

COBAKI LAKES RESIDENTIAL DEVELOPMENT

RESPONSE TO SUBMISSIONS BY MEMBERS OF THE PUBLIC

Issues	Proponents Response
Flora and Fauna	
With a population of 5300 dwellings, the development will bring with it around 1000 cats which will impact on mammals, birds and reptiles. These animals are not considered in a biodiversity assessment. Domestic animals will have a strongly adverse impact on native flora and fauna.	Impacts of cats on native fauna species has been identified as a potential impact in the Ecological Assessment (JWA 2009). Cats will be prohibited from the development.
Authorities should place a restrictive covenant / condition on the development preventing the ownership of cats as pets within the community. A policy of no cats and dogs should be implemented to protect wildlife.	Cats will be prohibited from the development. Dogs will be allowed.
Environmental restoration works in all environmental protection zones and open space areas should be funded by the developer for a period of 10 years.	The proponent is committed to monitoring and maintenance of restoration areas for a minimum period of three (3) years or until specific performance criteria are met.
Impacts of stormwater (particularly freshwater) on the saltmarsh. Stormwater should not enter Cobaki Creek and Broadwater.	A detailed Stormwater Management Plan has been prepared by Gilbert & Sutherland. This SWMP will ensure that only stormwater of acceptable quality will enter Cobaki Creek and Broadwater.
Developer should commit to manage erosion restoration on Cobaki Creek bank as part of the saltmarsh restoration.	The Saltmarsh Restoration Plan (JWA 2009) allows for the planting of native species along the banks of Cobaki Creek where required/necessary.
Using Existing Use Rights (EURs) and various piecemeal consents over the decades, developers systematically set about destroying or degrading as much of the ecological value of their site as possible. These EURs include fencing, pasture improvement, fire management and maintenance of drainage channels, which often destroy local and regional fauna movement/dispersal corridors.	Opinion noted.
Isolated patches or narrow strips of habitat should be fortified through vegetation work beyond the prescribed buffer zones.	<p>The following management plans have been prepared to deal with these issues:</p> <ul style="list-style-type: none"> • Site Regeneration & Revegetation Plan (JWA 2009); • Saltmarsh Rehabilitation Plan (JWA 2009); • Freshwater Wetland Rehabilitation Plan (JWA 2009); • Fauna Management Plan (JWA 2009); • Vegetation Management Plan (JWA 2009).

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<p>Incremental loss of habitat has very significant impacts on fauna and flora through of arboreal shelter/nest sites, loss of forage habitat, loss of terrestrial shelter sites, loss of 'stepping stone' habitat patches used by more mobile species, loss of tree seed resource for natural revegetation processes and loss of genetic diversity in vegetation species. Most of these losses cannot be mitigated for in the short term (20-30 years) through revegetation. Given the current degraded state of much of the habitats remaining on site it is likely that current threatened species populations (or individuals) will no longer exist when revegetated areas reach maturity (80+ years).</p>	<p>The proposed development has been designed to utilise previously cleared portions of the site and retain nearly all presently existing bushland. The majority of the habitat features listed will be retained in-situ.</p> <p>Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha).</p>
<p>Recommend the following additional measures be included in the Fauna Management Plan:</p> <ul style="list-style-type: none"> • An ecologist must inspect all areas, not just treed areas, prior to commencement of clearing works and be present and involved in the process where displaced wildlife may be encountered. The clearing contractor / machinery operator will be required to fully co-operate with the ecologist where specific potential fauna shelter sites (PFSS) are identified. • Clearing of trees containing hollows or other PFSS have been physically examined by the ecologist and any wildlife removed using a cherry picker and chainsaw. Clearing of understorey vegetation first does not always encourage wildlife to vacate their shelter site. 	<p>A detailed Fauna Management Plan will be prepared for each stage of the development and will ensure these measures are considered where necessary.</p>
<p>Infrastructure works should be confined, wherever possible, to those parts of the site that have already been cleared of vegetation.</p>	<p>Every effort has been made to avoid native vegetation areas when designing the Concept Plan. Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha).</p>
<p>The EA does not address wildlife road related mortality. Wildlife can be prevented from accessing roads by using fauna proof fencing to direct wildlife to under and overpasses.</p>	<p>Impacts of increased vehicular traffic on native fauna species has been identified as a potential impact in the Ecological Assessment (JWA 2009). This impact will be addressed in detail for each stage-specific Fauna Management Plan.</p>
<p>Additional fauna management measures required include:</p> <ul style="list-style-type: none"> - Glider poles on both sides of any road 15m wide or more, which intersects forested habitat. - No planting of heavy nectar or seed producing species of vegetation in the vicinity (within 20m) of roads without appropriate road side screening to prevent vehicle strike with nectivorous birds, bats, gliders and seed eaters such as birds and gliders. 	<p>A detailed Fauna Management Plan will be prepared for each stage of the development and will ensure these measures are considered where necessary.</p>

Issues	Proponents Response
There is an unnecessary conflict between protection of the Scribbly Gum habitat and provision of public open space. Scribbly Gum habitat should be protected in its entirety not turned into public open space so the proponent can meet the required open space dedication.	An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.
The Scribbly Gum area would be better off if fenced and signed to prevent unnecessary human access with periodical weed control. Or divided into 2-3 sections and with an access corridor to allow human access through the area without danger of limbs falling. Fencing should allow fauna access.	As above.
The proponent's proposal to fence individual trees or groups of two or three Gums does not allow for recruitment, resulting in the loss of the entire Scribbly Gum community along with its fauna inhabitants.	As above.
Aerial photos show that areas of Scribbly Gum have been cleared illegally. The developer should be fined and required to re-establish this unique habitat.	No illegal clearing of Scribbly Gums has occurred.
Future road works will need to be sensitively planned to minimise further loss of habitat.	Every effort has been made to avoid native vegetation areas when designing the Concept Plan. Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha). All construction works will be in accordance with stage-specific Vegetation Management Plans.
The Scribbly Gum Management Plan is primarily a plan designed to allow tree removal to facilitate urban expansion. There is no consideration of the value of old-growth trees, particularly those containing hollows.	An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.
If the Scribbly Gums are a safety hazard, then they should be zoned for Environmental Protection and be managed as a conservation area. Many mature Eucalypts have disappeared in the southern part of the site.	An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.
Erecting fences and flower beds around individual Scribbly Gum trees will not allow for natural recruitment or regeneration.	An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.

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A natural holistic self-regenerating plan is needed for the Scribbly Gum community.	An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.
It is unlikely that the Scribbly Gum Community will be able to regenerate naturally and that habitat values for species (other than birds possibly) will be sustainable.	An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.
To provide forage habitat for many of the threatened species would take 50 – 150 years, as mature forest with diverse ecologies is their preferred forage habitat. Revegetation, regeneration and landscape plantings will provide no compensation or amelioration for the loss of habitat for these species.	The majority of existing habitat is being retained. Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha).
There has been no serious attempt to nurture the Eucalypt Forest / Woodland on the sandy ridge running north-south on the eastern part of the site as a natural asset or feature.	<p>These vegetation communities occur as isolated patches of vegetation surrounded by large expanses of pasture and have limited value as a natural asset or feature.</p> <p>An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.</p>
The property has been steadily degraded by deliberate mass movement of earth and heavy grazing. What remains are isolated pockets of native vegetation that cannot continue to survive by natural regeneration.	Opinion noted.
Some patches zoned for conservation will be developed, further fragmenting vegetation and creating an increased area of habitat/vegetation subject to edge effects.	No land zoned Conservation Zone will be developed.
It is believed that there is significant variation in the numbers of threatened species reported on the site within the documentation. There are likely to be higher numbers than recorded.	A detailed Vegetation Management Plan will be completed for each stage of the development. Rare plants will be an integral part of the assessment for each stage and every rare plant will be located by survey.
Water storage devices located on a knoll in the middle of the bushland habitat on the western edge of the site should be located to a less sensitive location.	The location of the water reservoir has been selected by the project engineers. Ecological matters have been considered and are not significant in this portion of the site.

