

# Appendix C

## Summary of Issues Raised During Community and Stakeholder Consultation

**Table C-1 Checklist of Department of Environment and Conservation Requirements**

Issues Raised	Reference in EA
<b>Air quality</b>	
<ul style="list-style-type: none"> <li>Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data.</li> </ul>	21.1
<ul style="list-style-type: none"> <li>The Environmental Assessment should identify the location of sensitive receptors such as schools, residents etc likely to be impacted by particulate and other air emissions from the construction and operation stages of the project. Pollutants should be quantified, impacts assessed and mitigation measures provided.</li> </ul>	21.1, 21.2, 21.3, 21.4
<b>Noise and vibration</b>	
<ul style="list-style-type: none"> <li>The existing acoustic environment should be assessed and reported with reference to the relevant Sections of the DEC guidelines Environmental Criteria for Road Traffic Noise (ECRTN) and the NSW Industrial Noise Policy.</li> </ul>	16.1-16.3
<ul style="list-style-type: none"> <li>The location of sources of high noise should be identified and any diagrams provided with the Noise assessment Report (NAR).</li> </ul>	16.2, 16.4
<ul style="list-style-type: none"> <li>The location of sensitive noise receivers such as schools, residences, hospitals etc should be clearly identified on any diagrams provided with the NAR.</li> </ul>	16.2
<ul style="list-style-type: none"> <li>The predicted noise levels at all potentially affected sensitive receivers should be included in the NAR.</li> </ul>	16.4
<ul style="list-style-type: none"> <li>The assessment of noise, vibration and blasting impacts should include any impacts associated with the frequency and duration of intermittent noise on sensitive receivers.</li> </ul>	16.4
<ul style="list-style-type: none"> <li>The criteria used to develop the proposed mitigation measures to control noise, vibration and blasting impacts caused by construction activities and associated traffic should be included in the NAR. The NAR should include noise and vibration mitigation measures proposed for construction and blasting activities.</li> </ul>	16.3, 16.5
<ul style="list-style-type: none"> <li>Investigate opportunities to implement operation stage mitigation measures to provide a construction stage benefit.</li> </ul>	16.5
<ul style="list-style-type: none"> <li>Assessment of predicted operational noise impacts of proposal in accordance with ECRTN and RTAs Environmental Noise Management Manual (ENMM).</li> </ul>	16.4
<b>Water</b>	
<ul style="list-style-type: none"> <li>Description of potentially affected receiving waters with regard to water quality and river flow objectives (ANZECC).</li> </ul>	21.1
<ul style="list-style-type: none"> <li>Description of impacts of proposal with regard to above</li> </ul>	10.2, 10.3, 10.4, 21.1
<ul style="list-style-type: none"> <li>Identification of the number and type of bridges and culverts proposed for the project.</li> </ul>	6.1.4

Issues Raised	Reference in EA
<ul style="list-style-type: none"> <li>Assess the potential changes to flooding and drainage patterns from the proposal.</li> </ul>	10.2, 10.3, 10.4
<ul style="list-style-type: none"> <li>Describe the identification and management of acid sulfate soils.</li> </ul>	12.3.4, 12.4.4
<ul style="list-style-type: none"> <li>Stormwater management including soil dispersability, locations of sediment basins and spill containment basins.</li> </ul>	12.4.5, 10.3.2
<ul style="list-style-type: none"> <li>Waste water management with regard to opportunities for re-use, on site disposal and control measures.</li> </ul>	21.3, 7.4.3
<ul style="list-style-type: none"> <li>Identify water usage requirements and potential supply sources for the construction stage of the project.</li> </ul>	7.4.3, 21.3
<b>Waste and Chemicals</b>	
<ul style="list-style-type: none"> <li>Identification of waste streams.</li> </ul>	21.3.4
<ul style="list-style-type: none"> <li>Detail waste minimisation and management strategies.</li> </ul>	21.3.4, Appendix D
<ul style="list-style-type: none"> <li>Provide details of the cut/fill balance for the project.</li> </ul>	7.4.2
<b>Impacts on threatened and protected species their habitats</b>	
<ul style="list-style-type: none"> <li>A comprehensive survey of the site should be conducted and documented in accordance with the gazetted draft <i>Guideline for Threatened Species Assessment</i>.</li> </ul>	11.1
<ul style="list-style-type: none"> <li>Likely impacts on threatened species and their habitat need to be assessed, evaluated and reported on. The assessment should specifically report on the considerations listed in Step 3 of the draft guideline.</li> </ul>	11.3, 11.4, 11.5
<ul style="list-style-type: none"> <li>The Environmental Assessment needs to clearly state whether it meets each of the key thresholds set out in Step 5, Assess nature and impact of proposal from the Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities, DEC, 2004.</li> </ul>	11.6
<ul style="list-style-type: none"> <li>The proposal must consider the impact of the project on the broader regional landscape in conjunction with the DEC Key Habitats and Corridors Project. The location of key terrestrial and aquatic habitats and corridors (KH&amp;C) remnant floodplain vegetation and habitat features and provisions for maintenance of their condition and connectivity need to be addressed in the proposal. Information on KH&amp;C can be obtained from DEC's Key Habitats and Corridors in Northeast NSW (<a href="http://www.maps.nationalparks.nsw.gov.au">www.maps.nationalparks.nsw.gov.au</a>). Protection measures should be included in the comprehensive mitigation strategy for the project.</li> </ul>	Technical Report 2 (Vol.2)
<ul style="list-style-type: none"> <li>An assessment of other key specialised habitat in the road corridor needs to be considered:               <ul style="list-style-type: none"> <li>– Macleay River floodplain</li> <li>– hollow-bearing trees</li> <li>– large fig trees</li> <li>– rocky outcrops</li> <li>– remnant native vegetation.</li> </ul> </li> </ul>	Chapter 11 (reference to PAR Supporting Information)
<ul style="list-style-type: none"> <li>The above assessment needs to be identified from habitat assessment and survey data and included in the assessment.</li> </ul>	
<ul style="list-style-type: none"> <li>The assessment needs to address the magnitude of likely edge effects of proposed construction and operational activities on Glossy Black-Cockatoo foraging and nesting habitat (<i>Allocaeusuarina</i> spp. groves) and drainage impacts of these works on nearby SEPP14 wetland values.</li> </ul>	11.3.5, 10.3.2

Issues Raised	Reference in EA
<ul style="list-style-type: none"> <li>Further assessment of impacts and proposed protection measures for the adjacent SEPP14 wetland is requested as it is susceptible to changes in local hydrology and pollution from the proposed upgrade during construction and operational phases.</li> </ul>	Chapter 11 (reference to PAR Supporting Information)
<ul style="list-style-type: none"> <li>The PAR Supporting Information Ecological Assessment concludes the proposed Highway upgrade will have a significant impact on the threatened species, Brush-tailed Phascogale (<i>Phascogale tapoatafa</i>). Therefore the population extent, predicted impacts and mitigation measures needs to be addressed for the Brush-tailed Phascogale.</li> </ul>	Technical Report 2 (Vol.2)
<b>Impacts on Aboriginal cultural heritage values</b>	
<ul style="list-style-type: none"> <li>The environmental assessment should address and demonstrate how the RTA has met the information and consultation requirements as set out in the draft <i>Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation</i>.</li> </ul>	Chapter 17
<ul style="list-style-type: none"> <li>Subsurface archaeological investigations should be undertaken in relation to the significant potential archaeological deposits (PAD's) likely to be directly/indirectly impacted by the project and associated works and activities. The local Aboriginal community should be given the opportunity to participate in the proposed investigations, including being able to contribute to discussions on the methodology for testing, and to participate in excavations and late analysis. As the project has yet to receive Major Projects approval in accordance with Part 3A of the EP&amp;A Act, the RTA will be required to obtain a section 87 permit (NPW Act 1974) prior to undertaking subsurface archaeological investigations.</li> </ul>	17.1, 17.2, 17.3
<ul style="list-style-type: none"> <li>Describe the actions that will be (or have been) taken to avoid or mitigate impacts on Aboriginal cultural heritage values. Also describe the activities and actions which will be undertaken, and any agreements which have been made with the Aboriginal community, which will attempt to compensate for the unavoidable impacts of the project on Aboriginal cultural values. This should include an assessment of the likely effectiveness and reliability of the measures proposed and any residual impacts after these measures are implemented.</li> </ul>	17.5.3, Appendix D
<ul style="list-style-type: none"> <li>The environmental assessment needs to clearly demonstrate that effective Aboriginal community consultation has been undertaken in determining and assessing impacts, developing options and making final recommendations.</li> </ul>	4.3, 4.4, 17.1.2
<ul style="list-style-type: none"> <li>The environmental assessment should seek to demonstrate that appropriate measures will be implemented during the construction and operational phases of the project to ensure impacts upon Aboriginal cultural heritage are managed in accordance with agreements reached with Aboriginal community groups and the DEC.</li> </ul>	17.5
<ul style="list-style-type: none"> <li>The environmental assessment should demonstrate that negotiation has been, or will be, undertaken with relevant Aboriginal community groups with a view to determining their requirements for management and salvage of Aboriginal sites impacted by the project.</li> </ul>	17.1, 17.5, 4.3, 4.4
<ul style="list-style-type: none"> <li>Assuming that the Indigenous Heritage Management Sub-plan referred to in the Statement of Commitments will be prepared prior to commencement of construction, the DEC would appreciate the opportunity to contribute to the terms of reference for the sub-plan and to review the draft sub-plan.</li> </ul>	Not relevant at this stage of assessment

