SCHEDULE 1

BALLINA BYPASS

CONDITIONS OF APPROVAL

Contents

The following acronyms and abbreviations are used:

ARI	Average Recurrence Interval – refers to the average or expected period between exceedances of a flood of a given size
ASS	Acid Sulfate Soils
deleted	
Construction	Commencement of any physical works under this Approval
Director-General, the	Director-General of the Department of Planning or delegate
Director-General's Report	Proposed Ballina Bypass Director-General's Report, dated February 2003
DLWC	Department of Land and Water Conservation
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMR	Environmental Management Representative
EPA	Environment Protection Authority
L_{Aeq} 9hour	Equivalent continuous (constant) sound level over a 9 hour period from 10pm to 7am
L_{Aeq} 15 hour	Equivalent continuous (constant) sound level over a 15 hour period from 7am to 10pm
LAeq (15 mins)	Equivalent sound pressure level over a 15 minute interval
LA1(1 minute)	Sound pressure level exceeded for 1 per cent of the time measured over a 1 minute interval
LA10 (15 mins)	Sound pressure level exceeded for 10 per cent of the time over a 15 minute period
Minister, the	Minister for Planning
NPWS	National Parks and Wildlife Service, NSW
OEMP	Operational Environmental Management Plan
PAD	Potential Archaeological Deposit
Proponent	Roads and Traffic Authority
Reasonable and feasible	Consideration of best practice taking into account (as applicable): Benefit of proposed measures, technological and associated operational application in the NSW/Australian context. 'Feasible' relates to engineering considerations and what is practical to build. 'Reasonable' relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and nature and extent of potential improvements.
REA	Relevant Environmental Assessment documents. These include the EIS, Representations Report and the Director-General's Report as described in Condition 1
Representations Report	*The Ballina Bypass Representations Report* prepared by RTA Operations for the RTA, dated 12 December 2001
RTA	Roads and Traffic 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 and other minimal environmental/community impact activities.
SEPP 14	State Environmental Planning Policy No. 14

General

1. The project shall be carried out consistent with:

   (a) the proposal contained in the Environmental Impact Statement (EIS 'Pacific Highway Ballina Bypass' prepared for the Roads and Traffic Authority (RTA) by Connell Wagner and dated February 1998 and the Representations Report 'Pacific Highway Ballina Bypass' prepared by RTA Environmental Technology for the RTA and dated December 2001;
   (b) all identified procedures, safeguards and mitigation measures identified in the EIS and Representations Report;
   (c) the Director-General's Report;
   (d) the RTA's modification request dated 18 January 2008 (08_0019 MOD 1); and
   (e) the Conditions of Approval granted by the Minister.

   In the event of an inconsistency between the conditions of this approval and any document listed from condition 1(a) to 1(d) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency. In the event of an inconsistency between any documents listed from condition 1(a) to 1(d) inclusive, the most recent document shall prevail to the extent of the inconsistency.

   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 RTA to ensure compliance with all conditions of approval granted by the Minister.

Compliance

General

2. 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.

3. The Proponent may elect to construct the project in discrete work packages or defined stages. In that situation the Conditions of Approval may be complied with separately for each discrete work package or defined stage.

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 a report detailing how all conditions to be addressed prior to substantial construction have been complied with. The project must not commence until the proponent has been advised in writing that the Director-General has approved the Pre-Construction Compliance Report.

The Director-General shall provide a response within 1 month of receiving the Pre-Construction Compliance Report. The Director-General may request additional information if the Pre-Construction Compliance Report is considered incomplete. In such cases, the time 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 1 month period. The Director-General shall make any requests for additional information within 2 weeks of receipt of the Pre-Construction Compliance Report from the Proponent.

This report shall provide the following information as a minimum:

(a) Details demonstrating how the activities leading up to *substantial construction* have been addressed. Amongst other matters, these activities shall include:
  (i) nomination and approval of *Environmental Management Representative*;
  (ii) site surveying (assuming no clearance or site works are required);
  (iii) community consultation including copies of publications and media releases;
  (iv) the geological and hydrogeological report required under Condition 26;
  (v) noise monitoring;
  (vi) EMP preparation;
  (vii) communications with Department of Planning and other relevant agencies; and,
  (viii) compliance with all relevant Conditions of Approval.
(b) a timeframe indicating when each of the conditions were complied with. This may include dates of submissions of the various studies and/or approval dates;
(c) conditions placed on any approvals or licences issued by other agencies and action taken (or proposed) to satisfy the requirements of approvals and/or studies; and,
(d) a plan indicating how the conditions which apply to the construction work package or defined stage will be satisfied.

> *Note:*
> *If construction is undertaken in discrete stages then a Pre-Construction Compliance Report will need to be prepared in accordance with Condition 4 for each discrete work package or defined stage.*

Pre-Operation Compliance Report

5. At least one month (or within such period as otherwise agreed by the Director-General) prior to commencement of operation of any part of the project (or defined stages of the project), the Proponent shall submit a *Compliance Report* for approval of the Director-General. This report shall detail how all conditions that apply prior to commencement of operation have been complied with. The report shall provide the following information as a minimum:

(a) details demonstrating how each condition was satisfied during construction;
(b) a timeframe indicating when each condition was complied with. This may include dates of submissions of the various studies and/or requirements of various relevant conditions, approval dates, completion of any necessary works etc;
(c) summaries of major issues raised through the ongoing Community Consultation process and how these issues were addressed;
(d) summaries of major environmental issues, how they were managed, and lessons learned;
(e) conditions placed on any operational approvals or licences issued by other agencies; and action taken (or proposed) to satisfy the requirements of approvals and/or studies; and,
(f) a plan indicating how the conditions which apply during the operation stage will be satisfied.

Note:
The Director-General shall provide a response within 1 month of receiving the Pre-Construction Compliance Report required by Condition 4 or the Pre-Operation Compliance Report required by Condition 5. The Director-General may request additional information if the report is considered incomplete. In such cases, the time 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 1 month period. The Director-General shall make any requests for additional information within 2 weeks of receipt of the Pre-Construction Compliance Report or the Pre-Operation Compliance Report from the Proponent.

Project Commencement

6. The Proponent shall notify the Director-General and all relevant authorities in writing at least 1 week prior to commencement of construction and operation. For the purposes of assessing compliance with these Conditions, the Proponent shall explicitly identify a date for construction and a date for substantial construction.

