

North Nowra Concept Plan Final Statement of Commitments

The following commitments have been compiled based on the environmental assessment undertaken in the preparation of the EA Report, as outlined in **Section 22** of the EA Report, and the Response to Submissions Report. They provide a commitment by Shoalhaven City Council indicating the responsibilities and timing to implement measures to prevent potential environmental impacts that have been identified through this assessment to ensure that the project is environmentally, socially and economically sustainable, and to outline a program of works to take forward the development of the North Nowra Link Road subject to a subsequent future detailed approval for the preferred route.

It is highlighted that the Draft Statement of Commitments (provided in the EAR) referred to a future Project Application. Due to the repeal of Part 3A of the EP&A Act there will not be a future Project Application. Rather the details of the approved route option, if progressed by Council, will be subject of a development application under Part 4 of the EP&A Act, or an approval under Part 5 of the EP&A Act. This will depend on the administrative process agreed with OEH in relation to the timing of the revocation of the relevant land from the Bomaderry Creek Regional Park. In the Final Statement of Commitments the term Planning Approval has been used to represent the future approval of the design and construction planning details of the selected route.

In the Final Statement of Commitments below the commitments made relate to all three of the options (except where expressly stated) and are purposefully strengthened in consideration of Option 1 – The Central Route Option.

Subject	Commitments	Approved by Whom and Timing
General	1. The development will be carried out in accordance with this Concept Plan Application and Environmental Assessment Report, prepared by JBA Urban Planning Consultants (October 2010), and associated plans and supporting reports, as well as all other relevant legal requirements.	To be submitted as part of the Planning Approval application for the details.
Design Standards	2. All roads would be constructed in accordance with Shoalhaven City Council's Development Control Plan 100, AUSTRROADS standards (except where the Central Route Option is varied to enhance environmental protection) and approved design plans.	To be submitted as part of the Planning Approval application for the details.
Dedication of Land to Offset Revocation of Land from within the Bomaderry Creek Regional Park	3. The project will require the revocation of land from the Bomaderry Creek Regional Park which will require the bringing of a bill before the NSW Parliament by the Minister for the Environment to authorise the proposed revocation. Should the Parliament authorise the revocation of land from the Regional Park, Shoalhaven City Council is prepared to enter into an agreement with the Office of Environment and Heritage (OEH) for the dedication of Council owned lands to be incorporated into the Bomaderry Creek Regional Park. The amount of land to be dedicated will be dependent on the option built and the	The detail of the land to be dedication for offset purposes is required to be agreed prior to the bringing of the bill before the NSW Parliament. This could occur before or after an application is made for Planning Approval application for the details.

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	<p>actual amount of vegetation that will be required to be cleared from within the Regional Park resulting from the detailed design, however will be generally consistent with the following provision and will be subject to further agreement with OEH :</p> <ul style="list-style-type: none"> ▪ <u>Option 1: Central Route</u> <p>Council is prepared to dedicate Council owned land to increase the Bomaderry Creek Regional Park subject to further agreement with OEH. The land offered in reference to the Central Route is made up of the following; part of Lot 109 DP 3060 (up to 12.74 Ha), part of Lot 108 DP 131063 (4.96 Ha), Lot 27 (11.56 Ha) and 28 DP 130999 (16.52 Ha), Lot 2 in DP 817278 (2.6 Ha) and part of Lot 119 DP 751258 (4.0 Ha) which totals 50 hectares.</p> <ul style="list-style-type: none"> ▪ <u>Option 2: Southern Route</u> <p>A land area of 4.8 Ha of Council land has been resolved to be offered for dedication, however is subject to further agreement with OEH, in which it is anticipated that part of Lot 27 DP 130999 would be included in any such agreement.</p> <ul style="list-style-type: none"> ▪ <u>Option 3: Northern Route</u> <p>A land area of 13.0 Ha of Council land has been resolved to be offered for dedication, however is subject to further agreement with OEH. It is anticipated that Lot 27 (11.56 Ha) with the highest biodiversity value would be subject of any agreement.</p>	<p>Details of the actual agreed proposed offset land to be dedicated to OEH for incorporation into the Bomaderry Creek Regional Park would be detailed in the Planning Approval application for the details.</p>
Improvements to the Bomaderry Creek Regional Park	<p>Commitments 4 and 5 relate only to <u>Option 1: Central Route</u></p> <ol style="list-style-type: none"> 4. Shoalhaven City Council will design the bridge so as to maintain or improve access to the facilities within the Bomaderry Creek Regional Park, including the Bomaderry Creek walking tracks. In particular bridge footway design would include access for people with mobility impairments and will include a viewing platform and educational display. 5. Access and parking arrangements for the Bomaderry Creek Regional Park, and any complimentary upgrades to the existing picnic ground and walking trail facilities are anticipated to be agreed with OEH as part of the dedication of land to OEH for incorporation into the Bomaderry Creek Regional Park. 	<ul style="list-style-type: none"> ▪ To be submitted as part of the Planning Approval application for the details. ▪ To be submitted as part of the Planning Approval application for the details.