**Table C-2 Requirements of Department of Natural Resources**

Issues Raised	Reference in EA
<b>General</b>	
This Department would like the following aspects dealt with in any proposal developed for the Pacific Highway Upgrade – Kempsey to Eungai:	4.3, 6.2
<ul style="list-style-type: none"> <li>The local drainage union should be consulted and appropriate drain management maintained or improved as a result of works. The drains have the effect of controlling tidal and flood impacts on grazing land. These drains can also be managed to improve the quality of wetlands and reduce the impact of acid sulfate soils on local waterways.</li> </ul>	
<ul style="list-style-type: none"> <li>Impacts on biological/ecological and physical characteristics of local streams and local bushland.</li> </ul>	11.3
<ul style="list-style-type: none"> <li>Protection, rehabilitation and ongoing management of the Riparian Zone. The assessment should outline the structures and works in proximity to waterways. The assessment should also outline the nature of works to mitigate impacts on drain, creek and river bed and bank stability and to control erosion and sedimentation.</li> </ul>	11.3, 11.4, 10.5, 6.2
<ul style="list-style-type: none"> <li>Potential for flooding – impacts on the nature and extent of flooding for a range of flood heights both during and post development. Impacts on land, infrastructure and assets from any changes to the flooding regime.</li> </ul>	10.2, 10.5
<ul style="list-style-type: none"> <li>Stormwater management both during and post development.</li> </ul>	10.3, 6.2
<ul style="list-style-type: none"> <li>Assessment and treatment of potential contaminated soils and potential acid sulfate soils should they be disturbed. The Department recommends reference to be made to the excellent work carried out in the construction of the Pacific Highway upgrades at Taree and Yelgun to Chinderah. Reference should also be made to Cramer et al. (2002) Managing Acid Sulfate Soils in the Yelgun to Chinderah Pacific Highway Upgrade, SMEC.</li> </ul>	6.1.8, 12.3, 12.4
<b>Surface and Ground Water</b>	
<ul style="list-style-type: none"> <li>The assessment should outline the proposed uses for water and any impacts on surface and groundwater resources.</li> </ul>	7.4
<b>Issues specific to legislation</b>	
<ul style="list-style-type: none"> <li>Work in or adjacent to streams will require concurrence to be issued by the Department of Natural Resources under the Rivers and Foreshores Improvement Act 1948. Works will need to comply with the objectives of this Act.</li> </ul>	3.2
<ul style="list-style-type: none"> <li>Whilst RTA works are exempt from the Native Vegetation Act 2003, consideration needs to be given to any vegetation management agreements that may be in place over the proposed route. The Northern Rivers CMA and also the Department of Environment and Conservation should be contacted in relation to these vegetation management issues. Other relevant legislation includes the Catchment Management Act 2000 and National Parks and Wildlife Act 1974.</li> </ul>	3.2
<ul style="list-style-type: none"> <li>Use and management of drains is undertaken via the Water Management Act.</li> </ul>	3.2
<ul style="list-style-type: none"> <li>Water Act 1912 – Water licenses may be required for the use of surface and ground water during construction. A license may also be required if groundwater is intersected or groundwater dewatering is required.</li> </ul>	3.2

Issues Raised	Reference in EA
<b>Flooding Issues</b>	
<ul style="list-style-type: none"> <li>It is recommended that the hydraulic modelling and mitigation measures be fully revisited when refining the design and preparing the Environmental Assessment. Factors that contribute to this recommendation are:</li> </ul>	
<ul style="list-style-type: none"> <li>Hydraulic modelling to date has not covered the full range of flood events (the events previously suggested should be modelled – the larger events are required to ensure that no flood causes an afflux at Kempsey and facilitate effective evacuations strategies)</li> </ul>	10.1
<ul style="list-style-type: none"> <li>Refinement of the horizontal and vertical alignment of the highway may alter flood behaviour (what assumptions were made regarding the variable crest level of the highway, additional height of embankment to allow for settlement, depth of bridge girder/deck, allowance for traffic barricades and mature vegetation on embankments?)</li> </ul>	6.1.2, 6.1.4, 10.2
<ul style="list-style-type: none"> <li>By necessity, assumptions were made during the course of the modelling – the modelling will require clarification/refinement when the detailed designs come to hand</li> </ul>	10.1, 10.2, Chapter 6
<ul style="list-style-type: none"> <li>Insufficient information has been provided to assess some of the mitigation measures, e.g., time for the drains to remove floodwater off the floodplain once river levels recede and height/size of the stock mounds. The removal of cattle from the stock mounds has not been fully investigated nor the location and flood affection of the mounds.</li> </ul>	10.5
<ul style="list-style-type: none"> <li>The performance criteria for the Frederickton floodgate should be assessed with more rigour in light of the consequences of flooding within the levee. Furthermore, more flood event design scenarios are required, including testing the performance of the floodgates with past events (rather than the design events)</li> </ul>	10.1, 10.2, 10.5.3, 6.2
<ul style="list-style-type: none"> <li>Insufficient information has been provided regarding the calibration of the SOBEK model</li> </ul>	10.1
<ul style="list-style-type: none"> <li>Bridge, culvert and weir losses produced by the SOBEK model should be checked by an alternative hydraulic method or hand calculations.</li> </ul>	10.1
<ul style="list-style-type: none"> <li>The impact limit line has not been defined (it is assumed to equate to less than 0.01 m afflux). Does this line move closer to Kempsey in larger events?</li> </ul>	10.1

**Table C-3 Requirements of NSW Department of Primary Industries**

Issues Raised	Reference in EA
<b>Agricultural Issues</b>	
NSW DPI would expect and seek to ensure that the environmental assessment process and/or statement of commitments appropriately and effectively address the following matters:	
<ul style="list-style-type: none"> <li>Provision of property access arrangements that are safe and practical during construction and post construction.</li> </ul>	14.5.3, 15.4, Figure 14-6
<ul style="list-style-type: none"> <li>That operational and construction impacts include assessment of impacts on agribusiness and management of same as part of the assessment of impacts on the community and local economy.</li> </ul>	15.4.3, Chapter 18
<ul style="list-style-type: none"> <li>That impacts caused to and plans for stock movement to flood refuges are determined, practical and documented.</li> </ul>	15.4.3, 10.5.2, 10.2

Issues Raised	Reference in EA
<b>Mineral Resources Issues</b>	
Due diligence needs to be paid to the following four issues in any development application or EIS prepared for the subject highway upgrade:	
• Impact on resources.	21.3.4, 7.4
• Material need for highway upgrade.	21.3.4, 7.4
• Blasting-related safety around quarries.	Chapter 13
• Access for quarry trucks.	15.4.5
The subject development could consume large quantities of construction materials during its implementation. Consequently, DPI Mineral Resources considers that the EIS should:	
• Estimate the construction material requirements for the subject proposal.	7.4
• Indicate their likely primary sources (not just intermediate suppliers).	7.4
• State whether the proposed construction material uses are appropriate (e.g. use of high quality materials as fill may be inappropriate).	7.4
• Assess the potential impact on the sustainability of construction material supply in the district that could arise from obtaining any of those requirements from existing sources.	7.4
Informal engineering preference in the Department is to exclude new development from within 500 m of the limit of quarrying involving blasting, and to require assessment of any proposal to within 500 m to 1,000 m of the limit of future blasting.	Chapter 13
Access for quarry trucks is also an issue of potential concern because of the need for:	
• Continued and safe access for trucks to and from quarries.	15.4.5
• Continued and safe access for trucks to and from the Highway and other public roads for the movement of quarry products to markets.	15.4.5, 14.5.3