Dispute Resolution

7. The Proponent shall endeavour, as far as possible, to resolve any dispute with 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 and if the matter cannot be resolved then to the Minister for resolution. The Minister's determination of the disagreement shall be final and binding on all parties.

Complaints Management System

8. The Proponent shall implement a Complaints Management System prior to the commencement of construction, which ensures all complaints received during construction are recorded and managed as expeditiously as possible. Minimum requirements of the Complaints Management System shall include:

    (a) a 24 hour, toll free telephone number that is listed with a telephone company and advertised by means (e.g. newspapers, site signage etc) that would maximise public awareness of the number. This telephone number shall enable any member of the public to reach a person who can arrange appropriate response(s) to the complaint(s);
    (b) adequate resourcing to implement the Complaints Management System including human resources, communication and transport etc.;
    (c) an appropriate person(s) to receive, log, track and respond to complaints within the specified timeframe. The name and contact details of the nominated person(s) shall be provided to Ballina Shire Council, relevant authorities and the Director-General upon appointment, or upon any changes to that appointment;
    (d) details of all complaints received during construction shall be recorded, in accordance with (c) above and at least a verbal response on the action undertaken or proposed to be undertaken shall be provided to the complainant within two hours of the complaint in the case of night-time works (or within an alternate time agreed to by the complainant) and within 24 hours of the complaint in the case of standard construction hours or non-construction times;

(e) a process for the provision of a more detailed response to the complainant within 10 days, if additional information exists (over and above that provided in the initial response);
(f) appropriate management structures to allow effective resolution of complaints; and,
(g) a mediation system to ensure that all complaints are satisfactorily addressed to the greatest extent practicable. Where external or independent mediation is required, the mediator is to be approved by the Director-General.

Information on all complaints received, including the means by which they were addressed and whether resolution was reached with or without mediation, shall be included in the six-monthly Construction Compliance Report required by Condition 15 and shall be made available to the Director-General upon request.

Advertisement of Activities

9. 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: newsletters, leaflets, newspaper advertisements, 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, in particular noisy works, prior to such works being undertaken.

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

    (a) a description of relevant approval authorities and their areas of responsibility;
    (b) a list of reports and plans that are publicly available under this Approval 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) the 24 hour toll-free complaints contact telephone number.

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

Community Engagement Strategy

11. The Proponent shall, prior to the commencement of substantial construction, prepare a Community Engagement Strategy for the project. This Strategy shall provide mechanisms to facilitate communication between the Proponent, the constructor, the Environmental Management Representative and the local community (including adjoining landowners, businesses and Council, as relevant) on the progress and the related environmental management of the project. The Strategy shall include, but not be limited to:
    (a) identification of community stakeholders to be consulted as part of the Strategy;

(b) procedures and mechanisms for the regular distribution of information to the community on the progress of the project and matters associated with environmental management of the project;
(c) procedures and mechanisms through which the community can discuss or provide feedback to the Proponent and/or Environmental Management Representative in relation to the environmental management and delivery of the project. This may include focused discussion forums and site inspections;
(d) procedures and mechanisms through which the Proponent can respond to any enquiries or feedback from the community in relation to the environmental management and delivery of the project;
(e) procedures and mechanisms to be implemented to resolve issues/disputes that may arise between community and the Proponent on matters relating to environmental management and delivery of the project. This may include the use of an appropriately qualified and experienced independent mediator.

Issues that may be addressed through the Community Engagement Strategy include: flora and fauna controls, noise control measures, property access arrangements, air and water quality, and landscaping requirements.

A copy of the Strategy shall be provided to the Director-General prior to the commencement of substantial construction and the Proponent shall maintain and implement the Strategy during the construction stage.

Environmental Management Representative

12. Prior to the commencement of construction, the Director-General shall approve the appointment of the person nominated by the Proponent 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 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:

(i) considering and advising the Proponent on matters specified in the Conditions of Approval and compliance with such;
(ii) certifying the environmental/community impacts as minor for all activities defined by the Proponent as not constituting substantial construction;
(iii) endorsing the Construction EMP in accordance with Condition 14;
(iv) reviewing the Proponent's induction and training program for all persons involved in the construction activities and monitor implementation;
(v) periodically monitoring the Proponent's environmental activities to evaluate the implementation, effectiveness and level of compliance of on-site construction activities with the Construction EMP and associated plans and procedures, including carrying out site inspections at least fortnightly;
(vi) recording and providing a written report to the Proponent of non-conformances with the

Construction 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 Construction EMP;

(vii) directing the Proponent to stop work immediately, 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;

(viii) reviewing corrective and preventative actions to ensure the implementation of recommendations made from the audits and site inspections;

(ix) reviewing minor revisions to the Construction EMP;

(x) providing regular (as agreed with the Department) reports to the Department on matters relevant to the carrying out of the EMR role, including notifying the Director-General of any stop work notices; and,

(xi) endorsing the Operational EMP in accordance with Condition 16.

The EMR shall immediately, and at the same time, advise the Proponent and the Director-General 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 identified in the Construction EMP.

Environmental Management System

13. The Proponent shall ensure the appointment of 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.

Construction Environmental Management Plan

14. Prior to the commencement of substantial construction, a Construction Environmental Management Plan (EMP) shall be prepared, following consultation with the EPA, DLWC, NPWS, NSW Agriculture, NSW Fisheries and Ballina Shire Council. Where construction activities may be undertaken in discrete work packages or defined stages, the Proponent may prepare individual EMPs relating to specific work packages or stages of construction.

The Construction EMP shall be prepared in accordance with the Conditions of this Approval, all relevant Acts and Regulations and accepted best practice management procedures. The Construction EMP requires approval by the Director-General prior to substantial construction works or within such time as otherwise agreed to by the Director-General. The EMP shall be certified as being in accordance with the Conditions of Approval by the EMR prior to seeking approval of the Director-General.

The Director-General shall provide a response to the Construction 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.

