

KINGS FOREST CONCEPT PLAN

RESPONSE TO SUBMISSIONS FROM THE PUBLIC

Prepared by Project 28 Pty Ltd

ISSUES	PROPONENTS RESPONSE
Koalas	
Koalas not sufficiently protected in proposal. Proposal impacts on last remaining koala habitat on Tweed Coast and contributes to the cumulative impacts of development on koalas in the Tweed Coast area.	The proposals have been framed by one of the most highly accredited Koala experts in Australia, who not only considers Koalas sufficiently protected by them, but that the prospects for the survival and growth of the local population are enhanced.
Impact on tourism flow-in to the area if 'Koala Coast' koala population lost. Potential conflict between bushfire APZ and remaining koala feed trees.	There is no such conflict.
Restoration and recovery plan needed for koala on-site. Proposal not consistent with NSW Recovery Plan for the Koala, especially North Coast population.	KPoM is consistent with the then extant Draft NSW Recovery Plan – not clear what aspect of the final Recovery Plan contains the inconsistency
Sub. #615 argues Koalas and their habitat are a matter of National Environmental Significance under the EPBC Act 1999.	The Koala has been consistently excluded from listing under EPBC Act – status currently under review but determination will not occur prior to September 2010 and would probably require changes to the Act to be listed.
Koalas have intrinsic value that should be preserved.	Agreed
Habitat	
Loss, fragmentation and threat to koala habitat from – dogs and cats, humans, 4-lane road running through wildlife areas, multi-purpose buffers not specifically preserved for koalas (e.g. golf course, cycleways) vehicles, major residential area and business park.	The proposals for the protection of Koalas have been framed by one of the most highly accredited Koala experts in Australia, who considers Koalas sufficiently protected by them.
Preserve all 'core koala habitat' (as defined in SEPP 44) including small outliers.	All "Core Koala Habitat" as identified by Phillips and verified by Sainty is preserved.
Site of known importance to local koala sub-population. Cudgen system supports numerous koalas and links with another important sub-population to the south in the Round Mountain-Pottsville area.	Agreed
Impact of proposed 4-lane road on koala passage. Provide engineering solutions to solve koala vs. traffic issues. Suggests rethink of access road i.e. redesign of Depot Rd to accommodate wildlife passage as is done in other countries.	The road will remain 2-lane for at least 10 years after commencement of development, by which time Koala habitat South of Depot Road will be advanced – situation needs to be re-evaluated at that time – opportunity for alternative solutions should be preserved – traffic management options generally more effective than engineered structures The road will incorporate speed control limiting speeds to 50 kph at strategic crossing points suitably signed and illuminated in accordance with the Koala Plan of Management recommendations.