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Ecology	<ol style="list-style-type: none"> 6. Potential for direct and indirect project impacts on GHFF including habitat removal, noise and other disturbance related issues will be assessed in the context of State and Commonwealth requirements in the event that Option 2 is approved for detailed approval. 7. Surveys will be undertaken to determine whether hollow-bearing trees and Glossy Black Cockatoo (GBC) feed trees are being used along the chosen route option and adjacent areas to assess direct and indirect impacts. Surveys will be undertaken during the recognised breeding season for each species to determine the potential significance of these resources for GBC and Gang-gang Cockatoo (GGC). The potential for direct or indirect impacts on GBC and GGC will be assessed in accordance with the State assessment requirements. The mitigation measures proposed will reduce the severity of any potential impact on threatened cockatoos under the detailed assessment. 8. Surveys will be undertaken to determine whether hollow-bearing trees or cave habitats are being used in the gorge area along the selected option and adjacent areas to assess the potential for direct and indirect impacts in accordance with the State assessment requirements. The mitigation measures will reduce the severity of any potential impact on forest owls under the detailed assessment. 9. Habitat and targeted species surveys will be undertaken in accordance with State and Commonwealth survey guidelines to determine the likelihood of Broad-headed Snake (BHS) occurring within the development footprint and any additional areas that are likely to be affected by the proposal, either directly or indirectly. Searches of suitable sheltering sites under rocks or in crevices on westerly facing sandstone cliffs should be undertaken by day during winter. Likely detection should be supported with photographs. The potential for direct or indirect impacts on BHS will be assessed in accordance with the State and Commonwealth assessment requirements. 10. Mitigation measures proposed will be strengthened to reduce the severity of any potential impact on Brittle Midge Orchid under the detailed assessment. 11. An impact assessment will be undertaken to determine the potential for loss and recovery of the Lowland Rainforest Endangered Ecological Community (EEC) in the context of project actions and the mitigation measures proposed will reduce the likelihood of any indirect impact on Lowland Rainforest EEC under the detailed 	All additional assessments, and details of mitigation measures to be submitted as part of the Planning Approval application for the details.

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	<p>assessment.</p> <p>12. Survey for threatened microchiropteran bat species and their use of hollow-bearing trees will be undertaken throughout the study area in accordance with the assessment guidelines. An impact assessment will be undertaken to determine the potential for loss and recovery of threatened microchiropteran bats in the context of project actions and proposed mitigation measures.</p> <p>13. To manage the potential for future project actions significantly impacting on threatened entities a specific and quantitative proposal will be developed during the approval of details phase so that direct and indirect project impacts can be fully evaluated and the potential effect on threatened biodiversity and the environment be considered. Attributes of the proposal will include but not be limited to:</p> <ul style="list-style-type: none"> a) A mapped location of the route corridor approved by the Concept approval and any other additional areas required to facilitate the proposal b) Identification of all activities and actions including ancillary works and work stages; c) The duration and timing of the project including staging; and d) Details of the arrangements for relocating and or managing existing linear infrastructure e.g. powerline, water pipeline and access requirements. <p>14. The Flora and Fauna Assessment report to be prepared during the detailed phase will name, map and assess the vegetation community type to be directly and indirectly impacted by project actions and activities. The overall extent of the impact will be provided for each vegetation community under the approved option and any ancillary action or activity.</p> <p>15. To address the uncertainty around the extent of impact to the riparian corridor, a final bridge design will be provided including pylons, footings, span and installation access requirements for the approval of details. The potential for direct and indirect impact to terrestrial and aquatic ecosystems and values will be evaluated against the final design including the likelihood for river flows and fish passage to be impeded and terrestrial habitat connectivity to be severed or reduced for certain threatened species.</p> <p>16. In a broader sense the Flora and Fauna Assessment to be prepared for the approval</p>	

