future cycleway networks in the area; and
    (g) progressive rehabilitation measures to minimise impacts.

70. All landscaping works shall be monitored and maintained by a suitably qualified landscape specialist at the Proponent's expense for a period of not less than three years. The Proponent shall implement any required remediative measures to maintain landscaping works to a high

standard. Any landscaping within the road reserve shall be maintained by the Proponent for the life of the Project.

Noise and Vibration

Pre-Construction

71. The Proponent shall complete additional background noise monitoring to the satisfaction of the Director-General following consultation with the EPA to be used in the development of the Construction Noise Impact Statements required by Condition No. 76.

Construction

72. Open-graded asphaltic concrete shall be used on the main carriageways unless otherwise agreed by the EPA through the Construction Noise and Vibration Management Sub Plan as required in Condition of Approval No.73.

Construction Noise and Vibration Management Sub Plan

73. A detailed Construction Noise and Vibration Management Sub Plan (CNVMP) shall be prepared as part of the Construction Framework EMP in consultation with the EPA, other relevant government agencies, Councils and the CLGs. The Sub Plan shall provide details of general noise and vibration control measures to be undertaken during the construction stage. The Sub Plan shall provide the framework for construction noise and vibration management. Detailed analysis and assessment of potential impacts and mitigation measures shall be undertaken for each specific construction site through the Construction Noise Impact Statements required in Condition of Approval No. 76. The Sub Plan shall include, but not be limited to:

    (a) identification of each work area, site compound and construction depot;
    (b) identification of general activities that will be carried out and associated noise sources for each work area, site compound and construction depot;
    (c) identification of the appropriate construction noise objective for the Project with regard to the requirements of Condition No. 75;
    (d) identification of appropriate construction vibration objectives with regard to the requirements of Condition No. 85;
    (e) establishment of procedures for the assessment of noise and vibration impacts from each work site with regard to the requirements of Condition No. 76;
    (f) details of overall management methods and procedures that will be implemented to control noise and vibration from the construction stage of the Project;
    (g) a pro-active and reactive strategy for dealing with complaints including compliance with the construction noise and vibration goals, particularly with regard to verbal and written responses;
    (h) noise and vibration monitoring, reporting and response procedures;
    (i) internal audits of compliance of all plant and equipment;
    (j) construction timetabling, in particular works outside standard hours, to minimise noise impacts;
    (k) procedures for notifying residents of construction activities likely to affect their noise and vibration amenity; and
    (l) contingency plans to be implemented in the event of non-compliances and/or noise complaints.

Construction Hours

74. All construction activities, including transportation of fill and spoil, shall be restricted to the hours of 7:00 am to 6:00 pm (Monday to Friday); 8:00 am to 1:00 pm (Saturday) and at no time on Sundays and public holidays.

    Works outside these hours that may be permitted include:

    (a) any works which do not cause noise emissions to be audible at any nearby residential property;
    (b) the delivery of materials which is required outside these hours as requested by Police or other authorities for safety reasons;
    (c) emergency work to avoid the loss of lives, property and/or to prevent environmental harm; and
    (d) any other work as agreed by the EPA through the Construction Noise and Vibration Management Sub Plan process.

    In relation to points (b) and (d) above local residents should be informed of the timing and duration at least 48 hours prior to commencement of the work.

Construction Noise Guidelines

75. The construction noise objective for the Project is to manage noise from construction activities to the L_{10} level measured over a period of not less than 15 minutes not exceeding the background L_{A90} noise level by more than 5dB(A) at any residence or other noise sensitive receiver. The Proponent shall ensure that all reasonable and feasible noise mitigation and management measures are implemented with the aim to achieve the construction noise objective to the satisfaction of the EPA. Any potential activities that may cause noise emissions that exceed the objective shall be identified and managed in accordance with the specific Construction Noise Impact Statements in Condition No. 76.

    For the purposes of the noise objective for this Condition, 5dB(A) must be added to the measured level if the noise from the activity is substantially tonal or impulsive in nature in accordance with Chapter 4 of the *NSW Industrial Noise Policy*.

Construction Noise Impact Statements

76. Specific Construction Noise Impact Statements shall be prepared in consultation with relevant government agencies, relevant Councils and CLGs for specific stages of construction consistent with the Construction Noise and Vibration Management Sub Plan and the relevant CMS and shall specifically address each of the major construction sites. The statements shall include:

    (a) a description of the proposed processes and activities;
    (b) identification of all potentially affected noise sensitive receivers including residences, schools, commercial premises and noise sensitive equipment;
    (c) determination of appropriate noise and vibration objectives for each identified noise sensitive receiver;
    (d) assessment of potential noise from the proposed construction methods including noise from construction vehicles and noise impacts from required traffic diversions;

(e) examination of all reasonable and feasible noise mitigation measures including the use of alternative methods where potential noise levels exceed the relevant guideline levels;
(f) consideration of where reasonable and feasible, erection of operational stage noise mitigation measures prior to construction commencement;
(g) description and commitment to work practices which limit noise;
(h) description of specific noise mitigation treatments and time restrictions including respite periods, duration, and frequency;
(i) justification for any activities outside the normal hours specified in Condition No. 74;
(j) extent of noise monitoring;
(k) internal noise audit systems including recording of daily hours of construction, progressive impact assessments as the work proceeds, conducting informal checks by the EMR, providing active and continuous communication links to relevant Councils, residents etc;
(l) community consultation and notification;
(m) assessment and examination of potential reasonable and feasible offsite mitigation measures for traffic noise; and,
(n) additional noise mitigation measures as successfully negotiated with affected residents and other sensitive receptors.

With respect to (e) above, the Proponent shall consider the use of a range of structural and non-structural measures during construction including barriers, acoustic treatment of residences, scheduling of construction activities to minimise impacts and temporary relocation of affected residents.

Construction Noise Management

77. The Proponent shall where reasonable and feasible apply best practice innovative noise mitigation measures including:

(a) maximising the offset distance between noisy plant items and nearby noise sensitive receivers;
(b) avoiding the co-incidence of noisy plant working simultaneously close together and adjacent to sensitive receivers;
(c) orienting equipment away from sensitive areas;
(d) carrying out loading and unloading away from noise sensitive areas; and
(e) selecting site access points and roads as far as possible away from sensitive receivers.

78. Construction noise levels shall be monitored to verify compliance with the goals developed in the Construction Noise Impact Statements. Should monitoring indicate significant exceedances of these goals, the Proponent shall consult with the EPA and implement best available additional mitigation measures to the satisfaction of the EPA.

79. The Proponent shall ensure that rock breaking, rock hammering, sheet piling and any other activities which result in impulsive or tonal noise generation are only scheduled between the following hours unless otherwise agreed to by the EPA through the Construction Noise and Vibration Management Sub Plan process:

(a) 8 am to 12 pm (noon), Monday to Saturday; and
(b) 2 pm to 5 pm Monday to Friday.

Where these activities are undertaken for a continuous three (3) hour periods and are audible to

noise sensitive receptors, a minimum respite period of at least one hour shall be scheduled before activities re-commence.

80. The Proponent shall investigate and apply all reasonable and feasible noise source controls to reduce noise from all plant and equipment including bulldozers, cranes, graders, excavators and trucks. Examples of appropriate noise source are provided in Section 5 of the RTA Environmental Noise Management Manual.

81. The Proponent shall ensure that all entry and departure of heavy vehicles to and from the site are restricted to the construction hours as specified in Condition No. 74.

82. The Proponent shall ensure that wherever practical and where sensitive noise receptors may be affected, piling activities are completed using bored piles. If driven piles are required they shall only be installed as agreed by the Director-General in consultation with the EPA.

Schools and Institutions

83. The Proponent shall consult with affected educational institutions and ensure that noise generating construction works in the vicinity of affected buildings are not timetabled during examination periods, unless other arrangements acceptable to the affected institutions are made at no cost to the affected institutions.

84. As part of the CNVMP, relevant schools, relevant Councils and landowners shall be consulted in relation to the provision of a satisfactory combination of noise mitigation measures at Sule College, New Tribes Bible College, Horsley Park Public School, Seven Hills North Public School, Marion Primary School, Hoxton Park Catholic School, Hoxton Park Christian Life Centre, Horsley Park Catholic Church and Rooty Hill Presbyterian Church where exceedances of EPA noise criteria are predicted. The mitigation measures shall be installed prior to construction to mitigate against both construction and operational noise. Where feasible and reasonable all costs shall be borne by the Proponent.

Vibration Criteria

85. Vibration resulting from construction of the Project shall be limited to:

    (a) For structural damage vibration - German Standard DIN 4150; and
    (b) For human exposure to vibration – the evaluation criteria presented in British Standard BS 6472 for low probability of adverse comment unless otherwise agreed by the Director-General in consultation with the EPA through the Construction Noise and Vibration Management Sub Plan.