The Construction EMP shall:

a) address construction activities associated with all key construction sites, including staging and timing of the proposed works;
b) cover specific environmental management objectives and strategies for the main environmental system elements and include, but not be limited to: noise and vibration; geotechnical issues; air quality; water; erosion and sedimentation; access and traffic; heritage and archaeology; groundwater; contaminated spoil and acid sulfate soils, spoil stockpiling and disposal; waste/resource management; flora and fauna; flooding and stormwater control; impacts on SEPP 14 Wetlands; visual screening; landscaping and rehabilitation; hazards and risks; energy use, resource use and recycling; and utilities; and,
c) 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) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to compliance with the Construction EMP;
    iii) measures to avoid and/or control the occurrence of environmental impacts;
    iv) measures (where possible and cost-effective) to provide positive environmental offsets to unavoidable environmental impacts;
    v) the role of the EMR;
    vi) environmental management procedures for all construction processes which are important for the quality of the environment in respect of permanent and/or temporary works;
    vii) monitoring, inspection and test plans for all activities and environmental qualities which are important to the environmental management of the project, including performance criteria, specific tests, protocols (eg. frequency and location) and procedures to follow;
    viii) 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;
    ix) the sub plans required under this Approval including: the Groundwater and Settlement Management Sub Plan (Conditions 27), the Construction Traffic Management Sub Plan (Condition 31), the Flora and Fauna Management Sub Plan (Condition 33), the Integrated Wetland Management Sub Plan (Condition 40), the Construction Noise and Vibration Management Sub Plan (Condition 42), the Soil and Water Management Sub Plan (Condition 57), the Acid Sulfate Soils Management Sub Plan (Condition 68), the Spoil and Fill Management Sub Plan (Condition 69), the Landscaping and Rehabilitation Sub Plan (Condition 71), the Indigenous Heritage Management Sub Plan (Condition 74), the Construction Air Quality Sub Plan (Condition 77), Hazards and Risk Management Sub Plan (Condition 80), and the Waste Management and Reuse Sub Plan (Condition 80);
    x) steps the Proponent intends to take to ensure that all plans and procedures are being complied with;
    xi) consultation requirements with relevant government agencies; and,
    xii) community consultation and notification strategy (including local community, relevant government agencies, and Ballina Shire Council), and complaint handling procedures.

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

The Construction EMP(s) shall be made publicly available.

Construction Environmental Monitoring

15. The Proponent shall submit to the Director-General reports in respect of the environmental performance of the construction works and compliance with the Construction EMP 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 reports shall be submitted no later than one month after the six month period to which they apply, and are to be certified by the EMR to confirm that all EMP requirements and Conditions of Approval have been complied with.

    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;
    (f) the plan to be adopted for the project to ensure continued compliance over the coming six month period; and,
    (g) 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 and Ballina Shire Council, and any other relevant government agency nominated by the Director-General. The report(s) shall also be made publicly available.

Operational Environmental Management Plan

16. An Operational Environmental Management Plan (EMP) shall be prepared prior to the commencement of operation. The Plan shall be prepared in consultation with the EPA, DLWC, NPWS, NSW Fisheries, Ballina Shire Council 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 procedures. The Operational EMP requires approval by the Director-General prior to commissioning or within such time as otherwise agreed to by the Director-General. The EMP shall be certified as being in accordance with the Conditions of Approval by the EMR prior to seeking approval of the Director-General.

    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.

The Operational EMP shall address at least the following issues:

i. 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;
ii. sampling strategies and protocols to ensure the quality of the monitoring programme, including specific requirements of the EPA and DLWC;
iii. 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 description of potential site impacts, performance criteria, specific tests and monitoring requirements, protocols (eg. frequency and location) and procedures to follow;
iv. the sub plans required under this Approval including: the Operational Noise Management Sub Plan (Condition 55), the Soil and Water Management Sub Plan (Condition 57), the Landscaping and Rehabilitation Sub Plan (Condition 71), the Hazards and Risk Management Sub Plan (Condition 79), and the Waste Management and Recycling Sub Plan (Condition 80);
v. steps the Proponent intends to take to ensure compliance with all plans and procedures;
vi. consultation requirements, including relevant government agencies, the local community and Council, and complaints handling procedures; and
vii. strategies for the main environmental system elements and including but not limited to: noise; water; SEPP 14 Wetlands; groundwater; flora and fauna; hydrology and flooding; visual screening, landscaping and rehabilitation; and hazards and risks.

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

The Operational EMP 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.

Compliance with this condition may be waived with the approval of the Director-General on the proviso that the RTA has an operational maintenance and monitoring program for the whole of the Pacific Highway which addresses the key issues relating to this activity and provided that the results of this program are made publicly available.

Environmental Impact Audit Report

17. An Environmental Impact Audit Report shall be submitted to the Director-General and the EPA and, upon request by the Director-General, to any other relevant government authority 12 months after commissioning of the project and at any additional periods thereafter as the Director-General may require. An independent person at the Proponent's expense shall prepare the Report. 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. In particular, the Report shall provide

details on actual versus predicted impact for all key impact 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 on the operational phases of the project and any issues of concern raised. 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.

Staging

18. The Proponent shall prepare a construction program and staging report at least one month prior to the commencement of construction. The report shall be provided to the Director-General for information. The report shall:

    (a) include the output from the geotechnical and hydrogeological investigations (Condition 26);
    (b) identify the rationale for the staging and construction program; and,
    (c) assess the program and staging against the REA to determine if the REA conclusions remain valid.

    If construction of any part of the project has not commenced by 2016, environmental impact assessment for those project elements shall be updated to the satisfaction of the Director-General prior to construction commencement. This assessment shall address all relevant issues identified in the REA and shall take into account any changes to land uses and surrounding environments as applicable at the time. The updated assessment shall be based on relevant environmental standards and criteria applicable at that time.

    The Proponent shall not commence earthworks for the works identified in the "Ultimate" Stage as part of the Stage 1 works identified in the EIS and Representations Report, unless these works are:

    i. for structures to be completed as part of Stage 1; and/or,-
    ii. the geological and hydrogeological investigations (Condition 26) conclude that it is necessary to construct these earthworks as part of Stage 1.

> *Note:*
> *The "Ultimate" Stage works include the new southbound bridges over Duck Creek and Emigrant Creek (south) and/or widening of the Emigrant Creek (south) bridge and the grade separated interchanges at the intersection with the Bruxner Highway and Teven Road*

Economic Impacts

19. At least six months prior to opening the section of the project between the Cumbalum Interchange and the Teven Road intersection to traffic, the Proponent shall develop appropriate signage and 'gateway' treatments in consultation with Ballina Shire Council and the Community Liaison Group. The signage policy shall be developed in accordance with the RTA's standard signposting policy,

indicating the range of services in town and that the route through town may be taken as an alternative route to the bypass.