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	<p>of details will consider the nature, extent, frequency, duration and timing of the potential project effects in order to fully determine a set of comprehensive measures likely to avoid, minimise, mitigate and offset the potential impacts of the proposal on threatened biodiversity and habitats.</p> <p>17. The potential for habitat severance leading to local extinctions of populations of threatened species within the BCRP requires further assessment during the approval of details due to the potential for a significant impact on threatened species. The assessment will address:</p> <ul style="list-style-type: none"> a) The potential internal fragmentation effects on vegetation, specifically how during construction (and post-construction through management sub-plans) the proposal would avoid and minimise direct loss of habitat, avoid rare or threatened species through minor re-alignment opportunities and protect valuable habitat components; b) The potential internal fragmentation effects on fauna, specifically loss of habitat, and the implications for severing viable? populations in a small reserve; c) The implications/consequences of internal fragmentation of flora and fauna in the regional context of isolation; d) Assessment of the low probability of recruitment through immigration for many species i.e. Eastern pygmy possum in the regional isolation context; e) Use of a technical specialist to undertake predictive modelling to identify and quantify the potential impacts of vehicle collisions and incorporation of mitigation measures against this modelling to reduce animal and human trauma. f) Vehicle collision mortality and the implications for localised extinctions of threatened species within the study area caused by further reduction in already small population sizes eg Eastern pygmy possum and potentially Giant Burrowing Frog and Broad-headed Snake. Discussion is also required for likely impact of vehicle collision on highly mobile protected non-threatened species known to occur in the BCRP such as Swamp Wallaby and Lace Monitor; g) Consideration of the 'road effect zone' or the area over which significant ecological effects of the proposed road and its traffic, extend into the adjacent landscape and the potential incursion of pest animals and weed species in the 	

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	<p>context of local and threatened biodiversity;</p> <p>h) A detailed assessment of all measures likely to mitigate internal habitat fragmentation and recommendations of appropriate measures that have been evaluated as effective in similar circumstances (road design, geography and biodiversity values). Measures to be considered should include structural mitigation such as:</p> <ul style="list-style-type: none"> - Road design principles - Canopy bridges; - Glider poles; - Local traffic management; - Culvert crossings; - Tunnels; - Fences; - Bridge design over Bomaderry Creek <p>i) And non-structural mitigation including:</p> <ul style="list-style-type: none"> - Canopy connectivity - Micro-habitat placement to encourage movement toward crossing points; - Existing drainage lines and watercourses; and - Road management and driver education should be considered in collaboration with the RMS. <p>18. Further studies will be undertaken during approval of details for Option 1 (The Central Route Option) directly relating to the proposed measures such as predicted removal of shade trees and compensatory plantings in the context of the ecological requirements of Bomaderry Zieria to determine the likely efficacy of the measures. Some actions or activities are likely to require individual assessment such as clearing, soil and water management, herbicide treatment etc. The assessment during the approval of details will consider the implications for <i>Phytophthora cinnamomi</i> and other waterborne threats.</p>	