Vibration Management

86. Vibration testing of actual equipment such as vibratory compactors and rock breakers shall be carried out on site to determine acceptable buffer distances to commercial and residential occupancies to avoid structural damage. The methods for testing and buffer zones shall be detailed in the Noise and Vibration Construction Management Plan. Should it be necessary to use vibratory compactors or rock breakers within the buffer zone, building condition surveys of all buildings and structures within this area shall be undertaken before and after use of this type of equipment.

87. The Proponent shall advise all property owners of buildings to be surveyed, as defined in Condition No. 86, what the survey will entail and the process for making a claim regarding property damage within a reasonable time prior to the commencement of the surveys. A copy of the survey(s) shall be given to the affected owner. A register of all properties surveyed shall be maintained by the Proponent and provided to the Director-General upon request.

88. A management procedure shall be implemented to deal with vibration complaints. This shall be detailed in the Noise and Vibration Construction Management Sub Plan. Each complaint shall be investigated and where vibration levels are established as exceeding the set limits, appropriate amelioration measures shall be put in place to mitigate future occurrences.

Blasting

89. Blasting shall not be permitted as part of the construction of the Project unless otherwise approved by the EPA.

Operational Noise Management

90. A detailed Operational Noise Management Sub Plan shall be prepared as part of the Operational EMP, to the satisfaction of the Director-General. The Sub Plan shall provide details of noise control measures to be undertaken during the operation stages, sufficient to address the technical requirements of the EPA, and generally in accordance with the NSW Government's Environmental Criteria for Road Traffic Noise and the RTA's Environmental Noise Management Manual. The Sub Plan shall include, but not be limited to:

    (a) identification of the appropriate operational noise criteria;
    (b) predicted noise levels at all affected residential, recreational, commercial and industrial land uses;
    (c) location, type and timing of erection of permanent noise barriers and/or other noise mitigation measures demonstrating best practice;
    (d) specific physical and managerial measures for controlling noise;
    (e) noise monitoring, reporting and response procedures including the monitoring on surrounding roads which experience significantly increased traffic volumes as a result of the Project; and
    (f) the urban design issues relating to noise control measures.

91. The Proponent shall install all necessary noise mitigation measures in the vicinity of residences at Cecil Hills to reduce predicted traffic noise levels to not exceed the levels as specified in NSW's Environmental Criteria for Road Traffic Noise.

92. Noise mitigation measures determined in Condition No. 90 shall be based on noise levels including consideration of road grade variations and actual proposed signposted speeds on the Project.

93. In determining noise mitigation measures Category 1 (new freeway or arterial road corridor) criteria from the EPA's Environmental Criteria for Road Traffic Noise shall be applied unless otherwise agreed by the EPA.

94. Prior to the opening to traffic on the Project, the Proponent shall undertake noise impact

assessments for the 'truckstop' locations and install any relevant mitigation measures to the satisfaction of the EPA and Director-General. The results of this assessment shall be incorporated into the Operational Noise Management Sub Plan.

95. The Proponent shall install appropriate noise mitigation for all existing noise sensitive vacant land adjacent to the Project to allow noise sensitive development in accordance with Practice Note II of the RTA Environmental Noise Management Manual.

96. Monitoring of operational noise shall be undertaken in accordance with the Operational Noise Management Sub Plan and Practice Note VII of the RTA's Environmental Noise Management Manual. The Proponent shall, in consultation with the EPA, assess the adequacy of the traffic noise mitigation measures within 6 months to one year of opening the Project with regard to the criteria specified in the Operational Noise Management Sub Plan. Should the assessment indicate a clear trend in traffic noise levels on the Project and surrounding roads which exceed Operational Noise Management Sub Plan defined noise design goals as approved by the EPA, the Proponent shall implement further reasonable and feasible mitigation measures in consultation with affected landowners and/or occupiers including but not limited to consideration of inclusion of noise barriers and the acoustic treatment of buildings.

Regional Traffic

Construction

97. The Proponent shall ensure adequate monitoring of the local and regional road network is conducted prior to the opening of the Project to provide an appropriate base line for measuring significant changes resulting from the construction and/or operation of the Project. Key impact prediction shall include traffic volumes on approach and departure routes, major roads and local streets and impacts on bus services and travel times. The Proponent shall consult with and take into account comments from relevant Council(s) and bus operators regarding the methodology and timing of the study.

98. As part of the TMP identified in Condition No. 101, the Proponent shall work with the relevant local councils to ensure that traffic impacts within the regional road network affected by the Project are consistent with the predictions made and managed in consultation with the relevant local council(s).

Operation

99. The Proponent shall, as part of its impact verification required under Condition No. 27, monitor traffic changes on all regional and local roads/streets predicted to have increases in traffic as a result of the Project. Monitoring shall be undertaken at 6, 12 and 18 months after opening. Should monitoring indicate intrusion of these roads/streets substantially above that predicted by additional traffic modelling in 'Western Sydney Orbital – Traffic Report' (Masson Wilson and Twiney, January 2002) as a result of the operation of the Project, the Proponent shall prepare and implement traffic management measures to mitigate the impacts of intrusive traffic in the affected areas following consultation with relevant Councils, local communities and with the agreement of the relevant local Council Traffic Management Committee.

Construction Stage Traffic Impacts

Pre construction Stage

100. The Proponent shall prepare a Framework Traffic Management Plan as part of the Construction Framework EMP for overall traffic arrangements during the construction period. The Plan shall include, with respect to the Project as a whole:

(a) cumulative impacts of multiple construction sites;
(b) measures to manage traffic flows through and surrounding the Project, including regulatory and direction signposting, line marking and variable message signs; and
(c) identify any regulatory measures to improve the efficiency of traffic conditions.

The Plan shall take into account both local and regional traffic impacts and shall at all stages give priority to public transport, bicycles and pedestrian movements. The Plan shall be prepared by an experienced traffic/transport planner in consultation with the Department of Transport and approved by the RTA (Transport Management Centre) prior to construction commencement.

101. The Proponent shall prepare individual Traffic Management Plans (TMPs) for each construction site in accordance with the Framework Construction Traffic Management Plan required by Condition No. 100, and in consultation with relevant local councils and other relevant transport agencies, prior to commencement of substantial construction affecting that area. The individual TMPs shall be incorporated into the relevant Construction Method Statements required under Condition No. 22. The individual TMPs shall include, but not be limited to:

(a) impacts on all existing traffic (including pedestrians, public transport services, cyclists and disabled persons), including the staging of construction works to minimise road closures and delay or detours to traffic;
(b) access to construction sites and site compounds, including minimising the disruption from construction vehicles entering and leaving construction sites and site compounds;
(c) any changes to existing number and width of traffic lanes;
(d) maximum and average truck volumes and expected hourly distribution;
(e) truck ingress and egress routes;
(f) entry/exit locations to construction sites;
(g) nature of loads and materials;
(h) temporary traffic arrangements, including the identification and promotion of alternative routes;
(i) no heavy vehicle queuing on public roads unless otherwise agreed by the relevant Council(s);
(j) provision of barriers between working and trafficked areas;
(k) the impact on pedestrian and bicycle facilities, including measures to ensure safe pedestrian and cycle routes and access at all times, and the provision of alternative facilities and locations for pedestrians and cyclists;
(l) the provision of safe and convenient access to all bus stops and measures to mitigate impacts on any affected bus routes;
(m) signposting;
(n) stormwater drainage;
(o) methods for implementing the TMP;
(p) access to side streets;
(q) access to adjoining properties, which would be maintained at all times wherever practicable;

(r) road or lane closures;
(s) the use of cranes on public roads;
(t) deliveries to construction sites and site compounds;
(u) a response plan which sets out the proposed response to any traffic, construction or other incident; and
(v) appropriate review and amendment mechanisms.

The TMP shall be certified by an experienced traffic/transport planner who shall be engaged throughout the construction stage on a needs basis to advise on implementation issues and amendments and as a key liaison contact for the relevant local Councils.

Construction Management

102. The Proponent shall ensure that all businesses affected by altered traffic arrangements are consulted at least 10 days prior to affectation and shall endeavour where reasonable and feasible to maintain critical access at all times.

103. The Proponent shall investigate the provision of bus pick-up and drop-offs from a central location(s) for each shift and car-pooling mechanisms to minimise worker traffic generation and parking requirements during construction. The Proponent shall incorporate any recommendations from this investigation into the relevant TMPs.

104. For the duration of the Project, the construction sites, site compounds and surrounding work areas shall be maintained in a generally clean and tidy condition.

Local Traffic and Access

Pre-Construction

105. A road dilapidation report shall be prepared for all non-arterial roads likely to be used by construction traffic prior to commencement of construction and after construction is complete. A copy of the report shall be provided to relevant Councils. Any damage resulting from the construction of the Project, aside from that resulting from normal wear and tear shall be repaired at the cost of the Proponent.