**Table C-4 Requirements of Kempsey Shire Council**

Issues Raised	Reference in EA
<b>Frederickton Primary School</b>	
It is acknowledged that further assessment will be undertaken at the primary school for Air Quality. A similar level of assessment should be undertaken in relation to noise impacts. These impacts and associated mitigation measures should be investigated as part of the Environmental Assessment.	Chapter 16 and 20
<b>Urban/Visual Design</b>	
It is acknowledged that visual assessment will be undertaken as part of the Management Measures (Table 7.2 of the Project Application). However, a preliminary assessment of the visual impacts associated with the proposed development should be undertaken as part of the Environmental Assessment. This assessment shall take into consideration the scale and location of the development and recommend likely mitigative measures to reduce its obtrusiveness within the landscape. Of particular concern is the design of the highway through the predominately cleared floodplain.	Chapter 19

Issues Raised	Reference in EA
Heavy Vehicle Service Centre and Future Industrial Land in South Kempsey	
The environmental assessment should detail the provisions made to ensure these proposed activities have been appropriately addressed.	6.1.6, 15.3.1, 15.3.2, 15.4.4
<b>Heritage</b>	
It is understood that heritage has been extensively investigated as part of the route selection process. The environmental assessment should detail the provisions made to ensure these items have been appropriately addressed. Please find attached an inventory of all heritage items listed within Councils Community Based Heritage Study (some specific Frederickton items have also been attached). Any of these items impacted by the development should be addressed in the Management Measures (Table 7.2 of the Project Application Report).	Chapter 17
<b>Stock Movement/Evacuation</b>	
The applicant should include an assessment/evaluation of stock movement/evacuation availability as part of the Management Measures identified within Table 7.2 of the Project Application Report. Where necessary mitigation measures should be provided to ensure stock movement/evacuation is maintained.	15.4.3, 10.5.2, Figure 10-7

**Table C-5 Requirements of Nambucca Shire Council**

Issues Raised	Reference in EA
It is considered that the Director Generals Requirements For Environmental Assessment should include a specific provision that requires the RTA to fully address how the benefits of the economic and social impacts substantially outweigh the considerable detrimental ecological impacts of the selected eastern route. Ideally the Environmental Assessment should provide adequate information to make a full and proper comparison with alternative western route, to ensure that the selected route is indeed the most environmentally sustainable option for the Pacific Highway upgrade.	Chapter 5 and 22, 21.3

**Table C-6 Requirements of the Heritage Council**

Issues Raised	Reference in EA
All items of local and state heritage significance which are present along and in the direct vicinity of the proposed routes and any impacts the development may have upon the significance of these items should be assessed. This assessment should include natural areas and places of Aboriginal, historic or archaeological significance. It should also include a consideration of wider heritage impacts in the area surrounding the proposed routes.	Chapter 17
In addition to the State Heritage Inventory, the Environmental Assessment should consult lists maintained by the National Trust, any heritage items listed under the Australian Government's Environment Protection and Biodiversity Conservation Act 1999 and the local council in order to identify any identified items of heritage significance in the area affected by the proposal. Please be aware that these lists are constantly evolving and that items with potential heritage significance may not yet be listed.	Chapter 17

Issues Raised	Reference in EA
Non-Aboriginal heritage items within the area affected by the proposal should be identified by field survey. This should include any buildings, works, relics (including relics underwater), gardens, landscapes, views, trees or places of non-Aboriginal heritage significance. A statement of significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual. The field survey and assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual. The field survey and assessment should be undertaken by a qualified practitioner/consultant with historic sites experience.	Chapter 17
The proposal should have regard to any impacts on places, items or relics of significance to Aboriginal people. Where it is likely that the project will impact on Aboriginal heritage, adequate community consultation should take place regarding the assessment significance, likely impacts and management/mitigation measures.	Chapter 17
Where items of local or state heritage significance are identified as being impacted by the proposal the Environmental Assessment should include a Statement of Heritage Impact in line with the NSW Heritage Office publication (revised 2002) to assess the impact to the significance that/those items and identify the appropriateness or otherwise of these impacts on that significance. Relevant mitigation measures should be identified where impacts are deemed unavoidable.	Chapter 17

**Table C-7 Requirements of the Rural Lands Protection Board**

Issues Raised	Reference in EA
Impact of the bypass on viable agricultural land.	15.4.3
Impact of flooding on agricultural land, livestock and farm families i.e. higher water levels and increased velocity as a result of work on the flood plain.	10.2, 10.5
Emergency movement of livestock in times of flooding, access for walking stock, access and egress for trucks moving from the flood plain back onto the highway and other arterial road access.	10.5.2, Figure 10-7
Stock diseases and the impact on quarantined properties of a revised road network which may move cattle onto neighbours properties which could result in subsequent spread of notifiable diseases or additional quarantined properties.	15.4.3
Impact of the proposed bypass corridor on the travelling stock reserve (TSR 85050) on the corner of Old Station road and Inches road.	15.4.3

**Table C-8 Key issues raised by the community during Route Selection Phase**

Issues Raised	Section in EA
<b>Environmental Issues</b>	
• Impacts on current flooding regime.	10.2.2, 10.3.2
• Flora and fauna surveys may not accurately reflect local wildlife.	11.1
• Impacts of soft soils and acid sulphate soils on construction.	12.3, 12.4
<b>Social Issues</b>	
• Pedestrian safety.	14.2.1, 14.2.4, 14.7
• Noise impacts.	Chapter 16



Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Conflicts between through traffic and local traffic (particularly vehicles emerging from driveways).</li> </ul>	14.3, 14.4, 14.5
<ul style="list-style-type: none"> <li>Community severance.</li> </ul>	18.3.2
<ul style="list-style-type: none"> <li>Aboriginal heritage impacts.</li> </ul>	17.2.1, 17.4.1
<b>Economic Issues</b>	
<ul style="list-style-type: none"> <li>Impacts on good quality agricultural land.</li> </ul>	18.3.3
<ul style="list-style-type: none"> <li>Resumption impacts (particularly for farmers).</li> </ul>	18.3.3
<ul style="list-style-type: none"> <li>Impacts on future residential areas.</li> </ul>	15.3, 15.4
<ul style="list-style-type: none"> <li>Impacts on potential tourist growth.</li> </ul>	18.3.3
<b>Design Issues</b>	
<ul style="list-style-type: none"> <li>Need to retain crossing points (particularly for farmers).</li> </ul>	14.5.3, 15.4.3
<ul style="list-style-type: none"> <li>Conflicts between through traffic and local traffic.</li> </ul>	14.3, 14.4, 14.5
<ul style="list-style-type: none"> <li>Eastern options provide access to coastal towns and potentially avoid Aboriginal heritage areas, but concern about flooding and construction delays due to soft soils.</li> </ul>	10.2, 10.3, 10.4, 12.3.1, 12.4.1
<ul style="list-style-type: none"> <li>Western options appear to require less land resumptions, and avoid flood-prone areas and good quality agricultural land.</li> </ul>	Chapter 5 (5.1.1, 5.1.2)
<ul style="list-style-type: none"> <li>Through-town option not considered viable (increase in flooding, community severance).</li> </ul>	5.1.1