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Cane toads and mosquitoes will be difficult to manage in a way that avoids damage to local native ecosystems and populations.	Cane toads will be managed by planting dense low-growing native species (e.g. <i>Lomandra</i> sp.) along the edges of lakes, wetlands etc. Mosquitoes will be controlled via a diverse range of recognised techniques utilising biodegradable substances.
Wildlife is not coping with habitat loss and changes to the environment that we subject them to. When will deforestation / development stop?	Comment noted.
The site has 72.8ha of remnant bushland. Earlier in the project it was reported that 90.49ha of remnant bushland. The developer should explain this loss.	The Ecological Assessment (JWA 2008) states that there are 90.49ha of remnant bushland on the site.
The Concept Plan claims that Plans have been prepared with due regard to the conservation of native flora and fauna and ecological communities on site, but TSC has recommended that the Applicant's Plan should be substantially amended.	The Plans have been prepared with due regard to the conservation of native flora and fauna. Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha).
Obligations apply to the Applicant with respect to the nationally threatened species, the Long-nosed Potoroo and the Wallum Sedge Frog; this has not been attended to. There is no reference in the Concept Plan to desktop studies or targeted studies for the Potoroo nor any mention of potential impacts, whether on or off site.	These species have been dealt with in the Ecological Assessment along with all other Threatened species considered a possible occurrence on or adjacent to the subject site.
Wetland migratory birds protected by International Agreements, JAMBA and CAMBA their feeding and roosting habitat sites on the neighbouring Cobaki Broadwater and bordering SEPP14 wetlands on the Cobaki Lakes have not been identified.	The Ecological Assessment (JWA 2008) considered that no significant impacts on an area of important habitat (i.e. as defined by the Commonwealth <i>Environment Protection & Biodiversity Conservation Act 1999</i>) would occur.
There is no reference in the Concept Plan to the EPBC Referrals Unit and a search of the website shows none has been submitted to date. It is our understanding that the proponents have been requested by DEWHA to refer this action. Has the proposal been referred to DEWHA?	A referral has been made to the EPBC Referrals Unit.
The Tugun Bypass EIS Species Impact Statement Addendum Feb 2005 states that the population of the Long-nosed Potoroo at Cobaki Lakes has been listed as an Endangered Population under Schedule 1 Part 2 of the Threatened Species Conservation Act 1995, yet in the flora and fauna studies in the Concept Plan, the Potoroo is not listed.	Potential impacts on the Long-nosed potoroo have been assessed in the Ecological Assessment (JWA 2008).
Further studies should be undertaken to determine the presence of the Long-nosed Potoroo population, what remedial actions should be required and how these could be meaningfully integrated with the Concept Plan.	Detailed studies have already been completed on this population as part of the Tugun Bypass EIS. The management strategies within the approved Warren, Holloway & Scotts (1994) Management Plan will be adopted.

Issues	Proponents Response
Construction of the Boyd Street Interchange with the Tugun Bypass will have a much larger footprint than the construction of the overpass. This would be a cumulative impact of construction of the Cobaki Lakes proposal and as such must be given due consideration under the EPBC Act.	The prospective interchange is not a part of this application.
Future impacts of the Concept Plan indicate that there is a need to reassess potential future impacts on species of legislative significance as a result of the construction of the interchange and appropriate mitigation measures considered.	See above.
The mapping of vegetation communities in Figure 31 does not show the relationship of the site to the Tugun Bypass and whether an interchange would impact on any of these communities.	As above
It is unclear how the ecologist has gathered information on frogs – desktop study or field study?	Methodologies utilised for all Fauna surveys are contained within Volume 2 of the Ecological Assessment (JWA 2008).
Wildlife habitat is being fragmented. It is not a workable solution for the wildlife to merely have a proportion of site as wildlife habitat. Habitat needs to be of viable size.	The site has for many decades been cleared for cattle grazing and therefore has a long history of fragmentation. Over half of the development site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha). Furthermore, wildlife corridors will be retained and/or reinstated as part of the proposed rehabilitation works.
The plans do not show areas of suitable sizes to preserve wildlife and will further contribute to the loss of ecosystems in the area.	As above.
The proposal does not appear to include an interchange in the Concept Plan for the future rail interchange. The logical site would appear to place it in an area of Environmental Protection.	The prospective interchange is not a part of this application.
There should be an adjustment of the land allocated to the various precincts in order to maintain the required ratio of developed to undeveloped areas and to provide an offset to this further loss of habitat.	The site has for many decades been cleared for cattle grazing and therefore has a long history of fragmentation. Over half of the development site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha). Furthermore, wildlife corridors will be retained and/or reinstated as part of the proposed rehabilitation works.
Object to habitat loss and fragmentation due to the development.	As above.
The Concept Plan proposes offsets and compensation only in areas with development constraints and only outside existing consents. This is contrary to the principles of best practice ecological planning and indicates little regard for the ecological values of the site.	The Concept Plan has been designed with regard for the ecological values of the site by utilising the extensively cleared portions of the subject site. Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha).

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There should be no net loss of native vegetation values.	Approximately 60.43ha of revegetation/regeneration will be completed in accordance with the Site Regeneration & Revegetation Plan (JWA 2009) to offset the loss of 6.54ha of remnant bushland. This represents a substantial net gain.
It is more ecologically appropriate and cost-effective to regenerate existing areas rather than recreating areas of habitat elsewhere. Recreation may not be successful and takes 50 to 100 years, e.g.: creation of Wallum froglet habitat.	The Site Regeneration & Revegetation Plan (JWA 2009) provides for a combination of regeneration & revegetation techniques. These techniques in combination will ensure restoration of degraded areas and offsets for any native vegetation removal.
Ecological buffers are very narrow and cannot ensure sustainability of existing remnant vegetation. APZ buffers should be compatible with ecological buffers.	<p>Vegetation communities on the subject site have been fragmented for a long time. These areas will be bolstered through regeneration and revegetation works.</p> <p>In some areas at Cobaki Lakes an ecological buffer to environment protection (EP) zones is either not possible or practical (for various reasons – largely historic) and, instead, ecological plantings at the edge of, but <i>within</i>, the EP zones will be completed to achieve the same objective. The nature and extent of such plantings will be developed on a precinct basis having regard to potential impacts of proposed adjacent development and the nature of the extant vegetation.</p> <p>An Overview Buffer Management Plan has been prepared which establishes the principles and the strategic intent of the management actions. Where required for future project applications, the proponent will prepare site or issue-specific buffer management plans detailing specific actions, the timing of commencement and completion, performance monitoring and mechanisms for corrective action. This approach is considered appropriate at Concept Plan stage.</p>
Buffer zones are inadequate. Buffers of 50m should be applied to areas of ecological conservation value. Buffers of 100m should be provided to the SEPP14 wetland.	See above
The development does not take into account the potential impact on the adjacent Cobaki Broadwater, an area of high flora and fauna biodiversity.	A detailed Stormwater Management Plan has been prepared for the subject site (Gilbert & Sutherland 2008). The conceptual planning of the urban development has followed a constraints-based approach, which recognises the sensitivity of the receiving environment within the Cobaki Broadwater among other things.

Issues	Proponents Response
Open space included in the saltmarsh area is not appropriate.	The Saltmarsh area will be dedicated to conservation after the completion of proposed restoration works.
The site internal road network will impact on areas of native flora and fauna and wildlife corridors. The extension of Boyd Street to Cobaki parkway has an extremely limited buffer to a sensitive environmental reserve adjacent.	This area is a topographical pinch-point. Buffers have been provided between the road and nearby bushland. Additionally, revegetated corridors and wildlife underpasses link large retained habitat patches on Cobaki Lakes with the adjoining sensitive SEPP 14 area.
Koalas	
Object to further removal of 10ha of Koala habitat and 22ha of bushland habitat.	The development will result in the loss of 5.15 hectares (14.3%) of "potential" Koala habitat. Detailed surveys have failed to record a resident population on the subject site. Scats (faecal pellets) have been found in low numbers and suggest that Koalas may utilise the site occasionally. Retention of the majority of suitable habitat will ensure Koalas continue to utilise the sites forage resources.
There is insufficient evidence for conclusion that the area no longer supports resident koalas. Spot assessments are not reliable or efficient for koala surveys. Line transects and quadrants should be used. The consultant's methodology is insufficient.	Recently (2009) every Koala food tree listed under Schedule 2 of SEPP 44 has been located and assessed for the presence of Koalas and/or presence of scats. Additionally, approximately twelve (12) hours of spotlighting and call playback was completed. No Koalas were recorded and low numbers of scats were recorded.
The request to remove 9.24ha of suitable habitat should not be approved.	The development will result in the loss of 5.15 hectares (14.3%) of "potential" Koala habitat. Detailed surveys have failed to record a resident population on the subject site. Scats (faecal pellets) have been found in low numbers and suggest that Koalas may utilise the site occasionally. Retention of the majority of suitable habitat will ensure Koalas continue to utilise the sites forage resources.
Recommendations from the TSC ecologist have been ignored.	All submissions have been considered.
Cobaki Lakes site contains an identified primary habitat area for koalas on the southern boundary, a secondary habitat area ranging from western to the northern boundary, and an identified koala habitat areas in the central area of the development site.	The mapping is based on a study commissioned in 1993. This study relied on the presence of tree species known to be utilised by Koalas for forage purposes. No site work was completed to verify the mapping. More recent and more detailed survey of the site has revealed that no resident Koala population occurs and that 'potential' habitat is not as extensive as originally mapped.
With the clearing of 9.24ha of known koala habitat there is a real chance and possibility that this will reduce the occupancy of a species, and will lead to a long-term decrease in the size of the koala population, as well as adversely affecting habitat critical to the survival of the species.	No resident population occurs on the site.