106. The Proponent shall consult with relevant Councils to develop management techniques for construction traffic on local roads, prior to commencement of construction. The Proponent shall monitor the use of local roads by construction heavy vehicle traffic in consultation with relevant Councils and shall consult with relevant Councils to develop measures to minimise and/or restrict use of local roads by heavy vehicle traffic if so required.

Note:
Nothing in Conditions 105 or Condition 106 shall be taken as restricting the Proponent from negotiating an alternative payment for damage to local roads with relevant Councils, subject to the agreement of relevant Councils.

Construction

107. The Proponent shall ensure that access to all properties is maintained during construction and following opening of the Project to traffic. The Proponent shall ensure that any access affected by the Project is reinstated to an equivalent standard or that adequate compensation is negotiated with the relevant landowner(s).

108. Access to the Western Sydney Regional Park shall be maintained throughout construction of the Project. Temporary access arrangements shall be determined in consultation with and to the satisfaction of the NPWS and the Sydney International Equestrian Centre.

Pedestrians and Cyclists

Cycleways

109. A safe, high quality, contiguous and aesthetically pleasing cyclist/pedestrian path(s) shall be provided for inexperienced and recreational and commuter cyclists and for pedestrians for the length of the Project. Details of the provisions for cyclists shall be developed through the preparation of a detailed Cycleway Strategy which shall be prepared in consultation with Bicycle NSW, relevant Councils, relevant bicycle user groups, CLGs and be generally cognisant of the Pedestrian Access Strategy required under Condition No. 112.

    The Cycleway Strategy shall also address:

    (a) a detailed description of the proposed design including all connections to surrounding roads, streets and paths;
    (b) lighting where appropriate;
    (c) safety and security;
    (d) linemarking and signage to separate cyclists from pedestrians in accordance with signposting directions from the RTA in relation to all shared paths;
    (e) signage for services such as drinking water fountains, toilets and shops;
    (f) provision of bicycle lockers at public transport stop/stations;
    (g) maintenance; and
    (h) consideration of existing and future planned cycle networks, roads and paths and potential linkages.

    The Cycleway Strategy shall be submitted to the Director-General and require the approval of the Minister for Planning within an appropriate timeframe to ensure that the approved cycleway is opened to cyclists no later than the opening of the Project to traffic.

110. All cycleway elements resulting from the Cycleway Strategy required under Condition 109, shall be designed and constructed in accordance with Austroads Guide to Traffic Engineering Practice Part 14 – Bicycles. The cycleway shall also, where relevant:

    (a) be grade separated from all roads that cross the Project;
    (b) designed so that the pavement is above the highest flood level of a 1 in 2 year ARI;
    (c) bridges shall be provided over all watercourses and for each bridge the deck surface shall be at least one (1) metre above the existing bank levels of the watercourse; and,
    (d) demonstrate adherence to all conditions of concurrence set by NPWS,

unless otherwise specified in the approved Cycleway Strategy.

111. The off-motorway cycleway shall be fully installed and opened to bicycles/pedestrians no later than the opening of the Project to traffic.

Pedestrian Access

112. The Proponent shall prepare a Pedestrian Access Strategy to identify the pedestrian access requirements across the Project generally consistent with Condition No. 109 and shall include, but not be limited to the following:

(a) key pedestrian origins and destinations adjacent to the route of the Project such as:
    (i) residential and commercial/industrial development ;
    (ii) public facilities such as educational, community and recreational facilities;
    (iii) public transport nodes;
(b) the appropriateness of existing pedestrian access points across the Project to cater for demand;
(c) the need for additional access points across the Project;
(d) appropriate urban design of access points, pathways, landscaping, lighting and signage; and
(e) safety and security issues.

The strategy shall be prepared in consultation with relevant local councils, CLGs, NPWS, Olympic Co-ordination Authority, NSW Police and other relevant agencies. The strategy shall be submitted to the Director-General for approval at least one (1) month prior to commencement of substantial construction. Recommendations of the strategy shall be installed, implemented and open to pedestrians no later than the opening of the Project to traffic.

113. The design of all interchanges with the Project shall incorporate pedestrian access including the provisions of footpaths, crossing points etc to the satisfaction of the Director-General and in consultation with local Councils.

114. The Project between Camden Valley Way and Cowpasture Road shall be designed consistent with any findings as a result of Condition No. 32 and including:

(a) retaining existing local street links for pedestrian access, including Illaroo Road, Wilson Road and Ash Road reservations and allow for future local roads;
(b) providing visual connections under/through the Project; and
(c) improving pedestrian access at Bernera Road interchange.

115. Grade separated pedestrian/bicycle access shall be maintained across the Project within the following road reserves:

(a) Mavis Street, Rooty Hill (incorporating Angus Creek crossing and access to Aquilina Reserve);
(b) Simms Road and Ainsley Avenue, Glendenning; and
(c) Redmayne Road, Horsley Park.

Road Safety Audit

116. The Proponent shall undertake a Road Safety Audit during detailed design of the Project and

prior to opening.

Air Quality

Pre-Construction

117. A detailed Dust Management Sub Plan shall be prepared in consultation with the EPA and incorporated into the Construction Framework EMP. This Sub Plan shall detail the implementation and management of measures and procedures to ensure that dust emissions from the Project are either prevented or minimised. This Sub Plan shall include, but not be limited to:

    (a) identification of potential sources of dust deposition;
    (b) monitoring (by sampling and obtaining results by analysis);
    (c) details of mitigation measures to be implemented during normal operations and during periods of extreme climatic conditions where high level dust episodes are likely to occur;
    (d) establishment of a protocol for handling dust complaints that includes recording, reporting and acting on complaints;
    (e) a reactive management program detailing how and when operations are to be modified to minimise the potential for dust emissions, should emission levels exceed the criteria; and
    (f) progressive revegetation strategy for exposed surfaces in accordance with Conditions.

    The maximum acceptable increase over existing dust deposition is 2 g/m^2/month. Monitoring shall be carried out during the construction phase of the Project to assess compliance with goals for dust concentration and deposition rates.

118. Prior to construction commencing, dust sensitive industries shall be identified, appropriately consulted and mitigative measures put into place.

Construction

119. The Proponent shall undertake a regular dust monitoring program at all locations in close proximity to the public in accordance with the Dust Management Sub Plan.

120. The Proponent shall ensure that trucks entering and leaving all construction sites that are carrying loads of potential dust generating material are covered and appropriately sealed.

121. To ensure that any vehicles which leave construction site(s) do not track materials on public roads the Proponent shall construct and maintain wheel wash facilities or equivalent to be utilised by all departing trucks and machinery which have been used in unsealed areas.

122. Water sprays and tankers shall be used to minimise the amount of dust generated, especially on hot, dry, windy days. When conditions are excessively dusty and the dust emissions from operations cannot be maintained within the dust goal specified in Condition No. 117, then all dust generating activities shall cease until dust suppression can be adequately carried out.

123. In accordance with the Protection of Environment Operations (Control of Burning) Regulation 2000, no open burning or incineration shall be permitted at any construction sites.

Operations

124. Prior to the opening of the Project to traffic, the Proponent shall investigate, in consultation with the EPA the measures for smoky vehicle enforcement in areas surrounding the Project, taking into consideration cost effectiveness. Any measures implemented as a result of investigation recommendations shall be in accordance with the Smoky Vehicle Enforcement Program.

Water Quality, Erosion and Sediment Control

Soil and Water Quality Management Plan(s)

125. As part of the Construction Method Statements and Operational EMPs, detailed Soil and Water Quality Management Plan(s) shall be prepared in consultation with the EPA, DLWC, NSW Fisheries, relevant Catchment Management Trusts, Sydney Water, Sydney Catchment Authority and relevant Councils. The Plan(s) shall be prepared in accordance with the Department of Housing's guideline Managing Urban Stormwater - Soils and Construction 1998, the RTA's Guidelines for the Control of Erosion and Sedimentation in Roadworks and where appropriate, DLWC's Constructed Wetlands Manual. The Plan(s) shall be prepared prior to construction or operation as appropriate. The Soil and Water Quality Management Plan(s) shall contain, but not be limited to:

(a) management of the cumulative impacts of the development on the quality and quantity of surface and groundwater, including stormwater in storage, sedimentation dams and flooding impacts;
(b) details of short and long term measures to be employed to minimise soil erosion and the discharge of sediment to land and/or waters including the exact locations and capacities of sedimentation basins;
(c) identification of all potential sources of water pollution and a detailed description of the remedial action to be taken or management systems to be implemented to minimise emissions of these pollutants from all sources within the subject site;
(d) detailed description of water quality monitoring to be undertaken during the pre-construction, construction and operation stages of the Project including base line monitoring, identification of locations where monitoring would be carried out and procedures for analysing the degree of contamination of potentially contaminated water;
(e) measures to handle and dispose of stormwater, effluent and contaminated water and soil including incident management structures;
(f) a process for the disposal of water from sedimentation basins and constructed wetlands developed in consultation with the EPA;
(g) measures for the use of water reclaimed or recycled on-site; and
(h) contingency plans to be implemented in the event of fuel spills or turbid water discharge from the site.