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	<p>19. Specific and quantitative mitigation measures to reduce the potential for the proposal to impact upon Albatross Mallee will be developed during approval of details.</p> <p>20. Further targeted surveys during approval of details using a range of techniques during optimal conditions by experienced ecologists will be undertaken to detect or further reduce the likelihood of present day occurrence of Giant Burrowing Frog (GBF). In the event that GBF is detected during approval of details surveys a shift away from the proposed emphasis on impact mitigation along Bomaderry Creek is required to ensure future management relates to north south habitat connectivity under the Central Option. In the event that GBF is detected culverts and tunnels would be included in the road design, where appropriate, to facilitate movement between habitats and consideration will be given to frog fencing to mitigate against vehicle strike and improve the efficacy of crossing or underpass structures.</p> <p>21. Verification of desktop records will be undertaken during approval of details by experienced botanists/ecologists or recognised experts with an understanding of the requirements of both species in February – March (Brittle Midge Orchid) and July-December (Hibbertia sp. Nov 'Menai') to determine the location of individuals in proximity to the approved route option. The findings of the field survey will be used to inform the assessment undertaken during approval of details for the project's potential to impact at both the species and population levels. Specific quantitative and effective mitigation measures will be proposed using the hierarchy of avoid, minimise, mitigate and offset to ensure a 'maintain or improve' biodiversity outcome is achieved for both species under the proposal.</p> <p>22. Further targeted surveys for Spotted-tailed Quoll (STQ) will be carried out throughout the study area during the approval of details phase at the level of effort recommended in the relevant State and Commonwealth survey guidelines by experienced field ecologists and using a range of accepted detection methods including:</p> <ul style="list-style-type: none"> a) Camera traps and bait stations b) Cage traps and c) Hair tubes 	

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	<p>Should STQs be detected during approval of details then specific quantitative and effective mitigation measures will be applied using the hierarchy of avoid, minimise, mitigate and offset to ensure a 'maintain or improve' biodiversity outcome is achieved for STQ under the proposal.</p> <p>STQ are susceptible to vehicle strike due to their wide ranging movements. In the event of detection within the study area specific measures would be proposed to promote connectivity across the landscape and reduce the likelihood of road mortality. Measures are likely to include fauna fencing in conjunction with underpasses such as culverts and or 1.5m furnished fauna tunnels where constructability permits</p> <p>23. Further targeted surveys for Eastern Pygmy Possum will be carried out throughout the study area at the recommended level of effort and by experienced field ecologists during the approval of details phase. A range of recommended detection methods is proposed including:</p> <ul style="list-style-type: none"> a) Arboreal camera traps and bait stations; b) Arboreal and terrestrial Elliot traps; c) Pitfall traps; and d) Spotlighting. <p>Specific quantitative and effective mitigation measures will be applied using the hierarchy of avoid, minimise, mitigate and offset to ensure a 'maintain or improve' biodiversity outcome is achieved for EPP under the proposal. EPP are susceptible to habitat fragmentation and vehicle strike and a suite of proven measures will be applied to promote habitat connectivity and reduce the risk of vehicle strike.</p> <p>24. Further targeted surveys will be undertaken during the approval of details phase in the event that option 2 is approved. A range of recommended detection methods will be used including:</p> <ul style="list-style-type: none"> a) Diurnal counts to estimate the area of occupancy of the camp between September and February; and b) Survey of the arrival and departure flyways to the maternity camp. 	

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	<p>Surveys would be undertaken by experienced field ecologists to determine the potential impact of option 2 on the species and determine quantitative and effective mitigation measures using the hierarchy of avoid, minimise, mitigate and offset to ensure a maintain or improve biodiversity outcome is achieved for GHFF under the proposal.</p> <p>If the further recommended surveys determine that GHFF are susceptible to vehicle collision and disturbance impacts under the Option 2, specific measures will be proposed to mitigate against these threats.</p> <p>25. Quantitative and effective mitigation measures using the hierarchy of avoid, minimise, mitigate and offset would be adopted to ensure a 'maintain or improve' biodiversity outcome is achieved for Yellow-bellied Glider under the proposal. Measures will include glider poles and rope bridges to facilitate movement across the road corridor.</p> <p>26. All mitigation measures and offsets will require a full review in light of the findings of the surveys and assessments undertaken during approval of details. The hierarchy of avoid, minimise, mitigate and offset will be adopted to ensure a 'maintain or improve' outcome is achieved for all threatened entities under the proposal. Mitigation measures would be proposed where it can be demonstrated that they have proven to be effective in similar circumstances. The precautionary principle will be adopted throughout the approval of details stage to promote ecologically sustainable development practices and provide certainty around impact assessment and proposed impact minimisation measures.</p> <p>Management sub-plans including a Project Environmental Management Plan that incorporates vegetation and fauna management measures and practices will be based upon the recommendations proposed in the detailed assessment to provide transparency in approach, consistency of management and continuity and transmission of project knowledge.</p> <p>27. The offset assessment would be on the determined concept alignment only, and under the limitations of current commitments by Council in relation to offset areas and may include provision of funding assistance to NPWS for investigation of a Bomaderry Zieria recovery plan. Any commitment to future funding of the offset land by Council would be on the basis on current funding availability to Council</p>	