**Table C-9 Key issues by precinct during Route Selection Phase**

Issues Raised	Section in EA
<b>South Kempsey industrial area</b>	
<ul style="list-style-type: none"> <li>Direct acquisition.</li> </ul>	15.3.2, 15.4.2
<ul style="list-style-type: none"> <li>Interchange arrangements possibly impacting on business viability.</li> </ul>	6.1.3, 18.3.3
<ul style="list-style-type: none"> <li>Interchange arrangements/access roads need to be examined as soon as possible to allow this area to be planned and future investment to take place, which is important for local economy/employment.</li> </ul>	See above
<b>Crescent Head Road community</b>	
<ul style="list-style-type: none"> <li>Loss of sense-of-place with major highway severing the community.</li> </ul>	18.3.2
<ul style="list-style-type: none"> <li>Visual/intrusion impacts for residents of Crescent Head Road and Bruces Lane.</li> </ul>	19.3.1
<ul style="list-style-type: none"> <li>Noise impacts.</li> </ul>	16.4
<ul style="list-style-type: none"> <li>Air quality impacts.</li> </ul>	Chapter 20
<ul style="list-style-type: none"> <li>Concern about local drainage and flooding.</li> </ul>	Chapter 10
<b>Inches Road community</b>	
<ul style="list-style-type: none"> <li>Concern about the visual impacts of the highway design at Inches Road and Old Station Road.</li> </ul>	19.2, 19.3, 19.4
<ul style="list-style-type: none"> <li>Access arrangements.</li> </ul>	14.3, 14.5, 14.7, 14.9
<ul style="list-style-type: none"> <li>Noise impacts.</li> </ul>	16.4

Issues Raised	Section in EA
• Air quality impacts.	Chapter 20
• Severance of this community.	18.3.2
<b>Frogmore/floodplain community</b>	
• Increase in flood levels affecting several properties.	10.2.2, 10.3.2
• Potential loss of the WWI Memorial plantings.	17.2.2, 17.5.2
• Impacts on the status of a certified organic farm.	15.2.2, 15.3.4, 15.4.3
• Changes to topography (excavation) under the bridge area – localised impacts on low level flooding.	10.2, 10.5
• Siting and impacts of flood refuge mounds.	10.5.2
• Safety during flooding.	10.2.2, 10.5
• Emergency access to the highway for stock.	10.2.2, 15.4.3
<b>Frederickton and downstream of the highway west of the river</b>	
• Proposed levee and local and wider flooding impacts.	6.2, 10.2, 10.3, 10.4, 10.5
• Access during flooding.	10.2.2
• Loss of amenity.	Chapter 14, 16, 19
• Drainage under the bridge and the Frederickton creek area.	10.2, 10.3
<b>Collombatti</b>	
• Drainage issues.	6.2
• Stock movement for agricultural properties.	10.5.2, 15.4
• Acquisition issues – partial acquisition of high ground affecting property viability.	15.4.2
<b>Barraganyatti</b>	
• Severance and loss of sense of connectivity within the community.	18.3.2
• Visual impacts.	19.3
• Noise impacts.	16.4
<b>Eungai Rail</b>	
• Access to the existing highway.	14.3, 14.5

**Table C-10 Issues raised by agencies during route selection phase**

Issues Raised	Section in EA
<b>Department of Infrastructure Planning and Natural Resources</b>	
• Potential licensing requirements.	3.2
• Acid sulfate soils.	12.3.4, 12.4.4
• Flooding.	Chapter 10
• Crown land.	15.4.2
• Soil erosion.	12.3.5, 12.4.5
• Water quality.	21.1
• Sediment control structures.	11.4.4, 12.4.6, 21.1.2 21.1.3

Issues Raised	Section in EA
• Vegetation clearing.	11.3
• Impacts on local bus operations.	14.3, 14.4, 14.5, 14.8
• SEPP 14 Wetlands.	11.2, 11.3, 11.4
• Consider relative planning policies.	Chapter 3
<b>Kempsey Shire Council</b>	
• Impacts on local tourism.	18.3.3
• Issues raised by several other local groups and committees.	Chapter 4
<b>Nambucca Shire Council</b>	
• Likely impact on local residents from transporting of construction materials.	7.3.1, 7.3.2, 13.2.2, 14.3, 16.4,
<b>Department of Environment and Conservation</b>	
• Native flora and fauna.	11.2, 11.3, 11.4
• Aboriginal heritage areas.	17.2.1, 17.3, 17.4.1, 17.5.1
• Compensation requirements.	11.4
• Soil erosion, contamination and acid sulphate soils.	12.3, 12.4
• Impacts of construction and operational noise.	16.4
<b>NSW Agriculture</b>	
• Impacts of partial property acquisition on farm viability.	15.4.3, 18.3.3
• Weed spread, erosion, acid sulphate soil, access problems, flooding and drainage changes.	11.3.7, 12.3, 12.4, 10.2, 10.3, 10.4, 14.3, 14.4, 14.5
• Rural and agricultural heritage values.	Chapter 17
• Need to closely liaise with rural community.	Chapter 4
<b>NSW Department of Education and Training</b>	
• Impacts on schools with heritage significance.	n/a
• Noise and safety impacts.	16.4, Chapter 13, 14.2.4, 2.3
<b>NSW Fire Brigade</b>	
• Need emergency services access.	10.2.2, 13.4.3
<b>NSW Fisheries</b>	
• Fish habitat or fish passage impacts (including bridge location or altered flooding regimes).	11.3.9, 11.4.4
<b>NSW State Forests</b>	
• Maintain access to State Forest land.	14.5.3, 15.4.4
• Compensate any loss of productive State Forest land.	15.4.2, 15.4.4
<b>NSW Roads &amp; Traffic Authority</b>	
• Cumulative impacts of vegetation clearing.	21.2
• Appropriate roadside plantings.	19.5
• Fauna corridors.	11.4.2, 11.3.4
• Aboriginal heritage areas.	17.2.1, 17.4.1, 17.5.1

Issues Raised	Section in EA
• Aboriginal employment and use of Aboriginal language.	17.1
• Noise and vibration mitigation measures.	16.5
<b>State Emergency Service</b>	
• Need emergency services access to the new highway.	10.2.2, 13.4.3

**Table C-11 Key issues raised by the community during concept design phase**

Issues Raised	Section in EA
<b>Geology and soils</b>	
• The impacts of geotechnical investigations. In particular, potential injuries to stock from falling into divots left behind from test pit excavations.	Chapter 12
• The presence of soft soils and acid sulfate soils in the Macleay River floodplain present a major constraint for construction. A large amount of fill would be required for construction in the floodplain, with special construction techniques required to manage potential road settlement.	7.3, 12.3, 12.4
• The cost implications of the soft soils and acid sulfate soils being located in the immediate vicinity of the planned route.	7.3, 10.2.2, 13.4.3
• The time delays resulting from the presence of soft soils and acid sulfate soils. The community would like to see the works completed as soon as possible.	7.3, 10.2.2, 13.4.3
<b>Air</b>	
• The impact of dust generated during construction of the highway.	Chapter 20
• And the impact of vehicle emissions once the Upgrade was operational.	Chapter 20
• Health issues associated with air pollution from the proposed highway.	Chapter 20
• The close proximity of Frederickton Primary School and the health risks of emissions to students.	Chapter 20
<b>Noise and Vibration</b>	
• Impacts from highway traffic on residents who will be situated adjacent to the proposed highway.	16.4.2, 16.4.3
• Queries relating to the kinds of noise mitigation measures the RTA would employ (e.g. the height and aesthetic design of noise walls).	6.3, 16.5
• The impact of noise walls on visual amenity for those residents adjacent to the proposed highway.	6.3
• A suggestion that noise walls should be made of fire-proof materials in forested areas.	6.3
• Expectations that noise levels at Frederickton Primary School would increase.	16.4.3
• The view that the general amenity of the Kempsey would improve if the highway were removed from the centre of the town. Fewer trucks and through traffic would make the town more peaceful and more likely to attract tourists. Without the preferred route, impacts of noise from predicted increases in highway traffic would continue to reduce town centre amenity.	16.4