ISSUES	PROPONENTS RESPONSE
Koala corridor should be very large and not cut by roads.	False premise about what a “corridor” is – the whole idea of maintaining permeability of the site is to achieve this functionally – an effective linkage for Koalas does not have to be closely spaced continuous vegetation – it is high speed / high volume roads that are the problem, not residential streets or generally low speed main roads
Displacement of wildlife and threat to koala population from marginalisation leading to local extinction (e.g. as has happened in Sydney)	The Management Plan is intended to prevent adverse impacts on Koala habitat that still exists on King’s Forest and actually improve overall Koala habitat values.
Social alienation of koala groups caused by fragmentation. Loss of linkages with other populations means a lack of external recruitment for breeding and poses a significant threat to the population health in the next 50 years.	Unclear what is meant by “Social alienation” – no objective evidence for complex social dynamics in Koalas (in contrast to e.g. higher primates or many canids). However, whilst fragmentation is very damaging to the population dynamics of Koalas, past agricultural and residential / commercial development to the North and West of Kings Forest (and the ocean to the East) mean that the only existing population interchange is to the South; this linkage is preserved / enhanced in the proposal.
Cudgen Paddock should be allowed to regenerate to support Scribbly Gum and Swamp Mahogany woodland habitat. Fragmentation of habitat causes disruption to seasonal foraging.	The zonings were settled by the SEPP (Major Development) 2005 (Amendment No 10). The current extent of fragmentation has existed for many years, so any effects will have already occurred; proposal (of which KPOM forms part) will improve connectivity / reduce fragmentation.
Halt development until habitat is viable. This will address the lag time before habitat is regenerated. Core koala habitat should be increased and established over 10 years. Sites <i>Gerroa Environment Protection Society Inc vs. Minister for Planning and Cleary Bros (Bombo) Pty Ltd</i> [2008] NSWLEC 173 and NSWLEC 254 as a legal precedents.	All Core Koala Habitat will be retained and additional habitat will established early in development process.
Direct Threats	
Urban interface impacts on threatened koala population. Protect koalas by scaling back development.	Whatever the size of the development, there will always be an “urban interface” – KPOM (see Attachment L) sets out process to manage any impacts.
Exclude dog and cat ownership by covenant on title. Allow only small dogs (< 7kg)?	Cats are excluded, whilst dogs are to be controlled as per KPOM .
Construction effects on koalas not managed. Short term impacts to koalas are unacceptable. Will result in high mortality and therefore does not justify net gain of core koala habitat.	Such vegetation clearing as is required is limited and the Revised Vegetation Management Plan (Attachment J) requires measures to avoid direct impacts during clearing. The size of site and sequencing of any required clearing will mean Koalas can respond to any short term disturbance – since no Core Koala Habitat is to be cleared, there is a low probability of Koalas being present in vegetation that will be cleared (much of it being non-native or non-tree) – nonetheless protocols will ensure that in the unlikely event that a Koala is present, it will not be injured and will be allowed to move elsewhere on the site of its own volition – as with workplace health and safety measures, etc. this is a process of risk management.

ISSUES	PROPONENTS RESPONSE
<p>Threat of disease will increase for a fragmented population and must be taken into account for local koala population, particularly retrovirus, leukaemia and chlamydia. A smaller population is more susceptible to such a threat.</p>	<p>Degree of fragmentation of the site will be improved, not worsened, by the proposed form of development. In any case, the issue of disease has certainly been taken into account – there seems to be a misunderstanding here regarding the difference between <u>infection</u> (presence of a microorganism that potentially can become a pathogen) and <u>disease</u> (actually getting sick) – virtually all koalas (apart from the artificial island populations in Victoria and South Australia) are infected with both chlamydia and koala retrovirus – however, in many populations (including Kings Forest) there are few or no clinical signs of disease – where infectious disease prevalence is non-zero, the vast majority of conditions (90 + %) are due to chlamydia; with leukaemia and other cancers accounting for 1% to 5% of infectious disease (i.e. about 0.3% to 1.5% of mortality).</p>
<p>Airborne threat from carcinogenic pesticides/herbicides sprayed around golf course.</p>	<p>The Golf Course MP deals with this issue.</p>
<p>Koala Plan of Management</p>	
<p>Koala Plan of Management (KPoM) inadequate (and lacking in sufficient detail) to maintain viability of koala population. Plan must propose mitigation measures that will achieve maintenance of threatened fauna populations.</p>	<p>The approach of the KPoM (Attachment L) for Kings Forest is outcomes / performance based – it commits the developer to achieving specific outcomes rather than attempting to micromanage the process through being unnecessarily prescriptive.</p>
<p>KPoM does nothing to control natural behaviour of koalas from encroaching, therefore plan unworkable.</p>	<p>To some extent encroachment by koalas on the development area is what is intended, in that, whilst undesirable / not cost effective to try to establish additional carrying capacity within the residential / commercial component of the development (“attracting” Koalas into the urban component is not proposed), any Koalas that find their way into these areas (likely to be an uncommon event) must be able to pass through with minimised hazard (e.g. from dogs or cars).</p>
<p>Monitoring of Koala Beach Plan of Management has revealed a local reduction despite the best measures put in place. Kings Forest plan is deficient in comparison, and in some places appears to be factually incorrect (see Sub. #103).</p>	<p>The proponent’s Koala expert is unaware of published, peer reviewed reports of the objective evaluation of the Koala Beach development and the effectiveness of its KPoM, so it is unclear what the basis is for the assertion that it constitutes “best practice”. However, there is believed to be a fundamental difference between the Koala Beach development and the Kings Forest proposal; my understanding is that Koala Beach resulted in a net loss of Koala habitat (and thus carrying capacity), thus it was inevitable that there would be a reduction in the local Koala population; in stark contrast the Kings Forest proposal will result in a net GAIN in carrying capacity. The Kings Forest KPoM is a more holistic approach that is predicted to be superior in terms of outcomes for the local Koala population – the assertion that the KPoM is “factually incorrect” “in places” is not sustainable; the inadequacies of the KPoM alleged in submission 103 (105?) are based on misinterpretation of parts of the KPoM coupled with reliance on anecdotal and unsupported claims or “conventional wisdom” / truisms that are actually untrue or just not supported by objective evidence.</p>