Property and Land Use

Pre-Construction

20. Subject to landowner agreement, building condition surveys shall be conducted on all buildings and structures:

    (a) within 150 metres of excavation works or six times the maximum depth of the excavation (whichever is greatest); or
    (b) within 20 metres of filling works or three times the height of a fill embankment (whichever is greatest); or
    (c) 200 metres of blasting activities and/or other construction activities resulting in vibration impacts; or
    (d) identified as potentially affected in the report required under Condition 26.

    Building condition surveys shall be undertaken at least 30 days before construction occurs within the distance limits described in this condition.

    The building condition surveys need not be conducted if the report required under Condition 26 concludes that a building or structure is very unlikely to be affected.

    Note:
    Structure is defined as any fixed artificial object that might reasonably be expected to be able to be damaged by the works (e.g. dams, cable support structures, farm buildings, residences, etc.)

21. The owners of all properties to be surveyed, as identified in Condition 20 are to be advised at least 14 days prior to the commencement of surveys of the scope and methodology of the survey and the process for making a property damage claim. A copy of the survey shall be given to each affected owner at least three weeks prior to the commencement of construction in the section of road affecting the property. A register of all properties surveyed and considered for survey shall be maintained by the Proponent and provided to the Director-General upon request.

22. The Proponent shall consult on a regular basis with all directly affected landowners regarding any practical and cost-effective measures to minimise impacts. Agreed measures shall be implemented according to a program agreed between the relevant landowner and the Proponent.

Management

23. The Proponent shall ensure that access to properties fronting the project and the service road are maintained throughout the construction period. The Proponent shall ensure that any access-way affected by the project is reinstated to an equivalent standard or that adequate compensation is negotiated with the relevant landowner(s).

24. Any damage to buildings, structures, lawns, sheds, gardens, fencing, etc. as a result of any project construction or operation activities direct or indirect (i.e. including vibration and groundwater changes) shall be rectified at no cost to the owner(s).

25. Where a licensed bore, dam or other property water supply is affected by the project the Proponent shall reinstate water supplies of equivalent quality and quantity to affected landowners. Alternatively the Proponent may negotiate appropriate compensation for the loss of a water supply with the landowner.

Geology, Groundwater and Settlement

Pre-Construction

26. A detailed model of geological and hydrogeological conditions along the route shall be prepared prior to the commencement of construction, including locating and mapping the basalt/argillite interface. The model shall be used to predict ground movement (horizontal and vertical) caused by construction of the road including movement caused by excavation, the construction of embankments and groundwater changes. The model and analysis shall be prepared in consultation with the DLWC.

    Following completion of these studies the Proponent shall prepare a report for the information of the Director-General that:

    (a) provides the methodology and results of the geological and hydrogeological investigations;
    (b) analyses the staging of the project based on the geological and hydrogeological conditions;
    (c) identifies all buildings and structures that may be affected by the project, including those within the limits contained in Condition 20; and,
    (d) identifies monitoring requirements for the design, construction and operation of the project.

    This report shall be certified by geotechnical and construction engineering experts with appropriate registration on the National Professional Engineers Register prior to submission.

Construction

27. A detailed Groundwater and Settlement Management Sub Plan shall be prepared as part of the Construction EMP in consultation with the EPA and DLWC. The Sub Plan shall include:

    (a) identification of impacts on buildings and structures from potential settlement in accordance with Condition 26;
    (b) identification of licensed bores, dams or other property water supplies affected by the project;
    (c) groundwater inflow control, handling, treatment, and disposal methods;
    (d) a detailed monitoring plan for groundwaters, settlement and instability. The plan shall identify monitoring methods, instrument types and locations, monitoring frequency, monitoring duration and analysis requirements.

    Note:
    References to settlement and instability relate only to off-site effects.

Operation

28. A detailed Groundwater and Settlement Management Sub Plan shall be prepared as part of the Operation EMP in consultation with the EPA and DLWC and to the satisfaction of the Director-General. The Sub Plan shall include:

(a) identification of impacts on buildings and structures from potential settlement in accordance with Condition 26;
(b) identification of licensed bores, dams or other property water supplies affected by the project;
(c) groundwater inflow control, handling, treatment, and disposal methods;
(d) a detailed monitoring plan for groundwaters, settlement and instability. The plan shall identify monitoring methods, instrument types and locations, monitoring frequency, monitoring duration and analysis requirements.

Note:
References to settlement and instability relate only to off-site effects.

Settlement Criteria

29. Should the Report required by Condition 26 indicate that exceedances of the criteria in Table 1 are likely at buildings, structures or other facilities mitigation measures shall be implemented in consultation with the relevant land and/or infrastructure owners. The mitigation measures shall be agreed, and where necessary implemented, prior to the commencement of construction.

Table 1- Settlement Criteria for Specific Structures

Beneath Structure/Facility	Total Maximum Settlement	Total Maximum Angular Distortion
Existing Buildings and Structures	As described in AS 2870 - 1996	
Existing Roads	40 mm	1 in 250
Existing Parks	50 mm	1 in 250
Existing Utilities including sewerage, gas, electricity and telecommunication services	To be determined by the relevant utility provider.	To be determined by the relevant utility provider.

If monitoring during construction indicates off-site movement in excess of that predicted then all work affecting ground settlement shall cease immediately. Work shall not resume until the reasons for the excessive settlement are determined and mitigation measures identified, evaluated and implemented.

The above criteria shall not remove any responsibility of the Proponent for the protection of existing structures or for rectifying any damages even if settlement is contained within the above criteria.

Note:
Existing is defined as existing at the date of this Approval.
Total maximum settlement and angular distortion is the total cumulative settlement and angular distortion from all influences.

Traffic and Access

30. 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 Ballina Shire Council. 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.

    All sections of State Highway that are transferred to Ballina Shire Council as service roads shall be brought to standards as negotiated with Ballina Shire Council. The Proponent shall negotiate with Ballina Shire Council regarding contributions to costs for maintenance.

    Note:
    Nothing in this Condition shall be taken as restricting the Proponent from negotiating an alternative payment for damage to local roads with Ballina Shire Council, subject to the agreement of Ballina Shire Council.