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	<p>remaining available.</p> <p>28. Any offset package would be viewed in the context of aspiring to a 'maintained or improved' biodiversity outcome.</p>	
Aboriginal Heritage	<p>29. The design of the road will attempt, where practicable, to avoid impacts to Aboriginal sites.</p> <p>30. Where complete avoidance of an Aboriginal site is not possible then the remaining portion of the sites will be identified in the Construction Environmental Management Plan (EMP) and protected from inadvertent impact with temporary fencing along the construction boundary. No signage identifying the area as having Aboriginal significance will be erected, signage stating 'Significant Environmental Area – No Entry Permitted' will be established.</p> <p>31. In the event that Aboriginal objects (other than human remains) are encountered during construction in areas outside of previously recorded Aboriginal sites or potential archaeological deposits then work will cease and OEH and Aboriginal stakeholders will be contacted.</p> <p>32. In the event that human remains are discovered all works in the vicinity will halt and police contacted. If the remains are determined to be of Aboriginal origin and not forensic then OEH and Aboriginal stakeholders will be contacted.</p> <p>33. If any previously unidentified non-Aboriginal heritage are encountered, all works that would potentially impact the item and/or its curtilage will cease immediately. And OEH and Aboriginal stakeholders will be notified immediately. Works will not recommence until appropriate clearance has been received.</p> <p>34. Construction personnel will be educated on their obligations for Aboriginal cultural materials under the <i>National Parks and Wildlife Act 1979</i>.</p> <p>The following Commitment relates only to <u>Option 1: Central Route</u>:</p> <p>35. Any portions of sites not directly impacted (e.g. 52-5-0390) will be temporarily fenced along the construction boundary to limit inadvertent impacts.</p> <p>The following Commitment relates only to <u>Option 2: Southern Route</u></p> <p>36. If rock shelter site 52-5-0557 cannot be avoided through detailed design then</p>	To be submitted as part of the Planning Approval application for the details.

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	<p>salvage excavation will be carried out. Temporary protective fencing would be installed along the construction boundary if the site is only partially impacted.</p> <p>The following Commitment relates only to <u>Option 3: Northern Route</u></p> <p>37. If sites 52-5-0545 and 52-5-0547 cannot be avoided through detailed design then salvage excavation will be carried out. Temporary protective fencing would be installed along the construction boundary if the site is only partially impacted.</p>	
Landscape and Urban Design	<p>38. Landscape Plan will be prepared as part of the detailed design. Landscaping will aim to minimise visual impacts from private properties and will rehabilitate disturbed areas within the soonest possible time using native species.</p>	To be submitted as part of the Planning Approval application for the details.
Traffic and Transport	<p>39. Shoalhaven City Council will manage construction traffic and access to and from and adjacent to the site in accordance with an approved Construction Traffic Management Plans. In particular, temporary travel and access arrangements would be made for local business operators and local residents as required.</p> <p>40. Details of intersections with the Princes Highway will be agreed with the RMS.</p> <p>The following Commitment relates only to <u>Option 3: Northern Route</u></p> <p>41. If Option 3 is approved, Shoalhaven City Council will liaise with the RMS in relation to agreeing a suite of improvements to the Princes Highway to address the impact to the existing intersection between the Princes Highway and Cambewarra Road.</p>	To be submitted as part of the Planning Approval application for the details.
Noise	<p>42. Noise berms or walls would be designed as part of the detailed design of the road. Further noise assessment would be carried out on the detailed road design, incorporating the noise berm or wall, to demonstrate consistency with the NSW EPA's <i>Environmental Criteria for Road Traffic Noise</i>.</p> <p>43. Reasonable and feasible mitigation that seeks to achieve the construction noise objectives detailed in the Environmental Noise Control Manual (EPA 1994) will be developed and implemented during construction.</p>	<ul style="list-style-type: none"> ▪ To be submitted as part of the Planning Approval application for the details. ▪ Details to be incorporated into the Construction Environmental Management Plan.
Flooding	<p>44. The location of structures in the 1:100 Annual Recurrence Interval flood level will be minimised during detailed design. If bridge supports are required to be located in</p>	To be submitted as part of the Planning