ISSUES	PROPONENTS RESPONSE
Proposed measures not sufficient to provide for safe koala passage. Further measures could include: radio tracking, identification of significant trees, koala fencing and underpasses.	home ranges are not fixed; radiotracking is important as part of the monitoring program prescribed in the KPoM; “significant trees” (i.e. browse and shelter) certainly need to be preserved not just identified, BUT there is no evidence for the existence of “ranging trees”; indeed there is considerable evidence to the contrary – the form of fencing proposed by the submission is completely inappropriate, the KPoM requires fencing that will permit movement by Koalas but NOT dogs – underpasses are not the most appropriate solution to traffic issues for Koalas at Kings Forest (but provision for possible retrofitting should be preserved), the submitter refers to anecdotal reports that underpasses in the area are used by Koalas but no factual data on how often, etc. are provided to allow evaluation of effectiveness, in contrast observations elsewhere indicate that structures of the type installed under the Tweed Coast Road are rarely used by Koalas.
Enforcement provisions of KPoM not clear. E.g. a strictly no cat or dog provisions: must be on a leash, staying inside etc... be provided via covenant.	Enforcement provisions are clarified in the Koala Management Plan.
5-year Koala Habitat Monitoring Program: baseline information gathering <u>must be done prior to development</u> NOT post-development	As articulated in the KPoM there is more than adequate baseline information for production of the KPoM – however, a vital element of the KPoM is acquisition of robust data to inform adaptive management of Kings Forest’s Koalas (as I believe is clear in the context of the KPoM); the monitoring program needs to be scientifically defensible (unlike the absent or inadequate monitoring of the outcomes of other developments), thus <i>a baseline for the monitoring program</i> needs to be established in proximity to the commencement of the actual site works and can only be devised properly once the overall form of the development has been determined.
Plan does not adequately address short term impacts i.e. removal of vegetation.	There will be no removal of Core Koala Habitat and the KPoM addresses a “risk management approach” to removal of other vegetation (in conjunction to progressive development of the site), including the establishment of new habitat areas early in the development process.
Vehicle issue not addressed in Plan. Vehicle speed control measures in place for other developments not effective e.g. impacts of urban development on Hawks Nest koala population.	The vehicle issue is comprehensively addressed in the KPoM. There is ample evidence that Koala injury and mortality is negligible on roads where posted vehicle speed is 60 kph or less so assertion that reduced vehicle speed does not “work” is wrong.
Dog fencing may also restrict koala movement (unintended consequence).	The KPoM specifically addresses the requirement for fencing to be dog proof but Koala permeable; other than to exclude Koalas (and other animals and people) from imminent hazard e.g. electrical installations or potentially for directional fencing if engineered road crossings are subsequently constructed.
Ecology/Biodiversity	
Not ecologically sustainable development. Proposal in its current form will have a significant impact on threatened fauna, coastal wetlands, and threatened ecological communities	A range of management plans sets out the means for the development to be ecologically sustainable.