126. The Soil and Water Quality Management Plan(s) shall incorporate detailed erosion and sedimentation controls including a strategy to manage the extent of exposed ground surface during construction and progressive site rehabilitation requirements. The Plan shall be prepared to the satisfaction of DLWC and in consultation with the EPA, local Councils and NSW Fisheries and sufficient to address the technical requirements for obtaining the relevant EPA Licence.

Construction

127. The Proponent shall ensure that all appropriate soil and erosion and sediment control works are completed and in place prior to commencement of any works that may have the potential to generate soil erosion or sediment. Erosion and sediment protection measures shall also be in place before the commencement of any stockpiling activity. These controls shall be maintained until all ground surfaces are stabilised and revegetated.

128. The Proponent shall only construct sedimentation and erosion controls and sedimentation basins under this approval in those locations that satisfy the following criteria:

(a) sites to be located within the road reserve unless otherwise approved by the Director-General;
(b) sites to be located with ready access to access tracks;
(c) sites shall not be constructed over water or sewer pipelines unless otherwise agreed to by SWC and/or SCA;
(d) sites for sedimentation basins to be separated from nearest residences by at least 100m where practicable and where it can be demonstrated that there will be no adverse impacts on noise, visual and air quality, health and safety;
(e) sedimentation basins are not to be located within 100m of waterways unless adequate controls are implemented to protect water quality in case of overflows or otherwise agreed to by the DLWC;
(f) sites are not to involve the utilisation or modification of any existing wetlands or waterways;
(g) sites are to have low conservation significance for flora, fauna or heritage and they are not to require any clearing of native vegetation beyond that which must be cleared for the Project in any case;
(h) sites for sedimentation basins are to have a low risk of contamination and be free of existing utilities and services;
(i) all conditions of concurrence set by NPWS shall be adhered to;
(j) if land is leased to enable construction of a temporary sediment basin, it shall be restored following construction to a level equal or better than the original condition; and
(k) sedimentation basins on private land shall be fenced to minimise safety risks.

129. All surface water flows from construction sites shall be detained through appropriate measures to ensure that there is no exacerbation of existing flooding to the satisfaction of DLWC. The Proponent shall consult with the relevant Councils on appropriate and specific measures to be implemented at various locations.

130. No disposal of water from sedimentation basins or constructed wetlands shall be allowed to the sewer system without prior agreement from Sydney Water.

131. All water collected during construction which is likely to be contaminated shall be tested, treated, handled and disposed of to the satisfaction of the EPA.

132. Topsoil shall be stripped and stockpiled. All stockpiles shall be protected from surface flows. They shall be located away from drainage lines and upstream of sediment basins.

133. An appropriately qualified soil conservationist shall be consulted on a regular basis in accordance with Construction Method Statements during construction of the Project to undertake inspections of temporary and permanent erosion and sedimentation control devices to ensure

that the most appropriate controls are being implemented and that they are being maintained in an efficient condition at all times and meet the requirements of any relevant approval/licence condition(s).

Flooding and Hydrology

General

134. The Proponent shall develop a detailed Flooding and Drainage Management Sub Plan for the Project as part of the Construction Framework EMP to the satisfaction of DLWC and in consultation with Local Councils. The Sub Plan shall be in accordance with the measures identified in the "Floodplain Management Manual: the management of flood liable land" dated January 2001 (or its latest edition) and the requirements of Australian Rainfall and Runoff (1987). The objective of the Sub Plan shall be to not increase inundation levels or durations during a 100 year ARI flood event in any areas sensitive to flooding.

135. All drainage lines (whether permanent or ephemeral) crossed by the Project and/or any on/off ramps and/or the proposed cycleway exhibiting a defined bed and bank channel shall be through the provision of a bridge unless otherwise agreed to by the Director-General following consultation with the DLWC.

    Prior to seeking any agreement by the Director-General, the Proponent shall provide evidence of the consultation with DLWC and shall explicitly identify where there are disputes. For any crossings under dispute the Proponent shall provide detailed information to the Director-General on the nature of the dispute.

136. The Proponent shall consult with DLWC and NSW Fisheries in relation to the design and timing of all watercourse crossings including size and installation method of crossing prior to construction. Where reasonable and feasible, all bridges shall be designed to have a minimum of 2m clearance from the natural ground surface unless otherwise agreed by DLWC. The Proponent shall also investigate in consultation with DLWC and NSW Fisheries measures to ensure that adequate light and moisture is maintained to facilitate growth of native vegetation underneath bridges. Box culverts shall be preferred to pipe culverts, where practical.

137. The Proponent shall design bridge abutments at a sufficient distance from the edges of watercourse banks to allow for fauna movement and for vegetation linkages to the satisfaction of the NPWS and DLWC.

138. The Project shall be designed such that there are no bridge piers in watercourses unless otherwise agreed by the Director-General following consultation with the DLWC.

139. In undertaking bridge design and construction, the Proponent shall ensure where practicable that: no earthen platforms for driving pylons are constructed in permanent or ephemeral watercourses; and all embankments are located away from the edge of waterways unless otherwise agreed by NSW Fisheries.

140. If during the detailed design stage it is proposed that any construction and operational noise barriers would include a gap between the bottom of the noise barrier and the ground surface and/or components of the barrier are hinged for flooding purposes if agreed to by DLWC, the Proponent shall ensure that all noise and safety implications are investigated.

141. During the detailed design the Proponent shall ensure that flood mitigation measures associated with the Project in the vicinity of Cabramatta, Hinchinbrook and Maxwells Creeks are consistent with the Floodplain Management Manual (January, 2001) and any flood mitigation strategy adopted by Liverpool City Council and/or other relevant Councils (and other relevant authorities). The design shall be undertaken in consultation with Liverpool City Council, DLWC, Landcom and any private land developers.

Drainage Design

142. Cross drainage of the Project shall be designed to ensure that there is no exacerbation of existing flooding to the satisfaction of DLWC and consultation with relevant local Councils.

143. All temporary or permanent drainage works as part of the Project in the vicinity of the Western Sydney Regional Park shall be designed so that resizing or redesign of any existing or proposed drainage facilities in the Park is not required unless otherwise agreed to by NPWS.

Detention Facilities

144. Stormwater detention basins and stormwater interceptors shall be designed to contain the 100 ARI critical duration storm event.

145. The outlet of the detention facility shall be designed to ensure the development does not alter the natural hydrology of the catchment for all events up to the 100 year ARI flood event.

146. The Proponent shall only construct detention basins/constructed wetlands associated with the Project in those locations that satisfy the following criteria:

(a) sites to be located within the road reserve unless otherwise approved by the Director-General;
(b) sites to be located with ready access to access tracks unless otherwise approved by the Director-General;
(c) sites to be located off-line unless agreed to by DLWC;
(d) sites are not to be constructed over water supply or sewer pipelines without the prior agreement of SWC or SCA;
(e) sites for flood detention basins to be separated from the nearest residences by at least 100m and for constructed wetlands by at least 200m where practicable unless it can be demonstrated that there will be no adverse impacts on noise, visual, air quality impacts, health, safety and mosquito levels;
(f) detention basins and constructed wetlands are to be offline and not to be located within 50m of waterways unless adequate controls are implemented to the satisfaction of DLWC and the EPA to protect water quality in case of overflows;
(g) sites are to have low conservation significance for flora, fauna or heritage;
(h) sites for detention basins and constructed wetlands are to have a low risk of contamination and be free of existing utilities and services;
(i) all conditions of concurrence set by NPWS shall be adhered to; and
(j) detention basins and constructed wetlands shall be fenced to minimise safety risks.

147. The design of any detention basins or constructed wetlands is to be in accordance with NSW Dam Safety Committee standards.

Stormwater

148. As part of the Construction Method Statements, Stormwater Management Plan(s) (SWMP) shall be prepared in consultation with the EPA, relevant Councils, Catchment Management Trusts and DLWC prior to the commencement of construction. The SWMP shall be prepared in accordance with the principles and practices set out in "Managing Urban Stormwater, Soils and Construction: (1998") prepared by Department of Housing and RTA's "Guidelines for the Control of Erosion and Sedimentation." The SWMP shall be prepared so as not to exacerbate existing flood conditions. . The SWMP shall address the impacts of stormwater from the Project and as a minimum provide:

(a) details of mitigation measures and sedimentation basins which are required;
(b) details of the impact of the Project on waterways from stormwater;
(c) a de-watering procedure;
(d) where reasonable and feasible separate water systems in the proposed drainage system, one for run-off from the roadway areas and the other for run-off from catchments adjacent to the road; and
(e) how the issue of insufficient space for stormwater quantity and quality facilities within the road reserve will be addressed.