Issues	Proponents Response
<p>The following actions may modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the Koala species is likely to decline:</p> <ul style="list-style-type: none"> • Fencing of koala habitat in the centre of the site • The conversion of the southern portion of the development into public open space and fencing into two significant portions. 	<p>No evidence of Koala activity has been recorded in these portions of the site. "Potential" Koala habitat has been identified based on the presence of preferred food trees, however no significant impacts on the local Koala population are likely.</p>
<p>Clearing and development of the Cobaki-Terranora Regional Corridor, Piggabeen Corridor and McPherson Corridor may reduce the area of habitat for species such as the Wallum froglet and Koala.</p>	<p>Significant portions of the mapped corridors are currently clear of vegetation. Minimal additional clearing works will occur in these mapped areas as the development has been designed to utilise cleared areas where possible. Approximately 60.43ha of revegetation/regeneration will be completed in accordance with the Site Regeneration & Revegetation Plan (JWA 2009) and includes the provision of a number of local fauna corridors. Revegetated corridors and wildlife underpasses will link large retained habitat patches on Cobaki Lakes with the adjoining sensitive SEPP 14 area.</p>
<p>Concerned about the potential destruction of koala and other threatened native species' habitat, particularly in light of the massive loss of native flora and fauna in the recent Victorian bushfires.</p>	<p>The site has for many decades been cleared for cattle grazing and therefore has a long history of fragmentation. Over half of the development site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha). Furthermore, wildlife corridors will be retained and/or reinstated as part of the proposed rehabilitation works.</p>
<p>The development poses a major threat to the future of the Tweed Shire's koala population and deletes the natural koala corridor.</p>	<p>Recent detailed surveys and habitat mapping have revealed that no resident Koala population is present on the subject site. A low number of scats in the western portion of the subject site suggests that Koalas may occasionally utilise this portion of the site as they move through the locality. Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha). Furthermore, wildlife corridors will be retained and/or reinstated as part of the proposed rehabilitation works.</p>
<p>The Concept Plan states that Koala habitat will be retained and protected throughout the site, but also states that Swamp Mahoganies, a koala feed tree, are to be removed. All koala habitats should be retained, buffered and linked.</p>	<p>An isolated stand of Swamp mahogany within an area of slashed grassland will be removed from the central portion of the subject site. The removal of this small area of "potential" Koala habitat is highly unlikely to result in a significant impact on the local Koala population. No evidence of Koala activity has been recorded from this portion of the site.</p>

Issues	Proponents Response
Future road and bridge works will affect koala populations.	Over half of the site will be comprised of Environmental Protection Areas (196.5ha) and Open Space (78ha). Furthermore, wildlife corridors will be retained and/or reinstated as part of the proposed rehabilitation works.
Traffic & Access	
Insufficient access roads into the development and to Tweed Heads. The project needs more access roads, or should be reduced in size.	<p>The development incorporates a major four lane arterial road, Cobaki Parkway, which links the development to Queensland in the north via Boyd Street and a future interchange onto the Tugun Bypass and to NSW in the south via Piggabeen Road and Kennedy Drive. The development is a master planned community with chore based shopping needs, schools, community facilities and recreation facilities contained within it. There will be a reduced access requirement for this master planned estate compared to normal residential subdivisions where travel trips are required for these facilities.</p> <p>It is acknowledged that access to Tweed Heads is limited by the current capacity of Kennedy Drive, however the future traffic flows and road capacity improvements required to the Tweed road network have been comprehensively modelled and included in the Council's TRCP. Contributions will be obtained from all future development, including the Cobaki Lakes development, to fund the road capacity improvements required. The development of the Cobaki Lakes will increase traffic flows in Kennedy Drive on an incremental basis, however these increases will only occur when a bridge is constructed over Cobaki Creek and the southern portion of the Cobaki Parkway is constructed. This is not likely for another 10 years. Kennedy Drive traffic volumes have been modelled by Tweed Shire Council taking into account growth and traffic from Bilambil Heights and Cobaki Lakes.</p> <p>There is ample access capacity in the Cobaki Parkway and there is no need for other access roads or that the development should be reduced in size. A separate access to Piggabeen Road is proposed when the southern precincts of the estate are developed in approx. 10 years time.</p>

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Kennedy Drive is unsuitable for additional traffic	<p>The current capacity of Kennedy Drive is limited, however all of the road capacity improvements required in the Tweed road network to cope with future traffic flows, including the traffic flows from the Cobaki Lakes development, have been planned and modelled and will be funded through developer contributions on new developments. The Cobaki Lakes Concept Plan includes a commitment to pay all of the Council's TRCP contributions as various stages of the development are submitted for consideration and approval. In addition, the Cobaki Lakes development is situated adjacent to the NSW and Qld State borderlines. There is access to Qld and the future Boyd Street interchange onto the Tugun Bypass. This development is a master planned project which incorporates the chore based retail, schools, and recreation and community facilities within the estate. The main access to higher order facilities will be to the north; however all of the traffic flows from the development to the south have been planned and accommodated in the Council's TRCP.</p>
<ul style="list-style-type: none"> ▪ Safety concerns re traffic exiting onto Boyd Street due to children's sporting fields on street. 	<p>The Gold Coast City Council has undertaken master planning for the Boyd Street Precinct in Tugun. This Precinct Plan includes a traffic study of the existing and future traffic flows in Boyd Street. The traffic improvements proposed in the Master plan include a two lane service road in addition to the future four lane upgrading of Boyd Street. This Master Plan also includes stormwater improvements and a reconfiguration of the sports fields adjacent to Boyd Street. The safety aspects of children using the sports fields will be addressed in the upgrading of Boyd Street and the proposed service road from the Desalination Plant by the Gold Coast City Council. In addition, it will be some time (approx. 1 ½ years) before there are any traffic flows from the Cobaki Lakes development onto Boyd Street. There are a number of existing and future traffic generating developments proposed in the Tugun Boyd Street Precinct Master Plan. These include the Desalination Plant, Tugun Rail Station, Gold Coast City Council Recycling facility, the John Flynn Hospital and a number of development sites adjacent to Boyd Street. Any safety concerns from increased traffic flows in Boyd Street will be addressed by Gold Coast City Council well before there are safety concerns from traffic flows from the Cobaki Lakes development.</p>

Issues	Proponents Response
<p>Object to traffic exiting onto Boyd Street and any upgrade of Boyd Street as this will result in a loss of residential amenity. Adequate access can be provided to Piggabeen Road to Kennedy Drive to the south.</p>	<p>There are legal agreements in place for the access of Cobaki Lakes traffic onto Boyd Street, the future upgrading of Boyd Street when traffic flows reach specified levels and the upgrading of the intersection of Boyd Street and the Gold Coast Highway. The amenity issues from increased traffic in Boyd Street are being addressed in the Gold Coast City Council Tugun Boyd Street Precinct Master Plan. The future upgrading of Boyd Street to 6 lanes to provide better amenity for the residences in this locality through a separate 2 lane service road is proposed in the Boyd Street Precinct Master Plan.</p> <p>Access to the Cobaki development is being provided onto Piggabeen Road and Kennedy Drive as well as Boyd Street. There is currently insufficient capacity in Kennedy Drive for the Cobaki Lakes development traffic flows if this was the sole access.</p>
<p>With a 180 house development already under construction in Inland Drive and constant traffic to the John Flynn Hospital the whole area has insufficient capacity to handle any more traffic.</p>	<p>There are a number of other existing and future traffic generating developments which access Boyd Street. These include the Desalination Plant and its future expansion, the Tugun Rail Station and the Gold Coast City Council Recycling Facility. The Gold Coast City Council has commissioned traffic consultants GH&D to investigate the future traffic flows in Boyd Street including the Cobaki Lakes development and to advise on the options for the future upgrading of Boyd Street to 6 lanes. This will provide ample capacity in Boyd Street until the interchange onto the Tugun Bypass road is constructed.</p>
<p>Road access to Boyd Street should be denied as a new residential development should not have adverse affect on a previous residential development.</p>	<p>The concerns in this submission are addressed in previous responses to similar submissions. In addition there are currently approved development applications for similar traffic flows from the Cobaki lakes development without any reliance on the Cobaki Concept Plan.</p>
<p>Provide access on and off the Tugun by-pass so Boyd Street can be relieved of traffic proceeding north or south.</p>	<p>There are major traffic generating developments, both existing and proposed, adjacent to Boyd Street in Tugun in addition to the future traffic flows from Cobaki Lakes development. It is logical to provide the interchange as soon as possible to avoid all this traffic passing through Tugun to the Stewart Road interchange in the north and to the Kennedy Drive interchange in the south. The comments in this submission are concurred with.</p>
<p>Will seek compensation for loss of property value because of this development.</p>	<p>Intention noted.</p>