31. A detailed Construction Traffic Management Sub Plan shall be prepared as part of the Construction EMP in consultation with Ballina Shire Council. The Sub Plan shall include, but not be limited to:

    (a) identification of all public roads to be used by construction traffic, in particular for the transport of earthworks and pavement materials;
    (b) the timing and duration of the use of these roads;
    (c) impacts on existing traffic (including pedestrians, vehicles, cyclists and disabled persons) including the staging of construction works to minimise lane closures during peak periods and delay to traffic;
    (d) access to construction sites;
    (e) truck ingress and egress routes, entry and exit locations and the nature of loads;
    (f) an analysis of the need to construct the grade separated Cumbalum interchange at the earliest opportunity possible;
    (g) temporary and interim traffic arrangements including intersection and property access;
    (h) strategies to minimise construction heavy vehicles travelling through Ballina;
    (i) a response plan which sets out the proposed response to any traffic, construction or other incident; and,
    (j) appropriate review and amendment mechanisms.

    This Sub Plan shall be fully integrated with the Spoil and Fill Management Sub Plan required under Condition 69.

32. The Proponent shall monitor the use of local roads by construction heavy vehicle traffic in consultation with Ballina Shire Council to develop measures to minimise and/or restrict use of local roads by heavy vehicle traffic as far as reasonable and practicable.

Flora and Fauna

Construction

33. As part of the Construction EMP, the Proponent shall prepare a detailed Flora and Fauna Management Sub Plan in consultation with the NPWS, Ballina Shire Council, DLWC and NSW Fisheries. The Sub Plan shall manage all the impacts on flora and fauna in the vicinity of the project and shall Include:

(a) the characteristics and location of the terrestrial and aquatic flora and fauna communities in the vicinity of the project;
(b) procedures for the clearance of vegetation and soil for construction including identification of requirements for seed collection;
(c) detailed plans and maps of the construction footprint, areas to be cleared, timing of clearing, important habitat areas, threatened species locations, and vegetation type and location;
(d) strategies for minimising vegetation clearance within the worksite where possible and complete protection of vegetated areas outside the worksite area;
(e) strategies for transplanting individuals or populations of any threatened plant species affected by the road alignment where possible;
(f) Noxious Weed Management Action Plan including but not limited to: scope of works, minimising physical disturbance, revegetating cleared areas with local native plant species and regular removal of weeds and application of herbicide to newly establishing weed species. This plan shall address weed management for both terrestrial and aquatic flora;
(g) reuse of topsoil and cleared vegetation including weed eradication;
(h) replanting and rehabilitation of indigenous species, including trees suitable as a food resource for threatened species, preferably using materials that have been obtained from the site;
(i) measures to use any surplus vegetation shall be identified including donation to community groups and distribution to the local community;
(j) derivation of rehabilitation materials;
(k) a program for the active management and maintenance of all preserved, planted and rehabilitated vegetation (including aquatic vegetation) including watering regimes, fencing, replacement of vegetation that may have died and weed management; and,
(l) a program for reporting on the effectiveness of terrestrial and aquatic flora and fauna management measures against performance goals.

The Flora and Fauna Management Sub Plan shall clearly show how the mitigation measures identified in Section 6.6.5 of EIS and the Representations Report will be implemented during construction and operation.

34. All locations of the threatened species *Macadamia tetraphylla* and *Tinospora tinosporoides* that occur adjacent to the project footprint shall be fenced and protected from the direct and, as far as practicable, indirect impacts of the project. Protection from indirect impacts shall include as a minimum the erection of appropriate sedimentation and erosion controls prior to construction and educating construction contractors of the environmental significance of these areas.

35. If, during the course of construction, the Proponent becomes aware of the presence of any threatened species not identified and assessed in the REA and which are likely to be significantly affected, the Proponent shall immediately advise the Director-General of the NPWS and/or NSW Fisheries. No activity which places any of these species at risk shall be undertaken until advice has been received from the NPWS and/or NSW Fisheries. All recommendations by the NPWS and NSW Fisheries shall be complied with prior to any works likely to affect any threatened species.

36. The Proponent shall prepare a Bush Regeneration Plan in consultation with NPWS and DLWC. This plan shall identify disjunct parcels of land, consistent with the EIS and Representations Report, suitable for regeneration and potential connection with existing remnants with the objective of reducing exposure to edge effects, increasing connectivity between remnants and creating wildlife corridors. The Plan shall also include the areas of Closed Forest/Rainforest Communities. Ongoing management of these remnants shall also be addressed.

37. Where possible, seed of locally endemic species shall be collected prior to the commencement of construction to provide seed stock for revegetation purposes to the satisfaction of a qualified bushland regeneration officer acceptable to the NPWS. Topsoil and mulch shall be stripped and stored for placement back in the vegetation zone from where it was removed.

38. The Proponent shall provide compensatory habitat (or funding for such) to offset the loss of 1.3 hectares of mangroves at a ratio of 2:1 and to the satisfaction of NSW Fisheries.

39. Weed infested topsoil as identified by a qualified bush regeneration officer acceptable to NPWS shall not be used in the rehabilitation works unless it is to be sterilised or treated as specified by the bushland regeneration officer.

Wetlands

Wetland Management Sub Plan

40. The Proponent shall prepare an integrated Wetland Management Sub Plan in consultation with Ballina Shire Council, NSW Fisheries, NPWS and DLWC and incorporate this Sub Plan into the Construction EMP. The Plan shall incorporate the SEPP 14 Conditions of Consent and include:

    (a) details of coastal wetland restoration and Compensatory Wetland Agreement;
    (b) control of non-endemic plants in wetlands adjacent to the roadway;
    (c) removal of rubbish from wetlands adjacent to the roadway;
    (d) potential for transplanting juvenile mangroves up to one metre in height from affected areas of Duck Creek and Emigrant Creek; and
    (e) measures for the rehabilitation of wetland areas disturbed during construction of the project that are not required for the operational project.

Noise and Vibration

Background Noise Monitoring

41. The Proponent shall complete additional background noise monitoring in consultation with the EPA to be used in the development of the Construction Noise and Vibration Monitoring Sub Plan required by Condition 42 and the Operational Noise Management Sub Plan required by Condition 56.