149. Where practicable, the Proponent, shall in consultation with DLWC, ensure that discharge of stormwater (for both construction and operational phases) is prevented from draining into areas of existing native vegetation.

Operation Stage Control Measures

150. All operational stormwater and wastewater systems of the Project including stormwater drainage, erosion, sedimentation and water pollution control systems and facilities of the Project shall be located, designed, constructed, operated and maintained to meet the requirements of the relevant authorities including the EPA, NSW Fisheries, DLWC, SWC and relevant Councils. All facilities including wetland filters, grass filter strips, gross pollutant traps and sedimentation basins shall be inspected regularly and maintained in a functional condition for the life of the Project.

151. Stormwater control measures for the operational phase of the Project shall be installed and utilised within the road reserve prior to construction commencing.

152. Road stormwater shall be treated through gross pollutant traps, stormwater interceptors, constructed stormwater wetlands and/or detention basins. Gross pollutant traps shall be constructed at discharge locations where it is not possible to construct water quality ponds. Gross pollutant traps shall be designed to operate during a 1 year ARI flood event and shall provide for control of coarse sediments and collection of trash and litter. The design of gross pollutant traps shall incorporate adequate by-pass mechanisms to manage events greater than the 1 year ARI flood event.

153. All stormwater and pollution detention systems shall be located outside of, or protected from, existing or future flood hazard areas, to ensure that collected pollutants do not come into contact

with floodwaters.

Spill Management

154. The Proponent shall provide appropriate detention systems for containment of spills and materials arising from accidents that are consistent with the RTA's *Code of Practice for Water Management – Road Development and Management* in consultation with the EPA.

155. In the event of a spill, the Proponent shall ensure that all material spilled is removed as soon as practicable and at least within 24 hours.

Indigenous Heritage

Indigenous Heritage and Archaeology Management Sub Plan

156. As part of the Construction Framework EMP, the Proponent shall prepare and Implement an Indigenous Heritage and Archaeology Management Sub Plan in consultation with the relevant Local Aboriginal Land Councils, relevant Aboriginal communities, National Parks and Wildlife Service and relevant Councils to manage archaeological resources located within the area impacted by construction activities. The Sub Plan shall include:

(a) an assessment of the significance of effects on archaeological items and Aboriginal heritage features, including demolition, relocation, removal, damage and physical intrusion into conservation areas;
(b) details of the archaeological investigations to be undertaken;
(c) management measures for all identified features and excavated materials;
(d) a Contingency Protocol to be implemented in the event of discovery of relics including provision for significance assessment, consideration of management options and, where destruction or removal is proposed, application be made for appropriate NPWS permits and documentation and recording be undertaken for archival purposes;
(e) a conservation management strategy; and
(f) an independent conflict resolution process.

Pre-Construction

157. The Proponent shall undertake additional Aboriginal Heritage investigations to the satisfaction of NPWS prior to construction and incorporate the findings into the Indigenous Heritage and Archaeology Management Sub Plan. The investigations shall include:

(a) consultation with the relevant Aboriginal communities including Deerubbin and Gandangarra Local Aboriginal Land Councils, the Darug Tribal Aboriginal Corporation and the Darug Custodian Aboriginal Corporation;
(b) identification and assessment of places of cultural significance shall be undertaken in consultation with the relevant Aboriginal groups;
(c) statements of heritage significance for cultural and archaeological sites;
(d) review of management options shall be undertaken for all sites as presented in the EIS;
(e) preparation of preliminary research permit applications for all areas of Potential Archaeological Deposit (PAD);
(f) sub-surface identification and testing of all PADs by an archaeologist and representatives of the Aboriginal Community;

(g) NPWS shall be provided with a regional contextual database identifying sites of archaeological and cultural significance;
(h) where required Consents to Destroy to be lodged under Section 90 of the National Parks and Wildlife Act 1974; and
(i) research involving extensive testing programs, shall be conducted at Plumpton Ridge.

158. Where sites of high scientific and/or Aboriginal community significance are within the impact area and avoidance is not possible, the RTA shall consider in consultation with the NPWS and the Aboriginal community, measures such as the establishment of additional conservation areas, undertaking Aboriginal heritage community projects (for example, setting aside a Keeping Place for artefacts or funding Aboriginal heritage conservation projects) or ethnographic studies/Aboriginal heritage/Aboriginal archaeological studies.

Construction

159. A suitably qualified archaeologist, the Deerubbin and Gandangara Local Aboriginal Land Councils, the Darug Custodian Aboriginal Corporation and the Darug Tribal Aboriginal Corporation Incorporated shall be on-site during initial ground clearing and preliminary works in the vicinity of known or potential archaeological sites.

160. During construction, temporary protective fencing shall be placed around sites considered to be archaeologically sensitive and for which Consent to Destroy Permits have not been obtained. Protective fencing shall also be provided during the construction phase to sites located outside the immediate boundary of the Project but in close proximity to the construction works.

Construction Management

161. The Proponent shall ensure that all employees and sub contractors are appropriately trained on the obligations for Aboriginal Heritage conservation. The Aboriginal community and a qualified archaeologist shall be involved in this training process.

Unexpected Items

162. If during the course of construction the Proponent becomes aware of any items of Aboriginal archaeology, all work likely to affect the site(s) shall cease immediately and the relevant authorities, including the NPWS, the relevant Local Aboriginal Land Council(s) and the relevant Aboriginal groups shall be consulted to determine an appropriate course of action prior to the re-commencement of work at that site. Appropriate supporting documentation would need to accompany any application for required permit/consent(s). The relevant Local Aboriginal Land Council(s) and the relevant Aboriginal groups shall also be consulted about management of the deposits before construction re-commences.

Non-Indigenous Heritage

Non-Indigenous Heritage and Archaeology Management Sub Plan

163. As part of the Construction Framework EMP, the Proponent shall prepare and Implement a Non-Indigenous Heritage and Archaeology Management Sub Plan in consultation with the NSW Heritage Office and relevant Councils to manage heritage items and archaeological resources located within the area impacted by construction activities. The Sub Plan shall include:

    (a) identification of all heritage properties including all those listed in the EIS and the Representations Report plus any additional heritage properties as required by relevant Councils and the Heritage Office at the time of construction commencement;
    (b) an assessment of the significance of effects on heritage items including demolition, relocation, removal, damage and physical intrusion into conservation areas;
    (c) management measures for all identified features; and
    (d) a conservation management strategy where necessary.

164. A Plan of Management shall be prepared in consultation with Sydney Water, the Sydney Catchment Authority, the NSW Heritage Office, the National Trust, the Australian Heritage Commission, heritage representatives from Liverpool and Fairfield City Councils and the Department for the section of the Cecil Hills Water Supply Tunnel and the Woodstave Pipeline affected by the Project. The findings of the Plan of Management shall be incorporated into the Non-Indigenous Heritage and Archaeology management Sub Plan.

Pre-Construction

165. The following tasks shall be undertaken prior to construction commencing:

    (a) statements of significance shall be developed for each site impacted by the Proposal;
    (b) statements of Heritage Impact shall be developed for each site;
    (c) management and archaeological monitoring strategies shall be developed for impacted sites; and
    (d) necessary permits and approvals shall be obtained from the NSW Heritage Office.

166. Known heritage items for which approval to impact has not been obtained shall be protected from being disturbed during construction by the erection of protective fencing or flagging of the site.

Individual Items

167. Prior to construction in the vicinity of the Pearce's Cemetery the Proponent shall conduct preliminary archaeological investigations including hand and machine trenching to substantiate any evidence of human burials outside of the cemetery boundary. The investigations shall be supervised by an appropriately qualified archaeologist. During construction in the vicinity of Pearce's Cemetery a minimum 10m setback from the closest grave or the State Heritage Register boundary, whichever is the greater shall be maintained for construction works. A Plan of Management including landscaping shall be undertaken for this site and reviewed by the NSW Heritage Office, prior to any works on the Project in the vicinity of this item. The site shall be fenced during the construction period to ensure that construction does not encroach into this area. Access to the cemetery shall be maintained. The findings of the Plan of Management shall

be incorporated into the Non-Indigenous Heritage and Archaeology management Sub Plan.