Issues Raised	Section in EA
<b>Flora and Fauna</b>	
• The impacts of increased flooding on the Macleay River floodplain ecosystem.	10.2.2, 11.3.8, 15.3.4
• The identification of threatened species that inhabit individual properties and local areas.	11.2, 11.1
• The impacts of noise, air and water pollution local ecology such as bird life.	11.3
• The impact on fauna movements.	11.3.4, 11.4.2, 11.3.6
<b>Heritage and Culture</b>	
<i>Indigenous</i>	Chapter 4, 17.1.2
• Although no artefacts were found on the proposed route this view illustrated well that spurs overlooking flood plains are potential artefact sites which may need further investigation.	17.2.2, 14.4.2, 17.5.2
• The proposal to undertake some test pitting was strongly endorsed by the Aboriginal Elders present.	17.3.1
<i>Non-Indigenous</i>	
• Memorial avenue of trees that extend from South West Rocks Road to the Macleay River along Ferry Lane.	17.2.2
• A memorial would be developed that recognises the significance of the site through further consultation.	17.5.1
<b>Flooding</b>	
• Lack of trust in the flood modelling to accurately predict the behaviour of future flood events.	10.1
• Belief that providing full bridging across the floodplain is the only acceptable option and that financial constraints should not preclude full bridging.	5.3.3, 6.1.4
• Water velocities and associated impacts such as scouring, particularly in and around bridge openings.	6.2.3, 10.3, 10.5.4
• Loss of flood-free high ground which traditionally would be used for stock during flood events.	10.5.2
• Loss of prime agricultural land.	18.3.3, 15.4.3
• Proposed mitigation measures such as stock mounds, and arrangements for stock movements during flood.	10.5.2
• Changes to flood evacuation times which are important for safety and the removal of stock. It was noted that the forecasting and interpretation of rain and water level information is necessary for flood evacuation planning.	10.2, Figure 10-7
• Removal of any of the trees within the memorial avenue and associated flooding benefits for the local community.	10.2.1, 17.2.2, 17.5.2
• Installation and location of flood gauges to obtain flood information to assist flood management planning and flood monitoring.	10.5.4
• Maintenance of the highway embankment.	6.1.8, 8.3
• Emergency services access and changes to emergency rescue procedures due to increased velocities around bridge openings and reduced evacuation times.	10.2.2, 34.4.3

Issues Raised	Section in EA
<b>Local Flooding and Drainage</b>	
• The ability of proposed mitigation measures such as drainage culverts to address local flooding impacts such as increased ponding times.	10.5
• Impacts on land and agricultural use resulting from the removal and/or relocation of dams on individual properties.	15.4.3
• Impacts of rainwater run-off from the proposed highway, increasing flood levels on adjacent properties.	10.3
• Impacts on surface and groundwater quality.	21.1
<b>Economic Impacts</b>	
• Fill deficit and the difficulty of sourcing the fill.	7.4.2
• Problems associated with soft soils across the floodplain and the management of these issues.	12.3.1, 12.4.1
• Severance of RLPB (Crown Land), roads and travelling stock routes and access to individual properties.	14.3, 14.5, 18.3.2, 15.3
• Impacts on prime agricultural properties, in particular dairy farms on the Macleay Valley floodplain, and changes to the current regional agricultural economies of scale.	18.3.3, 15.4.3
• Possible loss of business to the Kempsey Central Business District as a result of the highway bypassing the area.	18.3.3
• Property severance as a result of the highway alignment passing through large properties and dividing them.	18.3.2
• Property devaluation due to the proximity of properties to the proposed highway and associated impacts.	5.1, 18.3.2
• Property acquisition and compensation. The issue will require ongoing consultation between the RTA and affected landowners. Some households may need to move for social, economic or environmental reasons and feel they will suffer hardship unless the RTA consider purchase of their property prior to the Environmental Assessment Report being finalised.	15.4.2
<b>Social Impacts</b>	
• Noise and air pollution as a result of highway traffic and possible mitigation measures including noise walls, double glazing and highway pavement noise reduction techniques. Some residents expressed concern regarding the visual impact of noise walls.	6.1.5, 6.6, 16.4, 16.5, 19.3, Chapter 20
• Visual impacts from the highway and possible mitigation measures.	19.3, 19.4
• The safe design of interchanges. Concern was raised regarding the operation of the Frederickton interchange.	6.1.3
• Loss of privacy from traffic on the proposed highway for adjacent residents.	19.3
• Impacts on residents' lives from the uncertainty surrounding the project. For directly affected landowners, the attachment to their properties and homes and the uncertainty relating to ongoing maintenance, and home and land improvement plans is an issue.	18.3.2
• Disruption to residents' future retirement, business or lifestyle plans.	18.3.2
• Impacts on residents' rural lifestyles altered by the proximity to the proposed highway, including background noise impacts for those adjacent to the highway.	18.3.2, 16.4

Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Fog hazard for truck drivers over the Macleay River floodplain in the early hours of the morning.</li> </ul>	20.1
<b>Traffic and Transport</b>	Chapter 14
<ul style="list-style-type: none"> <li>Changes to local road networks and access to and from the highway interchanges formed the majority of discussion especially for those landowners adjacent to the proposed highway. Other concerns included impacts from noise and air pollution from increased traffic volumes.</li> </ul>	14.5, 16.4 20.1
<ul style="list-style-type: none"> <li>Two meetings held with Busways and Cavanaghs bus companies in May 2005 discussed existing bus service routes and potential impacts from the proposed Upgrade, bus-stop locations and turning-bay requirements.</li> </ul>	14.2.1, 14.8
<b>Highway and Urban Design</b>	
<ul style="list-style-type: none"> <li>The aesthetic design of the bridge over the Macleay River for residents in Frederickton.</li> </ul>	5.3, 6.1.4, 19.3
<ul style="list-style-type: none"> <li>Interchange locations and arrangements in terms of impacts on adjacent residences, access provisions, visual impacts, safety, and whether the town itself could be viewed or any other visual cues be provided to indicate that a town was nearby or approaching.</li> </ul>	5.1, 5.2, 5.3, 6.1, 14.5, 19.3
<ul style="list-style-type: none"> <li>Height and design of underpasses for vehicle and stock movements.</li> </ul>	6.1
<ul style="list-style-type: none"> <li>Signage and the provision for a gateway to Kempsey.</li> </ul>	6.1.7
<ul style="list-style-type: none"> <li>Noise mitigation designs and landscaping.</li> </ul>	6.3, 16.5, 19.5
<b>Safety</b>	
<ul style="list-style-type: none"> <li>Emergency turn-bays (paved) should be provided at approximately two to five kilometre intervals.</li> </ul>	6.1
<ul style="list-style-type: none"> <li>Capacity for B-Doubles to turn around is important in emergencies only.</li> </ul>	6.1
<ul style="list-style-type: none"> <li>Emergency access and turn-bays are particularly important at the northern end of the proposed highway, adjacent to forested areas.</li> </ul>	6.1
<ul style="list-style-type: none"> <li>Emergency access to both carriageways of the proposed highway is required, particularly where there is twin bridging across the floodplain for long distances.</li> </ul>	6.1
<ul style="list-style-type: none"> <li>There is a need to provide safe pedestrian and cyclist crossing points across the highway.</li> </ul>	6.1
<ul style="list-style-type: none"> <li>Emergency access to roadside areas and fire trails in forested areas.</li> </ul>	6.1
<b>Access</b>	
<ul style="list-style-type: none"> <li>Adequate access provisions such as underpasses and culverts for stock, trucks and machinery, and future land uses.</li> </ul>	6.1, Figure 14-6a-f, 15.4.6
<ul style="list-style-type: none"> <li>Access routes and interchange arrangements to and from the proposed industrial area in South Kempsey.</li> </ul>	6.6.2, 15.3.2, 15.4.4
<ul style="list-style-type: none"> <li>Emergency vehicle access to the proposed highway, in particular during flooding.</li> </ul>	13.4.3
<ul style="list-style-type: none"> <li>Potential detour routes in the event of an accident on the proposed highway.</li> </ul>	14.3
<ul style="list-style-type: none"> <li>Emergency vehicle access to fire trails to be maintained.</li> </ul>	13.4

Issues Raised	Section in EA
• Access for residents to properties – extended travel distances may result from changes to local road networks and access to the proposed highway.	14.5.3
• Disruption to access arrangements for residents and businesses during construction.	14.3