Issues	Proponents Response
Some work has begun in the Cobaki Lakes area. How can this be if the plan is still open for exhibition and comment?	The work in Cobaki lakes currently being constructed consists of bulk earthworks and road formation under existing development approvals issued by the Tweed Shire Council.
Traffic will use side streets such as Morshead Street, Monash Street and Tugun Street as shortcuts to avoid hold-ups on Boyd Street, impacting on local residents. Morshead St is narrow and is lined both sides by parked cars so two vehicles cannot pass.	There will be a new signalised intersection of Boyd Street with the Gold Coast Highway before any houses are occupied in Cobaki Lakes. This will help ensure that there is no "rat running" through residential streets. In addition, the Gold Coast City Council is proposing a separate service road for these streets. See also previous responses on Boyd Street submissions.
Construction traffic will also use Boyd Street so side streets will be used as a short cut during construction as well.	See response above.
Once operational, delivery trucks will use Boyd Street, subjecting local residents to the large trucks on local streets. Cobaki Parkway will create another short cut from Tugun to Piggabeen.	The development of Cobaki Lakes will be incremental over 20 years and the bulk earthworks for the whole development are essentially complete. The number of houses being constructed each year will depend on market demand and will vary between 250 to 350 houses per annum. Delivery trucks will use Boyd Street, however the impacts are not considered excessive. The Gold Coast City Council is planning for the upgrade of Boyd Street and to protect the amenity of the residential areas abutting this major thoroughfare. The construction of the Boyd Street interchange will enable all future traffic both to and from Cobaki Lakes to utilise the Tugun Bypass rather than Boyd Street. The construction of the Cobaki Parkway will provide access between Tugun and Piggabeen once the bridge over Cobaki Creek is constructed. This is not envisaged until approx. 10 years time. This connection road has already been approved under deeds of agreement in 1993 and they apply to the current development proposal.
On/off ramp interchange with Tugun Bypass will be used for access to the airport resulting in more traffic delays on Boyd Street.	The construction of an interchange will greatly reduce traffic movements through Tugun. Without an interchange at Boyd Street traffic will be accessing either of the interchanges at Stewart Road or Kennedy Drive by travelling through Tugun. With an interchange at Boyd Street traffic to and from the John Flynn Hospital, the future rail station, the Gold Coast Recycling Centre and the Desalination Plan will all be able to access the Tugun Bypass Motorway without travelling through Tugun. This will also apply to traffic from NSW using the Cobaki Parkway to access the Motorway either to travel to the south or to the north.

Issues	Proponents Response
	In any event Boyd Street is proposed for 6 lanes under the Gold Coast Tugun Precinct Master Plan. Traffic may use the future interchange to access the airport, however the access way to Kennedy Drive near the Tugun Bypass tunnel will provide a much faster and less congested route to the airport and is therefore likely to be the preferred traffic access.
Boyd Street be left alone or blocked off and a new road should be built from the underpass to join up with the temporary road built for the desalination plant. As such, all traffic from Cobaki would be isolated from Tugun residential traffic.	The temporary road built for the Desalination Plan is in the flight path for aeroplane landing and take-off. This road was only permitted under strict conditions with controlled access by vehicles under the direction of the flight control section of the airport. A public road with uncontrolled access would not be permitted. The temporary road is being closed and remediated and the connection to the Gold Cost Highway closed with the traffic lights removed for use by the Department of Main Roads.
Boyd Street is doing an adequate job now for what it was built for and cannot be transformed into a sub-arterial road.	The Gold Coast City Council has undertaken traffic planning for Boyd Street as part of the Tugun Boyd Street Precinct Master Plan. Under this planning an upgrade of Boyd Street to 6 lanes is proposed by making Boyd Street 4 lanes in the future and having a separate 2 lanes for a service road. There is sufficient unconstrained land to increase the width of Boyd Street.
The Deed of Agreement with Gold Coast City Council has not been updated or amended since 1993. It was appropriate then but not now.	The Deed of Agreement with Gold Coast City Council provides for legal access to Boyd Street and for the cost of upgrading to 4 lanes to be met by the Cobaki development when traffic volumes across the State Border reach a predetermined level. This traffic volume coming into Tugun via Boyd Street will reduce significantly if the proposed Boyd Street Interchange is constructed before the time the traffic volume reaches the predetermined level for upgrading Boyd Street.
Access through Tugun is unacceptable and inappropriate when the Tugun Bypass could be made accessible with an on/off ramp.	Access to Boyd Street (via the current overpass or otherwise) has always been envisaged in the planning approvals and legal agreements for the Cobaki Lakes development. The current Boyd Street Overpass bridge has been designed for a future interchange.
Widening Boyd Street would be impossible with so many residents using the street.	The existing road pavement in Boyd Street is wider than two lanes and there is ample road reserve to enable road construction with detours for road traffic at all times. There is alternative access for many residents without the use of Boyd Street.

Issues	Proponents Response
The John Flynn Hospital has increased in size and Boyd Street is used by ambulances and patients. Boyd Street has no "peak hours" and traffic will no increase (if it is left alone) as it is only used by residents and visitors to the hospital and Pacific Beach Estate. Traversing a major arterial road (Boyd Street) would be a nightmare.	There are a number of traffic generators proposed for Boyd Street. These include a future rail station, a future waste recycling facility, a future expansion of the Desalination Plan and future redevelopment areas in addition to the Pacific Beach Estate. The traffic access from NSW will also increase traffic volumes over time but will reduce significantly when the Boyd Street Interchange is constructed. There will be peaking factors in the future traffic accessing Boyd Street.
Dust from road construction would be intolerable.	All construction work would be carried out to Gold Coast City Council design standards and supervision.
Tugun Bypass was constructed to keep traffic out of the suburbs.	The Tugun Bypass has diverted a lot of through traffic away from Tugun, however the Boyd Street extension to cater for the development at Cobaki Lakes has always been envisaged since the overall development was approved in the early 1990's and this access has been ensured through Deeds of Agreement between the original proponent Calsonic P/L and the Gold Coast City Council.
Construction of Tugun Bypass created noise and dust for local residents. Do not want this situation repeated.	All construction work would be carried out to Gold Coast City Council design standards and supervision.
If residents are to travel to Tweed Heads South to use facilities, the need for a sub-arterial road through the suburbs of Tugun is unnecessary.	The Boyd Street access will carry traffic through Tugun either to access the Stewart Road interchange to the North or the Kennedy Drive interchange to the South until such time as a Boyd Street Interchange is constructed. Access to South Tweed can only be achieved via Boyd Street until such time as the Cobaki Parkway bridge is constructed over Cobaki Creek or a Boyd Street Interchange is constructed.
Boyd Street will become a 'feeder' thoroughfare for the proposed development.	The access to Tugun via Boyd Street has always been envisaged for the Cobaki Lakes development. There are existing Deeds of Agreement in place which ensures that access to Boyd Street will be available.
Tweed Shire will receive no traffic benefit or cost recovery from the existing overpass bridge until the Cobaki Parkway is completed or until public access from Piggabeen Road to Boyd Street Tugun via Sandy Lane is made trafficable.	This is correct, however the Tweed Shire Council has carried out traffic modelling for the whole Shire and included all the traffic from future developments. The outcomes of this modelling and the works required to increase road capacity have all been included in the Tweed Road Contribution Plan TRCP. These works include the Cobaki Parkway and access into Tugun via Boyd Street overpass and, eventually, an interchange onto the Tugun Bypass.