Construction Noise and Vibration Management Sub Plan

42. A detailed Construction Noise and Vibration Management Sub Plan shall be prepared as part of the Construction EMP and in consultation with the EPA and where relevant, sufficient to address the technical requirements for obtaining EPA licences. The Sub Plan shall include, but not be limited to:

    a) identification of each work area, site compound and construction depot and the specific activities which will be carried out that these locations;
    b) construction timetabling;
    c) identification of all potentially affected noise sensitive receivers;

d) identification of appropriate construction noise objectives with regard to the requirements of Condition 44;
e) identification of appropriate vibration objectives with regard to the requirements of Conditions 49 and 52;
f) assessment of potential noise and vibration from the proposed construction methods including noise from construction vehicles and noise impacts from required traffic diversions;
g) detailed examination of all reasonable and feasible noise mitigation measures;
h) consideration of erecting operational stage noise mitigation measures prior to construction commencement;
i) details of all mitigation and management strategies to be implemented;
j) noise and vibration monitoring, reporting and response procedures;
k) community consultation and complaints handling procedures;
l) contingency plans to be implemented in the event of non-compliances and/or noise complaints; and,
m) education of construction personnel about noise minimisation.

With respect to (g) 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. The Proponent shall ensure that the mitigation measures referred to in Working Paper 3 of the EIS and in these Conditions are incorporated into the Sub Plan.

Construction Hours

43. All construction activities, including entry and departure of heavy vehicles are 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 through the Construction Noise and Vibration Management Sub Plan Process.

Local residents should be informed of the timing and duration of works covered under clause (d) at least 48 hours prior to commencement.

Construction Noise Criteria

44. The Proponent shall manage noise from construction activities so as to not exceed the following objectives, unless otherwise specified in the Construction Noise and Vibration Management Sub Plan:

(a) For a construction period of four weeks or less, the L_{10} level measured over a period of not less than 15 minutes when the construction site is in operation shall not exceed the background level by more than 20dB(A).
(b) For a construction period of greater than four weeks but less than 26 weeks, the L_{10} level

measured over a period of not less than 15 minutes when the construction site is in operation shall not exceed the background level by more than 10dB(A).

(c) For a construction period greater than 26 weeks, the L_{10} level measured over a period of not less than 15 minutes when the construction site is in operation shall not exceed the background level by more than 5dB(A).

The Proponent shall ensure that all feasible and reasonable noise mitigation and management measures are implemented with the aim to achieve the applicable construction noise objective. Any activities that may cause noise emissions that exceed the objective shall be identified and managed in accordance with the Construction Noise and Vibration Management Sub Plan required by Condition 42.

Construction Noise Management

45. Construction noise levels shall be monitored to verify compliance with the Construction Noise and Vibration Management Sub Plan. Should monitoring indicate exceedances of construction noise goals, the Proponent shall consult with the EPA and implement all reasonable and feasible mitigation measures to the satisfaction of the EPA.

46. The Proponent shall ensure that wherever practicable:

(a) the offset distance between noisy plant items and sensitive receivers is maximised;
(b) the co-incidence of noisy plant working simultaneously, close together and close to sensitive receivers is minimised;
(c) bored piles are used in place of driven piles in close proximity to residences; and,
(d) loading and unloading is carried out away from noise sensitive areas.

47. The Proponent shall ensure that sheet piling and any other activities which result in impulsive or tonal noise generation close to residences and other sensitive receptors are only scheduled between the following hours unless otherwise specified in the Construction Noise and Vibration Management Sub Plan:

(a) 9 am to 3 pm, Monday to Friday; and,
(b) 9 am to 12 pm, Saturday

Where activities are undertaken for a continuous three hour period and are audible to noise sensitive receptors, a minimum respite period of at least one hour shall be scheduled before activities recommence.

Blasting

48. Blasting shall only be undertaken between the hours of 9:00 am and 3:00 pm, Monday to Friday, and 9:00 am to 12:00 pm on Saturday.

49. The vibration level due to blasting activities shall meet the requirements of the EPA as specified in its Licence.

In general the Guideline entitled "*Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration*" prepared by the Australian and New Zealand Environment and Conservation Council (ANZECC) shall be applicable.

50. For any section of the project where blasting is proposed, the Proponent shall undertake a series of initial trials at reduced scale prior to commencement of the proposed blasting to determine site-specific blast response characteristics and to define allowable blast sizes to meet the criteria specified in the Construction Noise and Vibration Sub Plan.

51. The Proponent shall make all reasonable attempts to advise occupants of residences within 500 metres of a blast of the blasting. The advice shall be provided at least 48 hours in advance and include a schedule of blast time(s) and a telephone contact name and number should the resident have concerns.

Construction Vibration

52. Vibration resulting from construction of the project shall be limited to:

    (a) For structural damage vibration - German Standard DIN 4150 and BS 7385: Part 2 – 1993; and,
    (b) For human exposure to vibration - the evaluation criteria presented in British Standard BS6472 for low probability of adverse comment,

    unless otherwise agreed by the EPA through the Construction Noise and Vibration Management Sub Plan.

53. Vibration levels shall be monitored to verify compliance with the limits specified in Conditions 52 and 49. Monitoring shall occur at representative properties within a minimum of 500 metres of blasting works. Should monitoring indicate exceedances, the Proponent shall consult with the EPA and implement best available mitigation measures to the satisfaction of the EPA.

54. Vibratory compacters and rock breakers shall not be used within 50m of residential buildings, unless the requirements of Condition 52 are satisfied.

Operational Noise Management Sub Plan

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

Operational Noise Management

56. Monitoring of road traffic noise shall be undertaken as stated in the Operational Noise Management Sub Plan and in accordance with the NSW Government Guideline Environmental Criteria for Road Traffic Noise. The Proponent shall review the monitoring results and assess the adequacy of the traffic noise mitigation measures in accordance with the 'Post Construction Noise Monitoring Practice Note viii" contained in the RTA's Noise Management Manual.

Soil and Water Management

Soil and Water Management Sub Plan(s)

57. As part of the Construction and Operational EMPs, a detailed Soil and Water Management Sub Plan(s) shall be prepared in consultation with the EPA, DLWC, NSW Fisheries, NPWS and Ballina Shire Council. The Sub Plan(s) shall be prepared in accordance with the Department of Housing's guideline *Managing Urban Stormwater - Soils and Construction* and where appropriate, DLWC's *Constructed Wetlands Manual*. The Sub Plan(s) shall be prepared prior to construction or operation as appropriate.