ISSUES	PROPOSERS RESPONSE
Proposed site is an environmentally sensitive area. Sections of Kings Forest and Cudgen Nature reserve (the Cudgen system) form the most important natural area remaining on the Tweed Coast for long-term maintenance of biodiversity.	Agreed.
World Heritage area. Breach of EPBC Act 1999 as endangered species are significantly impacted. Identified in Sub #615 and 1126 – koala, Southern Swamp Orchid, Stinking Cryptocarya, Olungburra Frog, Grey-headed Flying fox, Long-nosed Potoroo are threatened species under this Act. 7-part test applied in detail and argued that there is a real chance and possibility of adverse effects on all species listed, site has unequivocally high conservation values.	World Heritage area - not listed. Koala – not listed. Long-nosed Potoroo – don't occur. There is no requirement for 7-part test under the EPBC Act.
Major urban expansion in and adjacent to an environmentally sensitive area. New population may not be environmentally aware. Increased pollution.	The zonings have been settled by the SEPP (Major Development) 2005 (Amendment No 10). Buffers to environmentally sensitive areas to be provided and managed in accordance with Buffer Management Plans. New residences provided with educational material.
Impact of introduced/exotic species will place massive strain on local ecosystem. Not adequately addressed in Feral Animal Management Plan.	Proposals in all management plans, in combination, provide adequately for possible impacts.
Site contains significant remnant coastal biodiversity (variously listed as being comprised of 6 threatened flora spp. 21 threatened fauna spp., 3 endangered ecological communities, 9 broad vegetation communities, 243 flora spp., 21 amphibian spp., 22 reptile spp., 125 bird spp., 31 mammal spp.).	Agreed.
Agricultural drains within the SEPP 14 wetlands should not be allowed to be manually rehabilitated due to the potential impact on Threatened Species.	Presently lawfully maintained under Existing Use Rights. Maintenance in perpetuity will be essential. No significant effect on threatened species. Report by Sainty & Associates recommends annual maintenance on the basis of potential ecological benefit.
Sub. #145 refers to additional ecological studies on the area and sites these as identifying the environmental importance of the site.	All environmentally sensitive areas have been zoned appropriately.
Much of site heavily scarred already from activities undertaken by previous owners/occupiers e.g. rock extraction, earth movement, drainage and vegetation clearing; leaving small, disconnected populations that have a reduced ability to replenish themselves.	No rock extraction, earthmoving or draining works has occurred. The vegetation clearing that has occurred was lawful under Existing Use Rights.
Long-term maintenance of environmental commitments is not provided for e.g. bush regeneration. Commitments appear to be tokenistic.	Revised Vegetation Management Plan (Attachment J) & Revised Weed Management Plan (Attachment I) includes monitoring/maintenance for 5 years. Detail will be provided at Project Approval/Development Approval stage.
Flora	
Long term degradation of areas of retained vegetation from human visitation and disturbance, encroachment, bushfire and weed invasion.	The Buffer Management Plan (Attachment G), Bushfire Management Plan and other management plans deal with these issues.
Changed hydrology and loss of water quality will impact on swamp sclerophyll and sedgeland/heathland communities inducing potential for indirect impacts on surrounds.	Hydrological impacts will be managed to ensure that peak discharge from the site reflects the pre-developed scenario. Tweed Shire Council's Development Design Specification D5 – Stormwater Drainage Design specifically requires the provision of on-site detention to ensure that discharge does not exceed the