Issues	Proponents Response
<p>All DOA's may need to be updated because the location of the \$40M Boyd/Sandy Lane Interchange has changed and:</p> <ul style="list-style-type: none"> • RTA and GCCC are now additional partners in the interchange; • TSC has requested an amended DOA that reflects current negotiated position; • Qld Rail may also be involved as the extension of services from Robina to Boyd St train station is underway towards Boyd St. 	<p>Noted. However, the cost of an interchange is not presently determined.</p>
<p>Lack of consideration of a public transport terminal centre for intercity and local buses, taxi service centre, cross border shared bicycle lanes & pedestrian pathways needed to connect this remote Cobaki Lakes community.</p>	<p>A future rail station is proposed on the Gold Coast City Council side of the Boyd Street Overpass bridge. The timing of this rail extension from Robina to the Coolangatta Airport is dependent on funding, but it is anticipated as a longer term project, i.e. approx. 20 years. This rail station or the rail station at the Airport will create a public transport hub. The Concept Plan for the Cobaki development proposes a town centre area which will be ample to accommodate a bus terminal as required. In addition the distributor roads in the Cobaki development will be designed with pavement widths and gradients to accommodate school buses and public transport buses. The main arterial road through the Cobaki development will be designed for pedestrian and bicycle paths to connect with existing infrastructure in the Gold Coast City Council area. The development is proposed in precincts with an emphasis on building communities with connected walkways and bike paths and a maximum distance of 400 metres to bus stops. The provision of a public transport terminal centre is a State Government function and there is no planning for such in this locality.</p>
<p>Possible rail route through the Cobaki Lakes property to Murwillumbah should be taken into consideration. The residential estates are too large for the infrastructure in place at present, especially the road ingress and egress, nature strips for wildlife and public transportation within the Tweed LGA.</p>	<p>A rail route through Cobaki Lakes is considered to have no prospect.</p>
<p>Planned upgrades of Kennedy Drive will be insufficient.</p>	<p>The Tweed Shire Council has modelled all of the future traffic flows on the Tweed road network including Kennedy Drive and has costed all of the improvements required to increase road capacity where required in the Tweed Roads Contribution Plan (TRCP). As development occurs, including the Cobaki Lakes development, pro rata contributions will be paid to Council towards the cost of these road improvement works. The traffic modelling carried out to underpin the TRCP shows that future traffic flows can be accommodated.</p>

Issues	Proponents Response
The proposal will have a significant impact on traffic flows on Kennedy Drive. Are there any alternatives proposed and/or any upgrades proposed for this road?	The traffic build up from the Cobaki Lakes development will be incremental over a 15-20 year period. The funding of the bridge over Cobaki Creek and the construction of the southern portion of Cobaki Parkway is dependent on development contributions and is unlikely to occur within the next ten years. There will be no impact on Kennedy Drive until a southern access to Piggabeen Road is made and then there may be some reduction in traffic using Kennedy Drive as some traffic movements north to the Gold Coast will be made using the Cobaki Parkway rather than Kennedy Drive. The first stages of Cobaki will all access the Gold Coast to the north via Boyd Street and there will be no impact on Kennedy Drive.
There is no real information in the Concept Plan as to how access will be achieved to Piggabeen Road.	Access will be provided , at a presently undetermined future date, by way of a bridge over Cobaki Creek and by way of a through-road in a residential subdivision adjacent to Piggabeen Road.
The existing built environment limits opportunities for increased capacity of Kennedy Drive.	The existing built environment constraints in Kennedy Drive will be addressed by Tweed Shire Council in according with their T.R.C.P.
Agreements should be made with the proponent regarding access to Piggabeen Road and Kennedy Drive and the bridge re section 94 contributions.	All of these requirements are either included in the Tweed Road Contribution Plan or can be included in conditions of development approvals.
Social & Environmental Impacts	
The extent of insufficient detail in so many areas of the Concept Plan makes it extremely difficult for proper assessment / surety of proper outcomes.	The adequacy of the application for public exhibition was determined by the Department of Planning. Sufficient information will be provided through the future assessment process to enable proper consideration of all applications.
Tweed Shire is currently being overwhelmed be unsuitable events and enormous projects requiring a lot more expert consideration and time than they are receiving. The social and environmental impacts will be enormous, traffic medical and policing issues are already unviable.	The application procedure and assessment process is in accordance with State policy.
Tweed community is currently overwhelmed by DAs currently before the Minister. We are deeply concerned that the Minister may not be aware of the full impact of these proposals on the existing community, or in the future of the Tweed Shire.	These concerns are matters for the Minister.
Maintenance of biodiversity is even more essential now in the face of the huge loss of wildlife in recent national flood and fire disasters.	Assessment will be in accordance with State policy.

Issues	Proponents Response
Satellite cities at Kings Forest and Cobaki are too large for any lay person, and most experts, to be able to make a reasonable assessment.	Assessment will be in accordance with State policy.
Strongly object to unsustainable, rapid overdevelopment which is simply designed to line individual developer's pockets and overwhelm local communities.	Noted.
Concerned about the social and psychological impact on the Tweed community. These developments are simply too large, extensive and intrusive for the existing community to be able to adapt without huge and high detrimental impact.	Noted.
With such a large development under the control of a single developer, concerns must be raised as to what happens if the development were to collapse financially.	Noted.
The process of increasing residential development needs to be an ongoing step and not a huge chunk, like Kings Forest and Cobaki because: <ul style="list-style-type: none"> - At present the Tweed Shire population is more than 50% retirees, ultimately resulting in an increase in property sales due to morbidity. - If the properties are sold, then why is there a need for 10,000 new homes? 	The planning approvals process is in accordance with State policy.
Support issues raised in Tweed Shire Council's submission.	Noted.
Due to apparent shortcomings in the Concept Plan the proposal should be refused until all the issues have been addressed.	Assessment will be in accordance with State policy.
Utilities Infrastructure	
Any new West Tweed Heads sewage treatment plant should be built in the Piggabeen/Cobaki Valley to service the 14,000 person Cobaki Lakes subdivision, the proposed Terranora Golf Club subdivision and other new West Tweed residential developments.	The location of sewage treatment plants and the operation of them is a function of the Tweed Shire Council. The Tweed Shire Council has advised the sewage discharge point for the sewage flows from Cobaki Lakes and the treatment works and infrastructure upgrading required will be funded through S64 Contributions from future development approvals within Cobaki Lakes. The Tweed Shire Council has a 30 year Water Supply and Sewerage Strategy that includes the servicing of Cobaki Lakes. It should be noted that all sewage treatment plants need licenses to discharge to receiving waters when reuse is not possible. It is highly unlikely that a license to discharge to the Cobaki Creek or Cobaki Broadwater would ever be obtained.

Issues	Proponents Response
The second STP now being planned for the Terranora Inlet should be built in the Cobaki Lakes Concept Plan to enable economic reuse of reclaimed treated water and to improve the ecosystem health of the Terranora/Cobaki Inlet.	Sewer and water infrastructure will be provided in accordance with Tweed Shire Council requirements.
Taking the ecosystem health of the Terranora Inlet into consideration, Council's claim that reclaimable wastewater to be uneconomical is a biased point of view favouring Council when it stands to make a profit from a readily available source of drinking water, even though the water supply from the Upper Tweed and Oxley Rivers might be unsustainable in future years because of warming climate change.	Sewer and water infrastructure will be provided in accordance with Tweed Shire Council requirements.
Council staff has raised concerns about the future water supply and sewage treatment capabilities. These issues need to be addressed.	As above.
The Tweed already suffers an acute lack of infrastructure as a result of the influx of ill-considered development approved by Council.	All of the internal infrastructure needed to service the Cobaki Lakes development will be constructed and paid for by the developer. All of the impacts of the development on external infrastructure will be paid for via S94 and S64 Contributions. This includes road, water, sewerage and community infrastructure.
Our water catchment is simply not capable of providing water for the proposed population increase inherent as a result of the development.	The provision of water has been planned and provided for by Tweed Shire Council.
Concerned about impact of increased population on infrastructure and services, including emergency services, telecommunications, sporting facilities, roads and traffic.	The provision of all required services and amenities has been taken into consideration.
Rezoning	
Proposed rezonings do not adequately protect the ecological values of the site.	Some isolated and/or degraded areas of EEC are proposed to be removed as a result of rezoning. The process of avoid, mitigate, compensate has been utilised in the assessment and offsets will be provided where appropriate. The level of significance of any loss of EEC's has been assessed by using the provision of Section 5a of the TSC ACT (1995) (7-part test). Conversely, some rezoning of residential land to conservation is proposed for consolidation of habitat, revegetation of degraded areas and creation of wildlife corridors.
Scribbly Gum area should be retained as a reserve. Rehabilitation, restoration and maintenance of this reserve should be paid for by the developer for a minimum of 10 years.	An off-site offset is proposed for the removal of Scribbly gums from the Cobaki Lakes site. The Scribbly gum community will be managed in accordance with an approved Scribbly gum Management Plan until such time that the off-site offset has become established to the satisfaction of DECC.