    The Soil and Water Management Sub 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 groundwaters, including stormwater in storage, sedimentation dams and flooding impacts;
    (b) preparation of a catchment analysis to determine the capacity of existing drainage systems and changes resulting from the construction of the project including detention requirements;
    (c) 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;
    (d) details of strategies to manage the stage construction of embankments including mitigation measures to be implemented, maintenance and responsibility;
    (e) management of the impacts of the development on creeks and water bodies, in particular Duck Creek, Emigrant Creek, Maguires Creek, Richmond River and SEPP 14 Wetlands No. 108 and 95;
    (f) 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 project;
    (g) detailed description of water quality monitoring to be undertaken during the pre-construction, construction and operation stages of the project including identification of monitoring locations;
    (h) contingency plans to be implemented in the event of fuel spills or turbid water discharge from the site; and,
    (i) a program for reporting on the effectiveness of the sediment and erosion control system against performance goals.

    The Soil and Water Management Sub Plan(s) shall clearly show how the mitigation measures identified in Section 6.4 of EIS and the Representations Report will be implemented during construction and operation.

Erosion and Sediment Control Works

58. The Soil and Water Management Sub Plan 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 (in accordance with Conditions 71 and 77). The Sub Plan shall be prepared in consultation with DLWC, EPA and NSW Fisheries.

Construction

59. The DLWC, or other appropriately qualified soil conservationist, shall be consulted on a regular basis 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).

    The results of these inspections and any follow-up actions shall be reported in the six monthly Environmental Performance and Compliance Report required by Condition 15.

60. All runoff collected during construction which is likely to be contaminated, shall be tested, treated, handled and disposed of in accordance with the provision of the Protection of the Environment Operations Act 1997 and the conditions of any Licence issued by the EPA.

61. All runoff from disturbed areas shall be contained by appropriate erosion and sedimentation controls designed in accordance with the Department of Housing's guideline *Managing Urban Stormwater - Soils and Construction*.

Operation Stage Control Measures

62. All 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, Ballina Shire Council and the DLWC. 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. Construction stage water quality structures shall be maintained for a minimum of six months after commissioning of the project or until revegetation has provided groundcover to at least 70% of the exposed ground surface.

63. 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.

Hydrology and Flooding

Inundation levels

64. The project shall be designed to "not worsen" the existing flooding characteristics in any waterway upstream or downstream of the project elements. "Not worsen" shall be defined as:

    (a) a maximum increase in inundation levels upstream of the project of 50 mm in a 1 in 100 year ARI rainfall event; and,

(b) a maximum increase in inundation time of one hour for any rainfall event.

65. The Proponent shall endeavour to resolve amicably any dispute between itself and any landowner about alterations to flooding characteristics caused by the project. If the parties cannot reach a mutually satisfactory resolution, the matter shall be referred firstly to the hydrologist referred to in Condition 66 for resolution. If the hydrologist cannot resolve the issue then the dispute resolution requirements of Condition 7 shall apply.

Hydrological Specialist

66. The Proponent shall provide appropriate funding for the DLWC to engage a qualified hydrologist(s) to ensure that each landowner affected by the project has appropriate technical resources to understand hydrologic issues and to receive advice concerning the provision of appropriate flood/drainage facilities consistent if not better than would exist without the project. The RTA shall notify all affected landowners of the availability of the hydrologist(s) as soon as practicable and prior to commencement of substantial construction activities likely to affect flood/drainage patterns.

Bridge and Culvert Design

67. The Proponent shall consult the EPA and NSW Fisheries in relation to the design and timing of bridge and culvert construction. In undertaking bridge design and construction, the Proponent shall ensure that: no culverts are used to cross creeks and rivers; no earthen platforms for driving piles are constructed; and all embankments are located away from the edge of waterways unless otherwise agreed by NSW Fisheries. The Proponent shall also investigate in consultation with NPWS designing bridge structures that are suitable for fauna use. This may require incorporating features such as locating bridge abutments a sufficient distance from the edge of creek or river bank to allow for fauna movement and measures to ensure that adequate light and moisture is maintained underneath bridges to facilitate native vegetation growth.

    In undertaking culvert design and construction, the Proponent shall ensure that there is no drop or 'waterfall' effect at the end of the structure, water levels above and below the crossing are the same and the base of the culvert is set into (rather than on) the floodplain so that natural sediments cover the bottom, providing a less alien habitat for fish passage.

Acid Sulfate Soils Management

68. A detailed Acid Sulfate Soil Management Sub Plan shall be prepared in consultation with NPWS, NSW Fisheries, EPA and DLWC prior to any construction activity in potentially affected areas. The Sub Plan shall include reference to the water quality monitoring program contained in the Soil and Water Quality Management Sub Plan. The Sub Plan shall be prepared in accordance with the *Acid Sulfate Soils Manual* (ASSMC, 1998). As part of the Sub Plan, a Contingency Plan to deal with the unexpected discovery of actual or potential acid sulphate soils shall be prepared to the satisfaction of the DLWC and in consultation with the EPA.

Spoil and Fill Management

69. The Proponent shall prepare a Spoil and Fill Management Sub Plan and incorporate this Sub Plan into the Construction EMP. This Sub Plan shall include:

    (a) details of the volumes of fill required in relation to staging of the project;

(b) how spoil and fill material will be sought, handled, stockpiled, reused and disposed;
(c) details of disposal sites and the volumes of spoil to be transported to each site;
(d) details of the any contaminated soil and appropriate management and monitoring measures for potential contaminants; and,
(e) a contingency plan to be implemented in the case of unanticipated discovery of contaminated material during construction.

The Spoil and Fill Management Sub Plan shall be fully integrated with the Construction Stage Traffic Management Sub Plan required by Condition 31, the Construction Soil and Water Management Sub Plan required by Condition 57, the Construction Air Quality Sub Plan required by Condition 77, the Construction Noise and Vibration Management Sub Plan required by Condition 42 and the Waste Management and Reuse Sub Plan required by Condition 80.

70. All material excavated from the works shall be reused or recycled where suitable and cost effective to do so. The Proponent shall ensure that of the reuse of suitable material generated from construction activities is maximised in preference to importing fill.

Landscaping and Rehabilitation

71. As part of the Construction and Operational EMPs, the Proponent shall prepare a detailed Landscaping and Rehabilitation Sub Plan in consultation with Ballina Shire Council, all affected landowners and the Community Liaison Group. The Sub Plan shall include, but not be limited to the following:

(a) sections and perspective sketches;
(b) methodology of landscaping works;
(c) location and identification of existing and proposed vegetation including use of indigenous species;
(d) location of mounds, bunds, structures or other proposed treatments, finishes of exposed surfaces (including paved areas), measures to preserve bio-diversity, colours and specifications, staging of works, methodology of landscaping;
(e) design of bridges;
(f) progressive landscape strategies incorporating other environmental controls such as erosion and sedimentation controls, dust mitigation, drainage, noise mitigation;
(g) decommissioning of all construction structure not that are not part of the operational project;
(h) lighting; and,
(i) monitoring and maintenance procedures.