168. Plans of Management shall be prepared for all historically significant items and areas potentially affected by the Project prior to construction including Meurants Cottage, the Timber Barn site, Rooty Hill and the wooden building thought to be the remains of Coleman's Inn. Any Plans of Management shall be prepared in consultation with the NSW Heritage Office. The findings of the Plans of Management shall be incorporated into the Non-Indigenous Heritage and Archaeology management Sub Plan.

169. At least three months prior to construction commencement, an advertisement to be approved by NSW Heritage Office shall be placed in the local and Sydney newspapers for a period of three weeks to locate any living relatives who may be able to confirm whether site Project-E-15 is in fact a burial site. Should it be confirmed that this is a burial site then the site shall be removed, restored and relocated with the approval from the Heritage Council of NSW. This process shall also be undertaken in consultation with relatives, The Department of Health, the Coroner and Local Council.

Construction Management

170. The Proponent shall ensure that all employees and subcontractors are appropriately trained on the obligations for heritage conservation under the NSW Heritage Act.

Unexpected Items

171. Should any historical relics be unexpectedly discovered in areas of the site not subject to an excavation permit, then all excavation or disturbance to the area is to stop immediately and the Heritage Council of NSW shall be informed in accordance with Section 146 of the Heritage Act 1977.

Property Acquisition

Pre-Construction

172. The Proponent shall identify all properties to be affected by land acquisition and complete negotiations with landholders prior to construction commencement and in accordance with the RTA's Land Acquisition Policy. Where a mutually acceptable arrangement cannot be made using this method, the Proponent shall ensure that the acquisition of any land shall be in a responsive and sensitive manner and in accordance with the Land Acquisition (Just Terms Compensation) Act 1991. The Proponent shall consult affected landowners prior to and during the property acquisition process in accordance with the requirements of Condition No. 174.

173. Prior to the commencement of construction, the Proponent shall consult all affected landowners regarding any practicable and cost-effective measures to minimise impacts which may be beneficially implemented prior to the commencement of construction or within such time as agreed with the relevant landowner.

174. The Proponent shall notify the owner of any property that is to be adjusted, acquired or from which an easement is to be obtained. This notice shall contain sufficient details to identify the land of interest being adjusted/acquired and is to include dimensions, location with respect to boundaries and any other information necessary to enable the identification of the land in

relation to the development. This notification shall be given in adequate advanced time prior to access for construction purposes.

Construction

175. Any damage to buildings, structures, lawns, trees, sheds, gardens etc. as a result of any direct or indirect construction activity which can be reasonably connected with construction activities as certified by an independent building surveyor or structural engineer (as appropriate) shall be fully rectified by the Proponent at no cost to the owner(s). Construction activities undertaken within private property shall be sympathetic to the specific needs of individual property owners particularly in terms of requirements for temporary facilities such as fencing, access to footpaths/ driveways/garages etc.

176. The Proponent shall ensure that the demolition of any structures is carried out only by specialist employees and/or contractors who hold any necessary licences to carry out such works.

Spoil, Fill Material and Waste Management

Spoil and Fill Material

177. Prior to the commencement of substantial construction where large volumes of imported fill are required, a detailed cost effectiveness study investigating the viability of importing fill by train shall be undertaken. The study shall include but not be limited to detailed consideration of rail opportunities on the Main Southern Line, Main Western Line and the Richmond Line and interfaces with the Project alignment. The study shall require the approval of the Director-General and the Proponent shall implement any such measures as required by the Director-General.

178. As part of the Construction Framework EMP, the Proponent shall prepare a Spoil and Fill Material Management Sub Plan in consultation with the EPA and relevant Council(s). This Sub Plan shall be prepared to the satisfaction of the Director-General. The Sub Plan shall identify how spoil and/or fill material would be sought, handled, stockpiled, reused including details of disposal/reuse sites and the volumes of spoil and/or fill material to be transported to each site and transport mode breakdowns. The Sub Plan shall include an assessment of road vs rail based spoil transport options and identify all material transport routes to be used to and from the Project. The Sub Plan shall be prepared in consultation with the EPA and Council before the commencement of construction at relevant sites and address issues of dust mitigation, drainage, disturbance and contaminated material (including procedures for dealing with the unanticipated discovery of contaminated material during the course of construction), noise and local amenity. The Sub Plan shall also assess the cumulative impacts associated with spoil management with regard to other Projects such as the South Windsor Flood Relief Route, Lane Cove Tunnel, Parramatta Rail Link, Port Botany expansion proposals. The Proponent shall ensure that this Sub Plan is fully integrated with the Traffic Management Plans.

179. As part of the formal tender evaluation process, the Proponent shall demonstrate to the satisfaction of the Director-General that the externality costs of truck-based importation of fill has been explicitly considered in the weighted comparative ranking and rating of tenders on the issue of cost. For the purposes of quantifying and comparing externality costs under this condition, the Proponent shall consider a ranking hierarchy from best to worst in accordance with the following:

(a) heavy rail transport;
(b) road based fill transport by Freeways or Tollways;
(c) road based fill transport by state roads (with the exception of Freeways or Tollways);
(d) road based fill transport by regional roads; and
(e) road based fill transport by local roads.

180. Notwithstanding the outcomes of Condition Nos. 177 to 179, the transport of spoil and/or fill material shall be limited to movements within the road reserve wherever possible. Where the transport of spoil or fill material on public roads is required the Proponent shall only use regional, state roads or freeways/tollways unless no other reasonable alternatives exist. Unless agreed to by the Director-General access points to and from the Project for spoil and/or fill material transport shall be limited to:

(a) Camden Valley Way;
(b) Beech Road;
(c) Hoxton Park Road;
(d) Cowpasture Road;
(e) Elizabeth Drive;
(f) Saxony Road;
(g) The Horsley Drive;
(h) Wallgrove Road;
(i) Great Western Highway;
(j) Woodstock Avenue;
(k) Power Street;
(l) Rooty Hill Road;
(m) Richmond Road;
(n) Sunnyholt Road;
(o) Old Windsor Road; and
(p) M2 Motorway.

181. The Proponent shall ensure that all clean and/or treated spoil shall be reused or recycled where possible. In particular the EMR shall endorse that:

(a) use of spoil generated from construction activities is maximised in preference to any import of fill; and
(b) where reasonable and feasible all clean excavated natural material is either reused on the Project or otherwise made available for reuse elsewhere in preference to disposal to landfill.

Waste Management and Recycling

182. As part of the Construction Framework EMP and as relevant, a detailed Waste Management and Reuse Sub Plan shall be prepared in consultation with the EPA. The Sub Plan shall address the management of wastes during the construction and operation stages respectively. It shall specify specific waste management measures to be followed during the construction period by the construction contractor. It shall be consistent with the *Waste Avoidance and Resource Recovery Act 2001,* and the EPA's *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes*, and shall identify requirements for waste avoidance, reduction, reuse and recycling. The Sub Plan shall provide details of requirements for:

(a) handling;
(b) stockpiling;
(c) disposal of wastes: specifically contaminated soil or water, concrete, demolition material, cleared vegetation, oils, grease, lubricants, sanitary wastes, timber, glass, metal, etc.; and
(d) identifying any site for final disposal of any material and any remedial works required at the disposal site before accepting the material.

This Sub Plan shall include but not be limited to:

(i) methods of management of all waste generated as part of the Project;
(ii) an outline of comprehensive plans of action for key waste streams;
(iii) implementation of the waste hierarchy by seeking to avoid waste generation as a priority, the reuse, recycling or reprocessing of waste and, as a last resort, disposal of waste;
(iv) arrangements for waste which cannot be re-used, recycled or reprocessed to be disposed of at a licensed waste disposal facility;
(v) procedures for separating excavation and demolition waste and for identifying destinations for the material;
(vi) procedures for classifying waste in accordance with the EPA's Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes;
(vii) installation of segregated bins for recyclable materials and provision for material to be reused or recycled wherever possible;
(viii) except where a sewer is available, the discharge of sewerage from site amenities to holding tanks for removal by tankers;
(ix) the provision of rubbish skips at all construction sites and site compounds and their regular removal or emptying;
(x) ensuring that local roads affected by construction remain intact to reduce the need for new paving materials;
(xi) erecting signs within construction sites and site compounds encouraging employees to reduce, re-use, or recycle wherever possible;
(xii) the disposal of chemical, fuel and lubricant containers and solid and liquid wastes in accordance with the requirements of the EPA;
(xiii) appropriate induction and training of all employees and sub-contractors in the waste hierarchy and the requirements of this Waste Management and Reuse Sub Plan;
(xiv) undertaking regular audits of waste management; and
(xv) keeping of a waste management register of all significant waste collected from construction sites and site compounds for disposal, including amounts, date and time and details and locations of disposal.

As part of the Sub Plan, an Action Plan shall be prepared to promote the use of recycled materials, including construction and landscape materials. The Plan shall detail how the Project gives consideration and support to the Government's *Waste Reduction and Purchasing Policy*. The Plan shall also include details on measures to implement energy conservation best practice.