Issues	Proponents Response
Saltmarsh area should be rezoned to 7(a) Environmental Protection and dedicated to Council after a developer funded rehabilitation and maintenance program of 10 years.	The Saltmarsh area will be dedicated to conservation after the completion of proposed restoration works.
Object to any rezoning of Environmental Protection Zones given the little remaining habitat of value to threatened and other fauna species on site.	Noted.
Do not agree with applicant's claim that the proposed refinements to the zone boundaries will provide better environmental and urban outcomes consistent with State planning strategies, policies and instruments.	Noted.
While many of the areas proposed to be rezoned are justified on the basis of previous consents, the applicant should submit their rezoning request in the upcoming review of the TSC LEP 2000, soon to be exhibited.	The rezoning proposal can properly be considered as part of the present Application.
The report from Council's ecologist has been ignored by the Applicant.	All submissions have been considered.
Rezoning should not result in clearing or reduction of EECs or threatened species and their habitats, particularly when all EECs proposed to be cleared will not be adequately compensated for.	<p>There will be no net loss of any EEC recorded on the subject site. Proposed offsets combining regeneration of degraded areas and revegetation works are as follows:</p> <ul style="list-style-type: none"> • Swamp sclerophyll forest on floodplain – 4.02:1 • Lowland rainforest on floodplain – 4.59:0 (no loss proposed) • Freshwater wetland –it is considered that the replacement of 26.45ha of highly degraded wetland with a minimum of 8.89ha of regenerated wetland which will be protected in perpetuity is a reasonable ecological outcome in this instance) • Swamp oak floodplain forest – 23.3:1 • Saltmarsh – 1.08:1 (The entire 53.98ha hectares of Saltmarsh is currently degraded due to grazing activities and exotic grasses, and will be subject to restoration works). <p>In total, there will be a net gain of 13.14ha of EEC vegetation communities on the site.</p>
Areas of most concern are Areas 2, 3, 4, 6 and 16. Boundary adjustments should be made only when they increase the ecological value of the most environmentally sensitive or restrictive zones as per Clause 52 of the Tweed LEP 2000.	Some isolated and/or degraded areas of EEC are proposed to be removed as a result of rezoning. The process of avoid, mitigate, compensate has been utilised in the assessment and offsets will be provided where appropriate. The level of significance of any loss of EEC's has been assessed by using the provision of Section 5a of the TSC ACT (1995) (7-part test).

Issues	Proponents Response
	<p>Conversely, some rezoning of residential land to conservation is proposed for consolidation of habitat, revegetation of degraded areas and creation of wildlife corridors.</p> <p>Clause 52 of Tweed LEP 2000, as it applies here, provides that the zone line must be fixed so that it “achieves the primary objective of the most environmentally sensitive or restrictive of the zone lines involved.”</p>
<p>Concept Plan identifies numerous areas to be managed primarily for nature conservation. Many areas are zoned for recreation or urban expansion. These should be rezoned to an Environmental Protection zoning.</p>	<p>Opinion noted.</p>
<p>Areas that should be rezoned for Environmental Protection include, the Scribbly Gum Reserve, all EECs, all remnant bushland, habitat rehabilitation and management precincts, all areas east of the Cobaki Parkway, saltmarsh area, all riparian areas along Cobaki Creek and other drainage lines, koala habitat and EEC offset areas.</p>	<p>The rezoning proposals reflect careful consideration of all areas and further consultation with DECC and DoP.</p>
<p>Bushfire</p>	
<p>Asset protection zones should be on private land and not impact on environment protection zones.</p>	<p>Noted.</p>
<p>Endorse Council’s submission that the Bushfire Assessment provides no detail on how the requirements of PBP 2006 will be achieved. With no detailed road layout available or a clear indication of APZ locations, discussion of necessity is limited. In addition, none of the measures listed in the assessment and recommended by PBP are identified for adoption.</p>	<p>The development will comply with Planning for Bushfire 2006.</p>
<p>Attention needs to be paid to bush fire planning.</p>	<p>Noted.</p>
<p>Buffers between the development site and adjoining lands must be of maximum adequacy. The priority in this regard is bushfire risk.</p>	<p>Noted.</p>
<p>Acid Sulfate Soils</p>	
<p>As a result of past experience of bad practice of stormwater drainage of disturbed soils from the Cobaki Lakes site, it is recommended that monitoring tests be undertaken every three months and after heavy rain by an independent consultant. Points along Dunn’s Drain and at the discharge point should be considered as monitoring points.</p>	<p>Officers of Tweed Shire Council and other statutory authorities or their consultants would be welcome to access the site to conduct monitoring, which would be in addition to the monitoring committed to by the proponent.</p>

Issues	Proponents Response
<p>Further consideration should be given to the feasibility of excavating lakes in areas of ASS, given the acidification that has occurred as a result of the construction of the Tugun Bypass.</p>	<p>The constructed lakes are intended to be perched above the level of ASS to minimise disturbance of ASS and interaction with groundwater and the associated management issues.</p> <p>The construction of the Tugun bypass involved large scale excavation of ASS and dewatering for a prolonged period to facilitate the construction of the tunnel.</p> <p>The extent of the disturbance for the Tugun bypass was vastly greater than any of the works required to facilitate the development of the Cobaki Lakes site in accordance with the concept plan.</p>
<p>Information for the proposed construction of the central lake system and management of ASS and dewatering is inadequate.</p>	<p>Sufficient information has been provided to allow an assessment of the concept plan. As discussed above, the central lake system has been reduced in scale and construction techniques minimising disturbance of ASS will be adopted.</p> <p>Dewatering in areas of Acid Sulfate Soils will be avoided wherever possible to prevent the oxidation of acid sulfate soils. Where dewatering is necessary for the provision of essential infrastructure, impacts will be avoided through the implementation of a dewatering management plan which will address any acidification of groundwater and mobilisation of potentially harmful metal species.</p> <p>Any disturbance of acid sulfate soils will be carefully managed in accordance with the acid sulfate soil management plan, which is based on current best practice.</p> <p>Providing additional assessment is undertaken where necessary to support the detailed design of infrastructure, prior to operational works, and management strategies are planned in the light of this data, the prevention of impacts to receiving waters is achievable.</p>
<p>Climate Change</p>	
<p>There will be delayed access to residential lots in times of heavy rain events. Erosion from fill sites may cause sedimentation of the Cobaki Broadwater.</p>	<p>All roads will be designed and constructed with the level of flood immunity necessary to meet Tweed Shire Council's minimum requirements. Detailed modelling which incorporates high range sea level rise predictions, is currently in progress and this will inform the design of the road network.</p>

Issues	Proponents Response
	<p>Erosion and sedimentation control will be undertaken in accordance with current best practice management and the requirements for controls will be documented in erosion and sedimentation control plans which will be submitted in support of operational works applications.</p> <p>There will not be any delayed access to residential lots in times of heavy rain events. Erosion controls are in place on the fill sites and most of the filling work is already completed.</p>
<p>Climate change allowing for a 0.91m local sea level rise by 2100 has not been adequately taken into account, particularly in relation to access to Cobaki Lakes and access on flood prone roads within the Concept Plan.</p>	<p>Climate change has been taken into account. The design level of the access roads will be in accordance with Tweed Shire Council and Gold Coast City Council requirements.</p>
<p>Filling of such large area combined with sea level rise could have a devastating affect on both the environment and people.</p>	<p>The impacts of filling, flooding and climate change have been assessed and there will be minimal impacts on the environment or future residents in this development.</p>
<p>The proposal will involve considerable filling of the floodplain. Assessment must consider the most recent data with more accurate information accounting for increased sea levels and intense rainfall events.</p>	<p>In terms of local drainage, the local catchment is confined and does not extend significantly beyond the site. Drainage corridors have been reserved in the concept plan and these will be refined at the detailed design stage. During detailed design, testing will be undertaken to estimate potential impacts of up to 30% higher rainfall intensities due to possible upper limit climate change. It is not expected that the local drainage will significantly affect the regional flood levels (Cobaki Creek and Tweed River). Local flood modelling will need to be undertaken to inform the development's drainage design and final fill levels. This has been commenced and will use as a base the recently revised, more detailed modelling prepared for Council.</p>
<p>Stormwater Management</p>	
<p>The Stormwater Concept Plan proposes a series of treatment train options in accordance with the principles of WSUD to manage the impacts of the development and improve the quality of stormwater runoff into Cobaki Broadwater with significantly reduced suspended sediment and nutrient loads, but detailed plans have not been provided.</p>	<p>The application of TSC's D7 provisions would ensure that for developed catchments totalling 330ha there will be a minimum of 8.25ha of stormwater treatment devices available. For the operational phase, we have demonstrated that adequate areas are available to generally comply with TSC's current guidelines.</p>