The Proponent shall also include landscape strategies incorporating other environmental controls such as erosion and sedimentation controls, noise mitigation measures, drainage structures and lighting.

72. 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 following completion of the relevant road stage when landscaping is undertaken. 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.

Heritage

Test Excavation Works

73. The Proponent shall undertake a subsurface testing program on PADs 1, 2 and 3 in consultation with the Jali Local Aboriginal Land Council, and NPWS, prior to the commencement of construction. The Proponent shall ensure that these works are carried out in accordance with a valid permit obtained under Section 87 of the *National Parks and Wildlife Act 1974*.

Indigenous Heritage Management Sub Plan

74. The Proponent shall prepare an Indigenous Heritage Management Sub Plan, in consultation with the Jali Local Aboriginal Land Council and NPWS as part of the Construction EMP. This Sub Plan shall include:

    (a) details of the archaeological investigations to be undertaken;
    (b) details of any licences and approvals required,
    (c) detailed plans to be implemented if previously unidentified items/areas are located during construction;
    (d) an education program for all personal on obligations with regard to Aboriginal cultural materials; and,
    (e) management/salvage measures for all identified features.

Non-Indigenous Heritage Survey

75. The Proponent shall prepare a Report on the European Heritage Survey of the Historic House at Cumbalum (the Campbell Property) and the remains of the Ballina to Booyong Rail Line in consultation with Ballina Shire Council prior to the commencement of construction. The Report shall include a photographic record in colour, monochrome print and colour transparency prepared in accordance with the guidelines by the Department and the Heritage Office entitled *How to Prepare Archival Records of Heritage Items* and *Photographic Records of Heritage Sites, Buildings and Structures*. Copies of the Report shall be forwarded to Ballina Shire Council and local libraries.

Unexpected Items

76. If during the course of construction the Proponent becomes aware of any heritage items or archaeological material, all work likely to affect the site(s) shall cease immediately and the relevant authorities, including NPWS, NSW Heritage Council and the relevant Local Aboriginal Land Council shall be consulted to determine an appropriate course of action prior to the recommencement of work at that site. Appropriate supporting documentation would need to accompany any application for required permit/consent(s).

Air Quality

Construction Air Quality Sub Plan

77. As part of the Construction EMP, a detailed Construction Air Quality Sub Plan shall be prepared in consultation with the EPA. The Sub Plan shall provide details of all dust control measures to be implemented during the construction stage, including, but not limited to:

(a) pro-active measures to reduce dust from stockpiles and cleared areas and other exposed surfaces;
(b) progressive revegetation strategy for exposed surfaces in accordance with Conditions 58 and 71; and,
(c) monitoring and maintenance requirements.

78. Where there is a risk of losing material, construction vehicles using public roads shall be maintained and covered to prevent any loss of load, whether in the form of dust, liquid or soils. Construction vehicles and construction roads shall be maintained in such a manner to minimise tracking of any track mud, dirt or other material onto any street which is opened and accessible to the public. In the event of any spillage, the Proponent is required to remove the spilt material within 24 hours.

Hazards and Risk Management

79. As part of the Construction and Operational EMPs, the Proponent shall prepare and implement a Hazards and Risk Management Sub Plan. This Sub Plan shall include, but not be limited to the following:

(a) details of the hazards and risks associated with the project; and,
(b) pro-active and reactive mitigation measures including contingency plans to be implemented in the event of a pollution incident.

Waste Management and Recycling

Waste Management and Recycling Sub Plan

80. As part of the Construction and Operational EMPs 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 in accordance with Government's *Waste Reduction and Purchasing Policy*. It shall be prepared prior to construction, and shall identify requirements for:

(a) waste avoidance;
(b) reduction;
(c) reuse; and,
(d) recycling,

and details of requirements for:

(e) handling;
(f) stockpiling;
(g) disposal of wastes: specifically contaminated soil or water, concrete, demolition material, cleared vegetation, oils, grease, lubricants, sanitary wastes, timber, glass, metal, etc.;
(h) implementation of energy conservation best practice; and,
(i) identifying any site for final disposal of any material and any remedial works required at the disposal site before accepting the material.

81. 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.

Utilities and Services

82. The Proponent shall identify the services potentially affected by construction activities to determine requirements for diversion, protection and/or support. This shall be undertaken in consultation with the relevant service provider(s). 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).

83. The Proponent in consultation with utility authorities shall ensure that disruption to services resulting from the project are minimised and advised to customers.

Cumulative Impact Assessment

84. As part of the Construction and Operation EMPs the Proponent shall identify parameters to be monitored during construction and operation of the project which have the potential for cumulative effects to occur. The Proponent shall also define the time period for which the identified parameters will be monitored. The results of such monitoring shall then be used as an input to the RTA's Cumulative Impact Assessment Study and made available to relevant government agencies and the Community Liaison Group.

Location of Construction Facilities

85. Unless otherwise agreed to by the Director-General, the Proponent shall only construct concrete batching plants and construction compounds required for the construction of the project, in those locations that satisfy the following criteria:

    (a) sites to be located within the road corridor assessed in the EIS and Representations Report to the greatest extent possible;
    (b) sites to be located with ready access to the local road network;
    (c) sites to be located to minimise the need for heavy vehicles to travel through Ballina;
    (d) sites on relatively level land;
    (e) sites to be separated from nearest residences by at least 200 m unless It can be demonstrated to the satisfaction of the Director-General that there will be no adverse noise, visual and air quality impacts;
    (f) sites are not to be permitted within 100 m of, or drain directly to, SEPP 14 wetlands;
    (g) sites are not to be located within 100 m of waterways unless adequate erosion and sediment controls are implemented to protect water quality;
    (h) sites must be above the 20 ARI flood level unless a contingency plan to manage flooding issues is prepared and implemented;
    (i) 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; and,
    (j) sites are to be selected so that the operation of the plant or compound does not impact on the land use of adjacent properties.

The location of any concrete batching plants/construction compounds considered under these Conditions of Approval shall be detailed in the Construction EMP and shall demonstrate that the above criteria have been met.