183. Any waste material that is unable to be reused, reprocessed or recycled shall be disposed at a landfill licensed by the EPA to receive that type of waste. The Waste Management and Reuse Sub Plan shall be framed using the waste minimisation hierarchy principles of avoid-reduce-reuse-recycle-dispose. This shall also include the demand for water.

Contamination

184. A detailed assessment of potentially contaminated land and the remediation required shall be undertaken having regard to the principles of SEPP55 and in accordance with the (1998) Managing Land Contamination: Planning Guidelines and guidelines made or approved by the EPA under Section 105 of the *Contaminated Lands Management Act* prior to construction. The results of this investigation shall be incorporated into a Contamination Investigation Report to determine the nature, extent and degree of contamination. The Report shall detail the results of site investigations and the assessment of potential risks posed by contaminants to health and the environment and indicate whether remediation is required. The Report shall be prepared to the satisfaction of an EPA accredited site auditor.

185. Should the Contamination Investigation Report required by Condition No. 184 indicate that remediation is necessary to reduce or remove risks posed by contaminants in particular locations, then the Proponent shall remediate the land in accordance with a Remedial Action Plan which shall be incorporated into the relevant CMS(s) required by Condition No. 22. The Plan(s) shall be prepared in consultation with relevant Council(s) and to the satisfaction of an EPA accredited site auditor.

186. In the event of discovery of previously unidentified area(s) of potentially contaminated material, the Proponent shall cease work in the vicinity of the discovery and not commence work until the extent of contamination has been assessed and if necessary a Remedial Action Plan has been prepared and implemented in accordance with Condition No. 185.

187. Disposal of any contaminated material shall only be to a landfill approved by the EPA to accept that type of waste.

188. Dilution of contaminated spoil with clean material shall not be undertaken.

189. The Proponent shall ensure that the cost of treatment of any contaminated spoil on-site for reuse is investigated, and if cost effective, implemented to the satisfaction of an EPA accredited contaminated site auditor, prior to commencement of spoil disposal.

190. A contingency plan for the management of contaminated water generated by an emergency situation shall be developed as part of the Project CEMP.

Acid Sulfate Soils

191. An Acid Sulfate Soil (ASS) Contingency Sub Plan shall be developed prior to the commencement of construction and incorporated into the Construction Framework EMP. This shall include mitigation measures for the unexpected discovery of actual or potential acid sulfate soils during construction. It shall be prepared to the satisfaction of the DLWC and in consultation with the EPA. The ASS Contingency Plan shall be prepared in accordance with the Acid Sulfate Soils Manual (ASSMC, 1998).

Groundwater

Groundwater Management Sub Plan

192. A detailed Groundwater Management Sub Plan shall be prepared to meet the requirements of DLWC and the EPA and incorporated into the Construction Framework and Operational EMPs. The Sub Plan shall cover the complete Project and shall provide details of groundwater control measures to be undertaken during both the construction and operation stages respectively and include but not be limited to:

(a) handling, treatment and disposal of contaminated groundwater;
(b) treatment strategies appropriate to predicted levels of salinity and quantities of seepage water;
(c) pre-construction and construction monitoring in accordance with the NSW EPA *Contaminated Sites: Sampling Design Guidelines* (NSW Environment Protection Authority 1995) to identify elevated concentrations of contaminants; and
(d) auditing.

Pre-Construction

193. Groundwater studies to determine quality, quantity and hydrological characteristics shall be undertaken for any proposed tunnel locations and significant cuts. This shall include targeted field investigations involving drilling, groundwater monitoring, bore installation, soil and groundwater sampling and analysis, and data interpretation. The investigations and monitoring shall be undertaken by a suitably experienced hydrogeologist or geotechnical engineer.

194. In accordance with Condition No. 193 investigations into groundwater salinity shall be undertaken at all locations identified as potentially containing high salinity levels and areas in close proximity to sensitive watercourses. Further investigations for the groundwater salinity issues shall include, at a minimum:

(a) boreholes to 5m below the proposed base of cuts, in all cuts deeper than 5m;
(b) installation of groundwater sampling and monitoring wells in the boreholes;
(c) sampling of the groundwater for salinity and general groundwater chemistry;
(d) regular monitoring of the groundwater levels; and
(e) assessment of the results of the testing and monitoring by an experienced hydrogeologist.

195. The Proponent shall establish parameters for any potential salinity increases as a result of the Project at nearby watercourses in accordance with guidelines specified in ANZECC and ARMCANZ (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality.

196. Prior to any major earthworks, the Proponent shall develop methods and procedures to monitor changes in the groundwater table due to modifications of the terrain, loss of vegetation, impacts on any existing bores and shall include measures to safeguard and/or mitigate impacts. The procedures to monitor changes in the groundwater table would be implemented prior to major earthworks, 12 months and two years after the opening of the Project to traffic. If changes in the groundwater are detected and determined to be a result of the above impacts, further testing shall be carried out and appropriate measures taken. The Proponent shall comply with all requirements of DLWC.

Construction

197. Fortnightly groundwater monitoring shall take place for the duration of construction at a minimum at all locations monitored during pre-construction studies. This shall also include the collection of data on salinity levels in nearby surface waters potential affected by construction works.

198. Licensable groundwater works shall only be undertaken by drilling contractors who hold a current Driller's Licence issued by DLWC with appropriate endorsement for the nature of the work required.

Greenhouse Gases

Construction Stage

199. The Proponent shall develop in consultation with the Sustainable Energy Development Authority criteria for assessment of potential contractors in the formal tender evaluation process encouraging the use of alternative cleaner fuel sources for construction equipment and vehicles.

200. The Proponent shall promote the reduction of greenhouse gases by adopting energy efficient work practices including, but not limited to:

(a) developing and implementing procedures to minimise energy waste;
(b) conducting awareness programs as part of induction for all site personnel regarding energy conservation methods; and
(c) conducting regular energy audits during the Project to identify and address energy wastage.

201. No rainforest timbers shall be used in any construction activities.

Sustainable Energy

202. Green power shall be purchased for the supply of at least 50% of the electrical energy requirements for the construction of the Project.

Utilities and Services

Pre-Construction

203. During the detailed design process the Proponent shall consult with relevant utility and service authorities to determine potential co-location opportunities for services with the construction of the Project.

204. The Proponent shall identify all locations where as a result of the Project new locations for electricity towers are required and existing towers need to be raised. The Proponent shall conduct a visual impact assessment at each location and investigate the cost effectiveness of alternative strategies such as the undergrounding of these power lines. The findings of these investigations shall be input to the Ancillary Infrastructure Impact Assessment as detailed in Condition No. 20.

205. Prior to the commencement of construction the Proponent shall identify the services potentially affected by construction activities including the Sydney-Moomba high pressure gas pipeline, to determine requirements for diversion, protection and/or support. This shall be undertaken in consultation with the relevant service provider(s) and based on any recommendations from Condition of Approval No. 212.

206. An appropriately qualified person acceptable to Sydney Water shall be commissioned to design, or review the design for water and sewer mains to be constructed and/or relocated as a result of the road construction. The design shall demonstrate compliance with Sydney Water's Design Manual as a guide and consult with Sydney Water throughout the process.

Construction

207. Any alterations to utilities and services shall be carried out to the satisfaction of the relevant service provider(s), and unless otherwise agreed to, at no cost to the service/utility provider(s).

Note:
Nothing in Condition No. 207 shall be taken as requiring the Proponent to meet the cost of any alterations should any prior agreements or protocols be in place between the Proponent and service provider(s) for such alterations.

208. The Proponent shall ensure that disruption to services resulting from the Project are minimised and shall be responsible for advising local residents and businesses affected prior to any disruption of service.

209. If any interruption of bulk water supply along the pipelines are anticipated during construction work, relevant authorities shall be informed as early as possible so that contingency plans can be developed. The Proponent shall bear all costs of disruptions, contingency plans and/or alterations unless otherwise agreed to be the relevant authorities.

210. The Proponent shall avoid sewer access chambers unless otherwise agreed to by Sydney Water. Any sewer access chamber affected shall be restored and ready access shall be facilitated for maintenance work by Sydney Water. No new or relocated access chambers shall be located within the Project carriageways.