Issues	Proponents Response
	The level of detail provided was adequate for the formulation of the stormwater strategy to inform the Concept Plan. However, it is accepted that more detailed survey and design will be required for individual catchments at each development application stage.
There is insufficient information to comment on the third lake proposal said to have salt water storage. The environmental impact of salt water discharging 2km downstream from this source in Dunn's Drain to the proposed manual sluice gate discharge point on Cobaki Creek is unknown.	There is no third lake proposed. It is now intended that the lakes will contain saline water to minimise water quality impacts and the maintenance burden to Council. The precise form of the gates, weirs or other structures discharging to the saline environment within Cobaki Creek will be the subject of detailed design and approval, after consultation with Council and Department of Primary Industries.
The Concept Plan does not adequately explain how the proposed stormwater drainage system will drain approximately 593.5ha of land and manage the impacts of development and improve the quality of stormwater runoff discharges from the site into Cobaki Creek/Broadwater with significantly reduced suspended sediment and nutrient loads.	The level of detail necessary to demonstrate that adequate water quality treatment can be achieved, should not necessarily form part of the Concept Plan. Compliance with Council's guidelines should be sufficient to achieve these objectives and the concept plan demonstrates that there is adequate area available to comply with TSC's D7 provisions.
Swales discharging into sensitive environmental protection areas are of real concern and require a thorough scientific assessment.	<p>The intent of discharging pre-treated stormwater into the open space area (which includes areas of saltmarsh) is twofold. Having discussed the proposal and inspected the site with Tweed Shire Council, an opportunity was identified to restore the former contribution of the site to the Cobaki Broadwater's fishery by reinstating and enhancing the conditions that existed prior to the agricultural use of the site. The diffuse discharge of stormwater would deliver nutrients to the saltmarsh and wetland areas, maximising its productivity. Simultaneously, the removal of nutrients from the stormwater before delivery to groundwater, Cobaki Creek or the broadwater, would minimise any potential water quality impacts to the broadwater.</p> <p>The delivery of stormwater during rainfall events will be intermittent and ephemeral. It is understood that providing saline groundwater is present and that the existing tidal regime is maintained, saltmarsh will maintain its competitive advantage and dominate, regardless of the delivery of stormwater during rainfall events.</p>

Issues	Proponents Response
	Providing careful balancing of the tidal exchange structures is undertaken, continued tidal influence in the saltmarsh areas will ensure the viability of the EEC. The detailed design of saltmarsh management, revegetation and rehabilitation works will involve cooperation between ecologists and engineers to ensure these objectives are achieved.
Urban Design	
Why are allotment sizes so small?	A wide range of housing choice is proposed with different size allotments and housing types depending upon market demands. Most of the housing product is for integrated housing which enables average size houses and private open space areas to be provided on smaller allotments through zero lot construction. Smaller allotments enable lower costs to be achieved and for higher density residential development to occur closer to services and facilities. Smaller lots are necessary to meet the Department Of Planning's planning objective of 25 dwellings per hectare. A high standard of urban design is proposed for the housing on these smaller lots as detailed in the Cobaki Development Code.
Concerned about lots less than 450sqm.	As above.
Do not support reduced lot sizes to 125sqm or an increase in heights above 3 storeys as this will have a visual impact on the surrounding rural / high conservation area.	There is no increase in height proposed in the Concept Plan.
Design codes should be developed as part of the Concept Plan.	The Cobaki Development Code has been prepared and Included in the PPR. A detailed comparison with the NSW Housing Code has also been provided.
Strategic Context	
Without a population plan for Tweed the proposal fails to meet sustainability requirements.	The future population of the Tweed is addressed in the Far North Coast Regional Strategy. Some of the predicted population growth for the Tweed includes the future development of Cobaki Lakes. The future population of the Cobaki Lakes development has been planned for in the Tweed LEP and relevant planning and infrastructure reports for the last 20 years.
Object on the grounds of increased population growth and its affects on the wider community and environment.	Noted.

Issues	Proponents Response
The region has existing issues regarding loss of rail service, stressed hospital system, known traffic black spots, tenuous water supply and the effects of climate change.	The provision of services and amenities is planned.
The population is increasing because of these large scale developments. The developer is the driver of population growth.	Housing supply responds to demand.
Concerned that the new houses will give little consideration for energy conservation.	All new houses will be required to comply with BASIX which addresses solar orientation, insulation, water saving etc.
The policy of growth is making a mockery of any talk of reducing carbon emissions and threats of climate change.	Opinion noted.
Off-Site Impacts	
Buffers adjoining agricultural land should be established at 250m.	The buffers committed to in the Concept Plan application are consistent with Tweed Shire Council's Development Control Plan (DCP) Section A5 Subdivision Manual which recommends an 80m buffer (including a 30m biological buffer) where pesticides are not applied by aircraft, and a 30m buffer to grazing land. The majority of the agricultural land that adjoins the site is suitable only for grazing, and grazing is the only activity being undertaken on a commercial scale on the adjoining agricultural land.
Concerned with section of development near Sandy Lane and the boundary facing Piggabeen Road.	Concerns about access to Piggabeen Road and screening along Piggabeen Road are matters which may be resolved as part of future project applications, when further detail on subdivision layout is prepared.
If houses are backed up to the boundary with no screening, future owners may put in gates to allow access to Piggabeen Road.	This is a management issue which can readily be addressed at the detailed design or project application stage, by the use of screens, fencing or bollards.
Existing issues with maintenance of Piggabeen Road.	Noted.
Propose a wildlife corridor running along boundary facing Piggabeen Road. This would mean moving the section of residential development 50 to 100m north, providing some screening for existing residents on Piggabeen Road from the development and will assist in retaining wildlife.	Wildlife corridors are assessed in the environmental reports for the development.
Consultation	
The development may take unintended advantage of the cross-border/jurisdictional geographic position.	Opinion noted.

Issues	Proponents Response
<p>The NSW community consultation process for major projects does not appear to have adequately included adjacent communities and interest groups in Queensland.</p>	<p>The proponent invited, by print media advertising and by written correspondence, adjacent communities and interest groups in Queensland to consult with it during the exhibition period.</p>
<p>S94 Contributions</p>	
<p>The Cobaki Lakes development will impact adversely on Tweed Shire's s94 fund and future expenditure on infrastructure and cause hardship to a ratepayer community that is not affluent.</p>	<p>The Cobaki development will pay all of the relevant S94 contributions for the infrastructure needed to service the Cobaki community. These funds will be collected by the Tweed Shire Council as the various stages of development are commenced. In most aspects the development is self contained with schools, retailing, recreation and sports fields, community facilities and service industries. There will be no hardship on the existing community and indeed the increased ratepayer base will assist Council in meeting shirewide maintenance costs as the development will be low maintenance for many years.</p>
<p>Tweed Shire's contribution funds for sewage treatment remain inadequate to meet the environmental requirements for water quality.</p>	<p>The Tweed Shire Council has adopted a Water and Sewage Strategy to itemise and cost all the improvements and augmentations required for water and sewerage infrastructure to cope with the growth from future population growth and meet its legal and statutory obligations.</p>
<p>There is likely to be additional adverse impact upon the water quality of the reported "stressed" Cobaki Broadwater and "sick" Terranora Inlet of the Tweed River.</p>	<p>The environmental discharge standards for treated wastewater are determined on the quality of the receiving water with ongoing monitoring, reporting and review. The Tweed Shire Council has legal and statutory obligations in relation to its discharge of treated wastewater.</p>
<p>The future of the current main public road (Sandy Lane) connecting Piggabeen Valley to Old needs to be taken into consideration for future traffic and other Tweed Shire development requirements.</p>	<p>The future traffic needs for the whole of the Tweed Shire including the Cobaki Lakes development and Piggabeen Valley have been modelled and all the road improvements required to meet future traffic demands have been included in the Tweed Shire Council TRCP.</p>

Issues	Proponents Response
	All of the future subdivision approvals for Cobaki Lakes will require road improvement contributions in accordance with the Tweed TRCP. The developer of Cobaki Lakes has included a commitment to meet all of the relevant S94 contributions required by Tweed Shire Council in the Concept Plan Application. The consideration of future traffic and road capacity has been included in the Tweed TRCP and will apply to this application.
Concerned about State government policy to reduce s94 contributions across NSW. Tweed already has a significant lack of amenities and needed infrastructure.	The State Government policy to reduce S94 contributions has been amended. The Tweed Shire Council S94 policies will apply to this development.
This approval will reduce the local government income by as much as \$200M plus over the next 15 years.	The development of Cobaki Lakes would increase the rate income of Tweed Shire Council significantly over the next 15 years. All of the rate revenue from new lots within the Cobaki Lakes estate would go to the Tweed Shire Council. Furthermore all of the infrastructure constructed within Cobaki Lakes will be relatively new and low maintenance compared with the older developed areas of the Tweed. This will result in higher revenue being available for shire wide works within Tweed Shire Council.
Developers will not reduce their land price because they have paid fewer contributions. It is more likely that it will result in rate increases.	Opinion noted.
As both sites (Cobaki & Kings Forest) are owned by LEDA , they will be able to maintain high land prices by never meeting demand.	Opinion noted.
Mosquito Management	
Fencing should be constructed immediately to restrict cattle from entering wetland areas in the proposed environmental area between Cobaki Parkway and the SEPP14 wetland to remove mosquito breeding habitat.	Fencing will be provided as an initial measure.
The development is placing residents in dangerously close proximity of mosquitoes, yet the success of the management program cannot be guaranteed due to is extensive area and unresolved resource issues.	The management of the mosquito problem will be comprehensive and measures adopted over time to ensure the best possible outcome.
Concerned about accumulation of poisons (from spraying) on the environment. Mosquito is an integral part of the ecosystem and human interference may be devastating.	The use of any such measures is controlled under the mosquito development plan.