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	the 100 year Annual Recurrence Interval flood level then a flood study will be undertaken to demonstrate that flood flows do not cause significant back stream effects.	Approval application for the details.
Soil and Water	<p>45. Stormwater from the bridge will be directed to stormwater treatment devices prior to controlled discharge into Bomaderry Creek.</p> <p>46. Soil characteristics, including possible contamination, to be confirmed as part of detailed site investigations for detailed design.</p> <p>47. A Soil and Water Management Plan will be prepared detailing strategies for the management of stormwater from the operating road. The Plan will include details of devices and management measures for stormwater detention, retention, treatment and release. The Plan will include details of:</p> <ul style="list-style-type: none"> a) Water cycle management devices to be incorporated into the project will convey storm water flows to sediment basins where initial treatment will occur before release to watercourses and flow channels. b) "Soft engineering" techniques to protect drainage channels and to dissipate stormwater flows without causing erosion that could otherwise impact on threatened flora species and their habitats. <p>48. During construction, erosion and sediment controls will be undertaken in accordance with a Construction Erosion and Sediment Control Plan.</p>	To be submitted as part of the Planning Approval application for the details.
Utilities	<p>The following Commitment relates only to <u>Option 1: Central Route</u></p> <p>49. The new bridge would incorporate the 600mm diameter water main into the structure and the existing water main would be decommissioned and removed.</p> <p>50. Shoalhaven City Council would liaise with Endeavour Energy in regards to incorporating the existing 33 kV transmission line owned by Endeavour Energy. Shoalhaven City Council would consult with Endeavour Energy to ensure the design of the road is sufficient for the existing transmission line and for any proposed upgrades to the transmission infrastructure. In partnership with Endeavour Energy, Shoalhaven City Council will investigate the feasibility of undergrounding the transmission line as part of the construction of the road in the environmentally sensitive area west of the proposed bridge for a distance of</p>	<ul style="list-style-type: none"> ▪ Incorporated into the detailed design of the bridge to be submitted as part of the Planning Approval application for the details. ▪ Details of consultations and investigations with Endeavour Energy to be submitted as part of the Planning Approval application for the details.

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	approximately 340 metres, and a short distance on the east side of Bomaderry Creek.	
Consultations	51. Open communications will be maintained with property owners, affected government agencies, the Local Aboriginal Land Council and other identified stakeholders.	Details of consultations with affected landowners and other stakeholders to be submitted as part of the Planning Approval application for the details.
Construction Environmental Management Plan	<p>52. Shoalhaven City Council will prepare and implement a Construction Management Plan for the project. The Construction Management Plan will address the following matters:</p> <ul style="list-style-type: none"> a) Provide details of proposed construction activities; b) Construction noise and vibration management; c) Potential impacts of construction activities on threatened species; d) Construction traffic, pedestrian management and any arrangements required to maintain access to properties and businesses; e) Construction waste, including investigating the use of recycled materials in construction materials, maximisation the recycling of wastes where possible; and ensuring that all waste for disposal would be removed by a licensed waste contractor and disposed of at a licensed landfill facility. f) Construction stormwater, erosion and sediment control; and g) Construction air quality (dust) management, including management measures for stockpiles, vehicle wheel washes and covering of truck loads; h) Induction and education of procedures for construction staff and visitors to the site. i) Advertising and notification procedures to advise the public of any delays or temporary inconveniences associated with works. <p>53. Construction will be undertaken in accordance with an Environmental Management System based on ISO 14001.</p>	To be submitted and approved by the Director-General and OEH prior to construction.