**Table C-12 Key issues raised by the precinct groups during concept design and environmental assessment phase**

Issues Raised	Section in EA
<b>South Kempsey</b>	
• Impacts on several large businesses.	18.3.3
• Impacts on future industrial sites.	3.2.3, 6.2.2, 15.3.2
• Impacts on planning for the South Kempsey area to facilitate the development of employment generating land uses.	15.3.2
• The need for easy access for trucks to existing and future industrial areas.	14.5, 6.6.2
• Safety and traffic volumes at the southern interchange.	14.4, 14.5
• Landscaping of embankments so that it is compatible with adjacent landscapes and land use and developed with input from the local community.	6.6, 19.5
• Monitoring of noise levels to meet State Government noise guidelines.	16.5, 16.1
• The type of pavement and its ability to withstand heavy vehicles.	6.1.5
<b>Crescent Head/Inches Road</b>	
• Local drainage in the Crescent Head Road area and the need for it to be maintained as close as possible to the current situation.	10.3
• Traffic safety at both the Crescent Head Road and Inches Road intersections. It was requested that the speed limit on Crescent Head Road should be reduced from 80 kilometres per hour to 60 kilometres per hour.	14.2.4
• Safe and functional access to individual properties.	14.5
• Safety regarding the location of bus stops and school bus routes.	14.2.4
• Emergency services access to the proposed Upgrade.	6.1, 13.4.3
• Local access during construction.	14.5
• Loss of flood free stock holding areas and the need to provide stock access to the proposed Upgrade, particularly during flood events.	10.5.2
• Potential for Council to rezone areas according to changed flood levels resulting from the proposed highway and the associated impacts on newly affected properties.	Chapter 15
• Impacts on residents' rural lifestyles affected by the proximity to the highway, including noise impacts.	18.3.2, 16.4
• Design and placement of noise mitigation such as noise walls and noise reduction pavement materials.	6.3, 16.5



Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Individual noise treatment of houses (double glazing of windows, air conditioning) and the need for consultation with landowners. It was noted that in a rural residential setting, double glazing is not attractive to residents.</li> </ul>	6.3, 16.5
<ul style="list-style-type: none"> <li>Impacts on residents' lives from the uncertainty surrounding the project in relation to future plans such as retirement, business or lifestyle plans.</li> </ul>	18.3.2
<ul style="list-style-type: none"> <li>Economic impacts on local businesses such as the timber recycling centre, the Kempsey Wholesale nursery, Mountain Nursery (Grandiflora Growers), Tropical Ornaments Nursery, and the Macleay Valley Nursery.</li> </ul>	18.3.3
<ul style="list-style-type: none"> <li>Concerns about local air pollution from traffic.</li> </ul>	21.1
<ul style="list-style-type: none"> <li>The loss of visual amenity as a result of vegetation clearing, views of the highway, noise barriers and other related structures.</li> </ul>	Chapter 19
<ul style="list-style-type: none"> <li>Water run-off from the highway and its potential to change drainage patterns.</li> </ul>	10.3
<ul style="list-style-type: none"> <li>Impacts on local water quality.</li> </ul>	20.1
<ul style="list-style-type: none"> <li>Potential flooding impacts on adjacent properties.</li> </ul>	10.2
<ul style="list-style-type: none"> <li>Noise and dust mitigation measures during construction.</li> </ul>	16.5, 20.1.4
<b>Frogmore</b>	
<ul style="list-style-type: none"> <li>Flood events.</li> </ul>	Chapter 10
<ul style="list-style-type: none"> <li>The aesthetic design of bridging options. Residents expressed the importance of having a bridge design that primarily addresses flooding issues rather than bridging that focused on aesthetic.</li> </ul>	6.1.4, 6.2, 19.3
<ul style="list-style-type: none"> <li>A preference to provide full bridging across the floodplain as a way of not changing flood behaviour and risk. It was also stated that will bridging would result in a design that would be more aesthetically pleasing.</li> </ul>	6.1.4, 6.2
<ul style="list-style-type: none"> <li>Criticism of proposing a highway across the floodplain where there are soft soils which will require earthworks over a longer period of time.</li> </ul>	5.3, 5.4, 12.3.1, 12.4.1
<ul style="list-style-type: none"> <li>The need to ensure that debris will not be restricted by piers during flood events.</li> </ul>	6.2, 11.4.4
<ul style="list-style-type: none"> <li>Concern that the proposed highway embankment and bridges will alter velocity of floodwater. This would restrict the area of land that can be cultivated and create more hazardous living conditions on the floodplain</li> </ul>	10.2
<ul style="list-style-type: none"> <li>Concerns that the highway will increase flooding heights and velocities downstream of the proposed Upgrade in the areas of Austral Eden, Smithtown and Gladstone.</li> </ul>	10.2
<ul style="list-style-type: none"> <li>Concerns regarding the impact of a levee at Frederickton forcing water back across the floodplain and increasing flood levels.</li> </ul>	6.2.2, 10.2
<ul style="list-style-type: none"> <li>Questions regarding increased flood levels in the Pola Creek area and the impact this would have on landowners.</li> </ul>	10.2
<ul style="list-style-type: none"> <li>Concerns regarding potential flooding impacts on prime agricultural land such as scouring, siltation and increases in water inundation)times.</li> </ul>	Chapter 10

Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Questions regarding compensation to landowners as a result of changed flooding characteristics.</li> </ul>	10.5
<ul style="list-style-type: none"> <li>Concerns that changes made to the route alignment since the route selection phase will create greater impacts on certain individual properties.</li> </ul>	4.2
<ul style="list-style-type: none"> <li>Changes to land use in affected areas especially around the bridge openings such as the use of different pasture types and limiting cropping, and on the status of organic farming practices.</li> </ul>	15.3, 15.4
<ul style="list-style-type: none"> <li>Possible rezoning of land to a higher flood risk level (due to increased flood levels and velocity) and associated insurance cost increases to landowners.</li> </ul>	Chapter 10, 15
<ul style="list-style-type: none"> <li>Measures such as stock mounds and house raising and their design.</li> </ul>	6.2.1, 10.5.2, 10.5.1
<ul style="list-style-type: none"> <li>Changes in flood behaviour and the impacts on neighbouring properties from mitigation measures such as stock mounds.</li> </ul>	10.2.1
<ul style="list-style-type: none"> <li>Stock access arrangements to South West Rocks Road and the need to consult with local residents.</li> </ul>	4.2
<ul style="list-style-type: none"> <li>Planning for culverts and stock access under the proposed Upgrade in consultation with individual landowners.</li> </ul>	6.1.4, 6.2.3, 4.2
<ul style="list-style-type: none"> <li>Concern regarding the impacts on the memorial avenue of trees along Ferry Lane.</li> </ul>	17.2.2, 17.5.2
<ul style="list-style-type: none"> <li>Emergency provisions in preparation for a flood occurring during construction.</li> </ul>	Chapter 10
<ul style="list-style-type: none"> <li>Impacts on emergency services during a flood event, including:               <ul style="list-style-type: none"> <li>access to the highway from West Kempsey, Kempsey Hospital and the airport during flood events by emergency services, including the police, fire, ambulance and SES. West Kempsey is isolated during flood events over 5 ARI. Access to Frederickton via Spooners Avenue is possible up to a 12 to 15 ARI flood event. This creates concerns regarding emergency access to the highway during major flood events which can remain open up to a 20 year ARI flood event</li> <li>the possible impacts of increased water velocities through bridge openings and how they would affect rescue boat operations</li> <li>the space beneath the undercarriage of the highway bridge during floods</li> <li>concern regarding the ability of flood modelling to accurately reflect the reality of flood.</li> </ul> </li> </ul>	10.2.1
	Chapter 6, 10
	Chapter 6, 10
	10.1, 10.2
<b>Frederickton</b>	
<ul style="list-style-type: none"> <li>fear that the levee could act as a dam, trapping water inside the levee and endangering residents' lives during floods.</li> </ul>	6.2.2
<ul style="list-style-type: none"> <li>The effects and design of the levee at Frederickton should be made in consideration of the potential impacts on the heritage values of the town.</li> </ul>	6.2., 17.4.2, 19.3
<ul style="list-style-type: none"> <li>Some residents are concerned about a reduction in the use of their land as a result of the levee.</li> </ul>	6.2.2
<ul style="list-style-type: none"> <li>Ongoing maintenance of the levee and flood gates.</li> </ul>	6.2, 8.3
<ul style="list-style-type: none"> <li>Ongoing use of the boat ramp by emergency services and recreational users.</li> </ul>	6.2.2

Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Questions regarding possible rezoning plans in relation to the change in flood behaviour in the area, especially for the residents of Lawson Street.</li> </ul>	Chapter 10, 15
<ul style="list-style-type: none"> <li>Concern about air pollution, especially considering the proximity of the proposed Upgrade to the Frederickton Public School.</li> </ul>	Chapter 20
<ul style="list-style-type: none"> <li>Concern regarding the increased water velocities in the river under the bridge opening and increased flooding levels in the Frederickton area.</li> </ul>	10.2.1
<ul style="list-style-type: none"> <li>Provision of access to Raymond's Lane, Quarry Road and Kemps Access for stock during floods. Culverts will need to be provided at low points</li> </ul>	Figure 10-7, 10.5.2
<ul style="list-style-type: none"> <li>The effect of the levee at Frederickton on floodwaters on the other side of the river (Pola Creek, Frogmore) and further downstream (Austral Eden, Smithtown).</li> </ul>	6.2.2, 10.2
<b>Collombatti</b>	
<ul style="list-style-type: none"> <li>The need for access to individual properties at Kemps Access, Seashore Lane, Raymonds Lane and Seven Hills Road.</li> </ul>	14.5.3
<ul style="list-style-type: none"> <li>Plans to provide a flood escape route for stock to Mill Lane and Kemps Access, and the closure of Raymonds Lane.</li> </ul>	10.2.2, 10.5.2
<ul style="list-style-type: none"> <li>Ongoing maintenance of service roads and local roads affected by the proposed highway. This will require further negotiation with Kempsey Shire Council.</li> </ul>	8.3
<ul style="list-style-type: none"> <li>Cattle walking onto a concrete bridge at Mill Lane and Kemps Access. If cattle were able to see over the sides of the bridge then they would be reluctant to move onto the bridge. Suggested solutions include fencing to guide stock onto the bridge and sealing the approaches to the bridge in order to condition cattle to the changed surface, and the use of solid guard rails to limit views.</li> </ul>	6.1.4, 10.5.2, Figure 15-2, 15.4.3
<ul style="list-style-type: none"> <li>Fauna movements in the local area. It was acknowledged that following field investigations and consultation with individual landholders there have been some minor realignment changes to provide better crossings of Collombatti Creek and to avoid threatened species habitat.</li> </ul>	6.1.4, 11.4.2
<ul style="list-style-type: none"> <li>Water backing up in Collombatti Creek and blocking Collombatti Road. It is currently closed for two days in wet weather.</li> </ul>	10.2
<ul style="list-style-type: none"> <li>The need for further explanation of the Collombatti Creek catchment area and the requirements for bridges over the creek and associated floodplain.</li> </ul>	10.2
<ul style="list-style-type: none"> <li>Drainage design and culverts should be used in combination with bridges across the Collombatti Creek floodplain with the goal of retaining the existing conditions as much as possible.</li> </ul>	6.1, 6.2
<ul style="list-style-type: none"> <li>The concentration of flows through culverts and the potential for scouring.</li> </ul>	10.2, 10.3, 6.1.4
<ul style="list-style-type: none"> <li>Loss of land to the RTA and the loss of income to the Seven Oaks Drainage Union. It was agreed that this is an issue for the Drainage Union to resolve with Kempsey Shire Council and the individual landowners.</li> </ul>	15.4.2, 18.3.2
<ul style="list-style-type: none"> <li>Maintenance of drainage and connectivity between creeks and waterways for both flora and fauna living in the wetland habitat.</li> </ul>	8.3, 11.3.8, 11.3.4

Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Impacts on residents' lives from the uncertainty surrounding the project and disruption to retirement, business or lifestyle plans.</li> </ul>	18.3.2
<ul style="list-style-type: none"> <li>Impacts on residents' rural lifestyles affected by the proximity to the proposed highway, including noise impacts.</li> </ul>	18.3.2, 16.4
<b>Barraganyatti/ Eungai Rail</b>	
<ul style="list-style-type: none"> <li>Changes to existing and proposed access arrangements, and associated economic impacts on the Nambucca Farmers Kitchen, a fruit and vegetable tourist outlet at Eungai Rail. The effectiveness of communications with the landowner was also raised.</li> </ul>	14.3, 14.5, 18.3.3, Chapter 4
<ul style="list-style-type: none"> <li>Access to properties on the western side of the existing highway.</li> </ul>	14.3, 14.5, 14.7, 14.8
<ul style="list-style-type: none"> <li>Impacts on dams and waterways on individual properties which are currently used for agricultural purposes.</li> </ul>	21.1
<ul style="list-style-type: none"> <li>The suitability of the local road network, and impacts resulting from its use during construction.</li> </ul>	14.2, 14.3
<ul style="list-style-type: none"> <li>Future uses of Barraganyatti Hut Road as a flood-free access road and emergency fire access.</li> </ul>	6.1.2
<ul style="list-style-type: none"> <li>Kempsey Shire Council's ability to maintain existing roads, as the network is upgraded. Stuarts Point Road was identified as not being in good condition.</li> </ul>	Chapter 6
<ul style="list-style-type: none"> <li>Impacts on residents' lives from the uncertainty surrounding the project including disruption to retirement, business or lifestyle plans.</li> </ul>	18.3.2
<ul style="list-style-type: none"> <li>Impacts on residents' rural lifestyles affected by the proximity to the proposed highway, including noise impacts.</li> </ul>	18.3.2, 16.4
<ul style="list-style-type: none"> <li>Consideration of providing street lighting on old Stuarts Point Road and Thurgood Lane. This will need to be assessed in collaboration with Kempsey Shire Council.</li> </ul>	6.1.7
<ul style="list-style-type: none"> <li>Concern regarding safety at the corner of Thurgood Lane and Stuarts Point Road, including for school buses.</li> </ul>	14.2.4
<ul style="list-style-type: none"> <li>Impacts on school bus movements and stopping points in the area.</li> </ul>	14.3, 14.5
<ul style="list-style-type: none"> <li>The need for and most suitable location for service centres along the highway. It was noted that the decisions for the provision of these facilities will be made separately to this project.</li> </ul>	18.3.3, 18.4
<ul style="list-style-type: none"> <li>The need for a rest area or truck stop in the area, due to its strategic location between Brisbane and Sydney.</li> </ul>	6.1.6
<ul style="list-style-type: none"> <li>The acquisitions process and compensation.</li> </ul>	15.4.20, 6.7.1
<ul style="list-style-type: none"> <li>Signage to establish the gateway to Scotts Head and Stuarts Point.</li> </ul>	6.1.7
<b>Eungai Rail</b>	
<ul style="list-style-type: none"> <li>Access to the existing highway.</li> </ul>	14.5

**Table C-13 Issues raised by agencies during concept design and environmental assessment phase**

Issues Raised	Section in EA
<b>Kempsey Shire Council</b>	
<ul style="list-style-type: none"> <li>The memorial avenue of trees is a significant heritage issue. Each tree was planted in honour of an individual who did not return from WWI.</li> </ul>	17.5.2, 17.4.2

Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Retention of building rights on properties that have been reduced in area by acquisition by RTA to a size that is under the threshold defined in the Local Environment Plan (LEP). Council advised that it would be looked at on a case-by-case basis and the RTA should provide Council with the information once acquisition requirements are determined.</li> </ul>	Chapter 15
<ul style="list-style-type: none"> <li>Council is developing a Master Plan for the South Kempsey area with a view to becoming an industrial area. Issues for this area include freight logistics and opportunities to tie the southern interchange arrangement in with existing rail infrastructure.</li> </ul>	15.3.2, 15.4.4
<ul style="list-style-type: none"> <li>Council's top priorities for Kempsey's future include:               <ul style="list-style-type: none"> <li>freight</li> <li>tourism</li> <li>lifestyle</li> <li>agriculture.</li> </ul> </li> </ul>	14.6 18.3.2, 18.3.3 18.3.2 15.4.3
<ul style="list-style-type: none"> <li>If B-Doubles are not able to readily use the southern interchange easily this may impact on Council's ability to develop this area as an industrial area.</li> </ul>	Chapter 6
<ul style="list-style-type: none"> <li>There is a need to establish South Kempsey and the interchange design as an attractive entrance to Kempsey. It will be considered the gateway to the town. There are plans for a tourist information centre. The southern approach needs to encourage drivers to stop and use the facilities within Kempsey and district.</li> </ul>	18.3.3
<ul style="list-style-type: none"> <li>Kempsey is a major interchange/stop-off area for truck drivers and other travellers. It is proposed that a southern interchange service centre would provide full facilities including accommodation.</li> </ul>	18.3.3
<ul style="list-style-type: none"> <li>Highway construction staging will influence the plans for service centre locations.</li> </ul>	7.3.2
<ul style="list-style-type: none"> <li>There are recent European heritage listings within Frederickton such as the school and cemetery which may affect the plans for Lawson Street, the flood levee and interchange.</li> </ul>	17.4.2
<ul style="list-style-type: none"> <li>Council flagged the possibility of closing Bingis Lane through to the quarry.</li> </ul>	15.4.5
<ul style="list-style-type: none"> <li>Cattle are primarily being trucked out of flood prone areas, as opposed to 'walked' out during flooding times.</li> </ul>	10.5.2, Figure 14-6a to f
<ul style="list-style-type: none"> <li>Impacts of the proposed levee at Frederickton on tourism potential as there are plans to develop Frederickton as a heritage village, with a focus on the Macleay River.</li> </ul>	17.4.2, 19.3
<ul style="list-style-type: none"> <li>Concerned about the range of flood velocities between 1m/s and 2m/s.</li> </ul>	10.2.1, 10.5
<ul style="list-style-type: none"> <li>Importance of flood events more frequent than the 1 in 100 year events being discussed because of their potential impacts on agriculture. These events are probably more relevant than the 1 in 100 year event to many people.</li> </ul>	10.1

Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Spooners Avenue is currently used for flood free access to Frederickton. However, it is limited by backwater at Christmas Creek during floods. State Emergency Services (SES) has expressed a concern that the increased flood immunity of the Highway will mean that it will be possible for a crash to occur on the Highway at a time that the SES would be unable to respond from West Kempsey. There would also be broader social benefits to the community resulting from an upgrade of Spooners Avenue.</li> </ul>	10.2.2
<b>State Forests</b>	
<ul style="list-style-type: none"> <li>Access is requested for forestry operations on fire trails, which also act as haulage routes. Cooks Lane, Barraganyatti Hut Road and Hills Lane are currently used for State Forest operations.</li> </ul>	Chapter 15
<b>NSW Fisheries</b>	
<ul style="list-style-type: none"> <li>Requirement for contractors to design and construct structures for a design life of 100 years tends to result in provision of scour protection to withstand a 1 in 2000 year flood event. This has the potential to substantially increase impacts on riparian zones adjacent to streams and possible provisions for fauna crossings. Mitigation for these impacts may include rehabilitation of other areas.</li> </ul>	6.1.4, 6.2, 10.5.5, 11.3.8
<ul style="list-style-type: none"> <li>Failure of gabions at Bulahdelah to Coolongolook and their use at Pola Creek and other locations was discussed.</li> </ul>	6.1.4, 6.2, 10.5.5, 11.3.8
<b>NSW Rural Fire Service and State Emergency Services</b>	
<ul style="list-style-type: none"> <li>Suggested that turn-around bays be located every 2.5 kilometres in forested areas to assist in emergency access, traffic control (turning around traffic during bushfires and other emergencies), and every 5 kilometres in other areas. The capacity for turn-around of B-Doubles is required. The locations requiring closer distances between turn-around bays are adjacent to fire-prone, forested areas.</li> </ul>	6.1.6
<ul style="list-style-type: none"> <li>Traffic delays and emergency access at Crescent Head Road during construction.</li> </ul>	14.3
<ul style="list-style-type: none"> <li>Wire rope barriers are dangerous on curves because their high tension results in a tendency for them to form a chord across the curve when a vehicle destroys the supporting posts.</li> </ul>	5.2.1, 6.6.2
<ul style="list-style-type: none"> <li>Ability for emergency vehicles to pass on bridges across the floodplain was asked. There were some options discussed (turnaround bays on embankment sections, widen bridges), but this issue is to be considered in the concept design.</li> </ul>	Chapter 13
<ul style="list-style-type: none"> <li>Establishment of access via Spooners Avenue between Kempsey and Frederickton up to the 1 in 20 flood event was seen as a desirable outcome. This would provide State Emergency Services access onto the proposed Pacific Highway at Frederickton (from their west Kempsey depot).</li> </ul>	10.2.2
<b>Rural Lands Protection Board</b>	
<ul style="list-style-type: none"> <li>Requirements across the project area for stock movement.</li> </ul>	6.1.1, 6.1.4, 10.2.2, 10.5.2, 18.3.3, 15.3, 15.4.3
<ul style="list-style-type: none"> <li>Existing cattle movement locations identified: <ul style="list-style-type: none"> <li>Pacific Highway</li> <li>Frederickton/Raymonds Lane</li> <li>Kemps Access</li> <li>South West Rocks Road</li> </ul> </li> </ul>	Chapter 6, 10

Issues Raised	Section in EA
<ul style="list-style-type: none"> <li>Requirements of stock reserve:               <ul style="list-style-type: none"> <li>access (quick access into dry paddocks)</li> <li>loading facility</li> <li>paddocks – ease of stock use</li> <li>has idea of another site further down Old Station Road</li> <li>land availability may be an issue</li> <li>buying land an issue</li> <li>72 hours of holding required before they can get out</li> <li>would prefer 1 holding (ease/practicality/1 set of stock yards required).</li> </ul> </li> </ul>	Chapter 6, 10, 15
<ul style="list-style-type: none"> <li>Health of stock (feeding, water) and disease management needs to be considered.</li> </ul>	Chapter 15, 18
<ul style="list-style-type: none"> <li>Quarantine herds exists on the flood plan (BJD – bovine johns disease) which during emergencies would contaminate RLPB stock reserves.</li> </ul>	Chapter 15, 18
<ul style="list-style-type: none"> <li>Need to have site established before construction starts, in case of flood occurring during construction.</li> </ul>	Chapter 7
<ul style="list-style-type: none"> <li>Establishment of access via Spooners Avenue between Kempsey and Frederickton up to the 1 in 20 flood event was seen as a desirable outcome. This would provide State Emergency Services access onto the proposed Pacific Highway at Frederickton (from their west Kempsey depot). The cost and practicality of this was discussed.</li> </ul>	10.2.2, 13.4.3
<ul style="list-style-type: none"> <li>The loss of flood refuge area near Inches Road. RLPB maintains that they will need to replace the lost property with a similar area. Possibilities of availability of remnant land were discussed. RLPB considers that any replacement land should be one block of land, partly so that requirements to duplicate yards etc. are avoided. Requirements across the project area for stock movement.</li> </ul>	6.1.1, 6.1.4, 10.2.2, 10.5.2, 18.3.3, 15.3, 15.4.3
<ul style="list-style-type: none"> <li>The RLPB is not eligible for compensation for the loss of the affected land as it is owned by the Crown. Compensation would be due to the Crown. Requirements of stock reserve.</li> </ul>	Chapter 6, 10, 15
<ul style="list-style-type: none"> <li>Area to be impacted by the project tends to be used by the last stock to leave the floodplain in a flood event.</li> </ul>	Chapter 6, 10
<ul style="list-style-type: none"> <li>Vertical curvature on bridges is an issue for stock movements. Stock needs to be able to see the other side. The curvature on the existing Jerseyville bridge is not conducive to use by cattle. Noted that the RLPB is not eligible for compensation for the loss of the affected land as it is owned by the Crown. Compensation would be due to the Crown. Requirements across the project area for stock movement.</li> </ul>	Chapter 6, 15
<ul style="list-style-type: none"> <li>Possible use of vegetation to assist in defining the paths to be used by cattle was discussed. The area to be impacted by the project tends to be used by the last stock to leave the floodplain in a flood event.</li> </ul>	Chapter 6
<ul style="list-style-type: none"> <li>Potential effect of concentrated stock numbers on pavements was noted and need to be considered in designing minor road pavements and drainage provisions. RLPB noted the levels of congestion on roads at the time stock will be being relocated.</li> </ul>	Chapter 6, 10
<ul style="list-style-type: none"> <li>RLPB role made harder by lot sizes decreasing and absentee farmers – increased dependence on RLPB to manage stock during flood.</li> </ul>	Chapter 6, 10, 15