Issues	Proponents Response
ESD	
The proposal is unsustainable and unacceptable.	The concept plan involves the development of less than 330 hectares in a site of almost 595 hectares, which is a development footprint of only 55%. Large areas of the site will be retained for their various environmental and ecological values and considerable effort has been expended designing a concept which protects these values both on and off the site.
There is an opportunity to adopt the true principles of ESD through the conservation and ecologically sustainable use of our natural resources. Decision making processes should effectively integrate both long/short term economic/environmental/social and equitable considerations.	The Cobaki Lakes development is based on the principles of ESD.
Public Transport	
A public transport plan and planning for walkable neighbourhoods is needed.	This issue has already been addressed in the response to public transport and school bus routes. The various stages of the development will be submitted to Tweed Shire Council for assessment. There is requirement in the TSC DCP Subdivision Manual A5 to comply with their public transport policy. The walking distance maps have been amended to include the public transport routes.
Aboriginal Heritage	
The Executive Summary of the EA understates the considerable significance of past Aboriginal Cultural Heritage of land that surrounds the Cobaki Broadwater.	The region's significance is addressed in the Cultural Heritage Assessment.
When the Concept Plan was being developed, local Aboriginal community groups were not adequately engaged.	Extensive consultation has been undertaken and is continuing in accordance with the DECC guidelines.
Massive earthworks have already been wiped out unknown history of ancient Aboriginal occupation.	Opinion noted.
Areas within the Concept Plan have not been subject to adequate geomorphic and geological assessment.	A geomorphologist has inspected the site and agrees with the Cultural Heritage consultant's geomorphic interpretations.
Undisturbed areas in the environmental areas of the Concept Plan have not been surveyed for Aboriginal Cultural Heritage and therefore the Aboriginal history of the subject area has not been adequately documented.	These areas are Included in the draft Cultural Heritage Management Plan and will be addressed in the final Plan .

Issues	Proponents Response
Without an adequate Aboriginal Cultural Heritage survey and study of all land neighbouring this Concept Plan, it is unlikely that the indications or understanding of the connectivity of Aboriginal landscape of sites will be fully recognised.	The Cultural Heritage consultant has undertaken a study of other regional assessments. This was used to inform the predictive modelling for the excavation strategy.
Community Services	
Provisions for a library should be reconsidered as the distance for disadvantaged students to make use of a modern electronic library is too far away.	The development matrix allows for a library and other community facilities in the town centre precinct.
Employment Lands	
The development intends to be self-sufficient. What employment opportunities exist?	There will be substantial employment opportunities within the development in the retail, commercial, restaurant & community service areas. This land is also located in close proximity to major employment land in the Coolangatta Airport precinct and in the industrial land immediately south of the Coolangatta Airport in Tweed Shire Council.

Letters of Support

Issues	Proponents Response
General	
<ul style="list-style-type: none"> ▪ Strongly support 	Noted.

Other

Issues	Proponents Response
Traffic & Access	
The proposal does not recognise the location of the desalination plant.	The proponent commits to consulting with the desalination plant authority with respect to road works at Boyd Street..
<ul style="list-style-type: none"> ▪ In order to maintain plant operations, the GCD Alliance requires continuous inbound and outbound plant site access at Boyd Street. The plant site access must be to a standard accommodating B-double vehicle access. 	The future upgrading of Boyd Street will not be required if the Boyd Street interchange is constructed. Any upgrading of Boyd Street from the traffic volume coming along the Cobaki Parkway into Tugun will only occur in at least 10 years time and then only if the interchange with the Tugun Bypass is not constructed. However, should the upgrading of Boyd Street be required to be upgraded by Leda then consultation will be undertaken with the GCD Alliance and other stakeholders before any construction work is commenced.
LEDA should consult with GCD Alliance prior to developing or undertaking any proposed road upgrade works on Boyd Street at Tugun.	Consultation will be undertaken with GCD Alliance and other affected stakeholders prior to any road upgrade works on Boyd Street from Inland Drive to the Gold Coast Highway.
LEDA should give recognition to the location and access requirements of the Plant in its Response to Submissions.	The responses above address this issue.
Town houses on corner of Boyd Street and Inland Drive will be most affected in terms of traffic and noise.	<p>The traffic volume on Boyd Street from the Cobaki Lakes development will only increase incrementally as the traffic from 150-250 homes become occupied each year.</p> <p>There are considerable existing traffic generators on Boyd Street from the GCD Alliance, the John Flynn Hospital, the waste recycling plant, town house development etc. In addition, the land opposite these town houses is proposed for future Tugun Rail Station. There is an obvious need for an interchange to be constructed to take all of the traffic out of Tugun and allow access on and off the Tugun Bypass. The Boyd Street overpass bridge has been constructed and designed for the future interchange. With the interchange constructed there will be minimal traffic from the Cobaki Parkway coming into Tugun.</p>
Consideration should be given to install an interchange with the Tugun Bypass at Boyd Street. If there is no interchange, consideration should be given to sound proofing the townhouses on the corner of Inland Drive and Boyd Street.	The early construction of an interchange would benefit many residents in Tugun, however, the sound proofing of the townhouses would be a matter to be determined by Gold Coast City Council. The cost of such a project would have to be funded on an equitable basis which may be difficult given that most of the noise and traffic generating uses are already operating.

Issues	Proponents Response
Utilities Infrastructure	
TEDC research confirms it is no longer acceptable to provide ADSL or ADSL2 copper access to new subdivisions.	The benefit of fibre optic cabling for communication is acknowledged, however, there are many new technologies evolving in this area. The Federal Government has approved a major infrastructure project to deliver fibre optic cabling throughout Australia. This would include any major urban release areas such as Cobaki Lakes.
There is an urgent and critical requirement to provide the infrastructure necessary to deliver optic fibre as part of the basic upfront infrastructure for all new developments.	This issue is addressed in the response above. It is envisaged that the communication cabling for Cobaki Lakes will be optic fibre.
It is recommended that a condition be attached to any consent for Cobaki Lakes requiring the proponent to provide optic fibre cabling for communication purposes throughout the proposed subdivision, to service each of the lots in the proposed subdivision.	This issue is addressed in the response above.
Proposal should elaborate on Tugun Desal negotiations given that Energex and the QLD Minister for Mines and Energy has assured the Energex Community Reference Group that the Mudgeeraba to Tugun 100kv upgrade will not feed the Cobaki Lakes development in any substantial way. This position is at odds with the description - "negotiating a major linkage".	The Cobaki Lakes development will be serviced by Country Energy and a new sub station site is being constructed on a parcel of land adjacent to the intersection of Cobaki Parkway and Piggabeen Road.
Public Transport	
The proposal does not address public transport or anything to do with school bus routes into, through and out of the development.	The Cobaki Lakes development has been designed so that buses can traverse all of the arterial and collector roads in the site. The residential areas within the estate will all comply with the Tweed Shire Council's public transport policy where 90% of residences will be within 400 metres straight line distance of a bus route.
Off-Site Impacts	
The project does not impact adversely on housing issues in Queensland.	The housing within Cobaki Lakes will complement the housing in Queensland and given the wide range of housing types and lot sizes will assist in providing more affordable housing.
Emergency Services Infrastructure	
The EA does not identify that the development would be likely to increase the demands for emergency services.	Emergency services are provided on a regional basis and the population growth within the region determines the increase in services required. The Cobaki Lakes development has been designated for urban development in the Far North Coast Regional Strategy and all of the State Government agencies had input into this regional strategy.

Issues	Proponents Response
	The additional State Government infrastructure needed to service this growth was listed in the Strategy.
Should the Cobaki Lakes project be approved in the form proposed it will have a significant impact on the ability to deliver appropriate urban fire services to that area.	The Cobaki Lakes development will comply with Planning for Bushfire 2006 and other fire regulations. The form of the development will not impact on the ability to deliver fire services.
Development of the scale proposed would require a change to the delivery of urban fire services in the area to ensure an appropriate and equitable standard of fire cover. This may require the construction of a new Fire Station in the area.	If a new Fire Station is required in the area there is suitable land within the mixed use area of the town centre. The development will only proceed incrementally over a 15-20 year period and the requirement for a new Fires Station would only become apparent in time.
As the development would primarily trigger the need for this upgrade of services, the proponents should identify and dedicate an appropriate site for a new Fire Station as part of their infrastructure contributions. The exact location of any new fire station would be the subject of further service delivery assessments and negotiations as and when required.	The dedication of land for a new Fire station is not a reasonable and relevant requirement given the uncertainty that a new station is required and that the exact location would be the subject of further service delivery assessments and negotiations. Land for regional services is usually purchased by the service provider after detailed studies have been carried out on the location and environmental advantages and disadvantages for different site options.