Safety and Security

211. The Proponent shall prepare and implement a Security and Crime Management Strategy with aims to prevent unauthorised public ingress to the Project and to minimise the potential for crime in the vicinity of Project infrastructure (eg vandalism, loitering, illegal dumping etc). The Strategy shall be generally in accordance with the principles outlined in the joint DoP and Police Service publication *Crime Prevention and the Assessment of Development Applications*, and be developed in consultation with the NSW Police Service, relevant councils and CLGs. The Strategy shall include, but not necessarily be limited to:

    (a) details of security arrangements to prevent unauthorised access to the Project, including physical exclusion measures, detection devices and management mechanisms;
    (b) policies and procedures for addressing security issues, should they arise;
    (c) specific design features of the Project intended to discourage the incidence of crime at and in the immediate vicinity of Project access points;

(d) lighting considerations, including light intensity, direction and hours of operation at and in the immediate vicinity of Project access points, paths to bus stops and at public transport stops/stations and the off-motorway cycleway with the aim of minimising areas that may encourage crime;
(e) policies and procedures for the management and removal of graffiti, amelioration of vandalism, should it occur at or on any component of the Project; and
(f) policies and procedures for the management and removal of illegal or inappropriate bill-posting and illegally dumped materials, should it occur at or on any component of the Project.

The Security and Crime Management Strategy shall be incorporated into the Operational EMP. After opening, the Proponent shall audit the Strategy in accordance with the requirements of Condition No. 27.

Hazards and Risks

Pre-Construction

212. Prior to construction commencement, the Proponent shall hold a risk management workshop to identify the potential construction and operational hazards, to assess the risks, to nominate any necessary risk mitigation measures. In particular the workshop shall assess: (i) the need for risk mitigation measures in the vicinity of sensitive land uses (eg. Schools, waterways etc.), the urbanised areas along the route and at major intersections; and (ii) the location and design of the earth bunds proposed for stormwater containment.

Participants at the workshop shall include, but not be limited to, the RTA, Department, SWC, SCA, DLWC, EPA, Telstra, RIC, Integral Energy, TransGrid, AGL and Duke Energy. An independent person qualified in risk management shall chair the workshop.

The Proponent shall prepare and submit prior to the commencement of substantial construction for the approval of the Director-General a report detailing the outcomes of the workshop. In particular, the report of the workshop shall demonstrate for the approval of the Director-General that all necessary risk mitigation measures would be provided.

The outcomes of the workshop shall be used in the development of the Hazards and Risk Management Sub Plan required under Condition of Approval No. 214.

213. The Proponent shall undertake a geotechnical study during detailed design and prior to the commencement of construction to determine the potential impacts as a result of or to the Project. The study will include the area in the vicinity of Elizabeth Drive where medium to very high risk of slope instability occurs. The results of the study shall be used in the development of the Soil and Water Quality Management Plan(s) required in Condition of Approval No. 125. Mitigation measures required to minimise the potential impacts of slope instability shall be designed in consultation with the DLWC, NPWS and EPA and to the satisfaction of the Director-General.

214. A Hazards and Risk Management Sub Plan shall be prepared as part of the Construction Framework EMP. The Sub Plan shall include, but not be limited to:

(a) the provision of adequate emergency procedures and equipment for the response to and management of any environmental pollution events;

(b) a program for training of all staff;
(c) a protocol for notifying the appropriate authorities in the case of an emergency;
(d) procedures to ensure compliance with all legislative and industry standard requirements for safe handling and storage of hazardous substances; and
(e) undertaking hazardous activities such as washing out of concrete delivery vehicles, washing down of construction plant etc. only at appropriate locations that have appropriate environmental protection controls.

215. Prior to the commencement of construction or operation in the vicinity of Hoxton Park Airport the Proponent must prepare procedures dealing with the construction and operation stage impacts in the vicinity of Hoxton Park Airport. These Procedures must be prepared in consultation with the Hoxton Park Airport management and to the satisfaction of the Civil Aviation Safety Authority and AirServices Australia. The construction stage procedures shall be incorporated into the relevant Construction Method Statement and must be submitted for approval at least 1 month prior to the commencement of construction or operation, as appropriate. The Procedures must address, as relevant to the particular stage, but are not limited to:

(a) construction stage working hours; obstacle limitation surfaces; temporary navigation aids; Airport security requirements; lighting; bird hazards (including temporary and permanent waterbodies) access to and from the Airport; transport of dangerous goods; Motorway height and toll gantries; and
(b) flood mitigation, stormwater control and dust management.

The Procedures must, in relation to matters specified in (b), be prepared in consultation with the EPA and DLWC.

216. In accordance with the outcomes of the risk management workshop in Condition No. 212 and the findings of the Sub-Plan, the Proponent must prepare procedures dealing with the construction stage impacts in the vicinity of utilities and services, determine the need for specific risk assessments and to approve the design of any protective structures required. These procedures must be prepared to the satisfaction of the relevant authority as nominated above and in consultation with the Ministry of Energy and Utilities as appropriate prior to construction and incorporated into the Construction Method Statements.

Construction Hazards

217. The Proponent shall not store significant quantities of Dangerous Goods (as per the Australian Dangerous Goods Code and the Dangerous Goods Act and Regulations) at any location associated with the Project, unless required for refuelling of vehicles etc in accordance with Condition No. 218. The Proponent shall consult with WorkCover NSW to ensure all Dangerous Goods are stored in an appropriate manner.

218. Diesel fuel or other fuel requirements shall be located within appropriately located and constructed bunds. Fuel storage and refuelling locations shall be in accordance with the requirements for ancillary infrastructure identified in Condition of Approval No. 223 and the following:

(a) refuelling areas shall be constructed of concrete and covered where possible;
(b) shall comply with *AS 1940-1993 The Storage and Handling of Flammable and Combustible Liquids*;

(c) walls and floors of the bund shall be constructed of reinforced concrete, including a collection sump; and
(d) bund volume shall be sufficient to contain at least 110% of the largest container to be stored.

Operational Hazards

219. The Proponent shall not permit any vehicle carrying a quantity of goods defined as dangerous under the Australian Dangerous Goods Code, to enter any tunnels forming part of the Project. Prior to the opening of the Project to traffic, the Proponent shall provide a strategy to the Director-General detailing how this condition shall be managed and enforced.

220. For the first five years of operation, the Proponent shall undertake an annual Hazard Review of the Project and hazardous incidents that have occurred during the preceding twelve-month period, with the first Review to be undertaken no later than twelve months after the opening of the Project to traffic. A report outlining the results of the Hazard Review, and any proposed additional safety measures to be implemented in response to the findings of the Review, shall be submitted to the Director-General within one month of completion of the Review. The Proponent shall meet the Director-General's requirements in relation to the findings of the Review, within such time as the Director-General may agree. The Proponent shall undertake further Hazard Review if directed by the Director-General following any major incident on the Project.

221. The Project carriageways, not including the pedestrian/cycleway, shall be appropriately fenced at all times to prevent access by the general community. Particular attention shall be paid to areas of open space or community land use such as the SREP No. 31 – Regional Parklands, including the Western Sydney Regional Park and SIEC. Locked gates shall be provided at suitable locations to allow for emergency service access in consultation with the NSW Police Service, NSW Fire Brigade and State Emergency Services.

222. Emergency telephones shall be provided at 2km intervals along the road.

Location of Construction Compounds and Ancillary Facilities

223. The Proponent shall only construct construction compounds or any other ancillary facilities such as batching plants, Service Centre(s), toll gantries etc and not addressed in Condition Nos. 128 and 146 under this approval in those locations that satisfy the following criteria:

(a) sites to be located within the road reserve wherever possible;
(b) sites to be located with ready access to the local road network;
(c) sites on relatively level land;
(d) sites to be separated from nearest residences by at least 100m where practicable unless it can be demonstrated that there will be no adverse impacts on noise, visual and air quality impacts;
(e) sites are not to be located within 100m of waterways unless adequate erosion and sediment controls are implemented to protect water quality;
(f) sites above the 100 ARI flood level unless otherwise agreed to by DLWC;
(g) sites are to be excluded from areas that would have an impact on any endangered ecological communities or threatened flora and fauna
(h) all conditions of concurrence set by NPWS shall be adhered to.

Guidelines for the Establishment of the Community Liaison Group

The proponent shall consider the following when establishing a Community Liaison Group:

1. At its first meeting, the Group shall consider its interrelationship with any existing community liaison/ consultative groups of adjoining or interrelated developments.

2. Representatives from relevant government agencies or other individuals may be invited to attend meetings as required by the Chair.

3. Where determined necessary by the Chair, an independent note taker would be provided by the Chair at the expense of the Proponent.

4. The Proponent shall, at its own expense:

   - nominate two (2) representatives to attend all meetings of the Committee;
   - provide to the Group regular information on the progress of work and monitoring results;
   - promptly provide to the Group such other information as the Chair of the Group may reasonably request concerning the environmental performance of the development;
   - provide access for site inspections by the Group; and
   - provide meeting facilities for the Group, and take minutes of Group meetings. These minutes, once endorsed by the Chair, shall be available for public inspection at Council within 14 days of the meeting.

   Where reasonably required the Proponent shall engage consultants to interpret technical information and tasks of a similar nature for the benefit of the CLG.