ISSUES	PROPONENTS RESPONSE
	<p>capacity of the downstream system and that downstream landholders are not adversely impacted.</p> <p>Potential decline in water quality will be managed by the implementation of the Integrated Water Cycle Management Strategy (IWCMS). The IWCMS proposes a treatment train approach to stormwater quality control, incorporating water sensitive urban design (WSUD) which has the capacity to treat water leaving the site to a quality which is on average comparable to, or better than, the pre-development scenario. As such, water quality related impacts to the receiving environments will be negligible.</p> <p>The Integrated Water Cycle Management Strategy (IWCMS) demonstrates that water quality objectives can be achieved with indicative areas shown on the plans presented in the Environmental Assessment Report.</p> <p>Whilst each precinct, stage and road will require detailed design to be completed, should insufficient water quality treatment area be available to achieve the water quality objectives, then development land would be consumed to</p> <ul style="list-style-type: none"> a) provide sufficient treatment area and b) reduce the pollutant load. <p>Sufficient area is available for such purposes.</p> <p>The IWCMS maximizes infiltration into the sand and substrate. The Site Based Management Plan attached to the concept plan extensively details the construction and operational phase provisions that will ensure any influence on the quality of receiving waters is benign. The extent of the ecological buffers will ensure that direct or indirect impacts are either prevented or fully ameliorated.</p>
Ecologically valuable heathland in the southern section of the site will be severely impacted by the residential development, roads, and golf course development.	Development is only proposed on the areas zoned for urban development, much of this currently under pasture improvement and grazing in accordance with development approval. Assessment of impacts of development has been undertaken.
Weed infestations from nearby households.	Relevant Management plans deal with this.
Rehabilitation of riparian zones and no net loss of vegetation on-site required.	Relevant Management plans deal with this.
Vegetation Management Plan (VMP) inadequate: sets no targets, provides no monitoring, future vegetation introductions not considered. Monitoring should be undertaken by a third party and a bond used to ensure compliance. Landscape concept plan and VMP prepared in isolation of each other e.g. Scribbly Gum tree population threatened by removal and being fenced off and planted around. Thus not allowing natural regeneration, effectively becoming a 'tree museum'.	Site specific Vegetation Management Plans (and other relevant plans) to be submitted in support of each application for stages of development will provide the required detail.

ISSUES	PROPONENTS RESPONSE
Fauna	
Threat to wildlife primarily from habitat destruction. Fragmentation will result in slow loss of biodiversity, habitat value and increase stress on native fauna populations.	Most areas contained within development envelope have existing use rights for cattle grazing & forestry. High value vegetation confirmed by Sainty, preserved by Environment Protection zoning. No significant habitat destruction results from the proposal.
Reduced opportunities for fauna dispersal, esp. for ground dwelling mammals. Proposal must include provision for passage ways/corridor for all fauna across all roads to maintain connection between Environmental Protection Zones.	A major emphasis of the KPoM is to maintain and enhance permeability of the site for Koalas - as previously discussed there is an inherent false premise about what a "corridor" is for Koalas – the whole idea of maintaining permeability of the site is to achieve this functionally – an effective linkage for Koalas does <u>not</u> necessarily have to be closely spaced continuous vegetation – it is high speed / high volume roads that are the problem, <u>not</u> residential streets or generally low speed main roads. The proposal makes adequate provision for linkages including road crossings for fauna generally.
Off-site impacts – Cudgen Nature Reserve likely to become unviable for threatened and conservation priority fauna species.	Assessment of development impacts has been undertaken and relevant Management Plans apply.
Threat to wallum froglet, other endangered frogs, black footed swamp wallaby, white crowned snake, bush-stone curlew and long nosed Potoroo habitat. Restoration and recovery plans are needed.	The Revised Threatened Species Management Plan (Attachment K) addresses the species known to occur on site
Increase in need for control of biting midges and mosquitoes.	Council entomologist has advised there is no significant problem with biting midges or mosquitoes at Kings Forest.
Draft Threatened Species Management Plan is not adequate for Long Nosed Potoroo.	Long Nosed Potoroo does not occur on the site
Stormwater runoff and peak flood events: Urbanisation will direct stormwater runoff into narrower systems creating flashflooding and events that are highly detrimental to the survival of species.	Tweed Shire Council's Development Design Specification D5 – Stormwater Drainage Design specifically requires the provision of on-site detention to ensure that discharge does not exceed the capacity of the downstream system and that downstream landholders are not adversely impacted. There is abundant area on the site for the construction of the necessary detention devices and these will be used in conjunction with the proposed stormwater treatment train which utilise infiltration devices and in turn minimise the amount of surface flow discharging from the site. The low gradient of the site and sandy nature of the soils means that a relatively high proportion of stormwater will infiltrate. Even with an increase in the impervious surface, stormwater quantity and quality management will be designed to take advantage of these properties of the site and it is likely that there will be no significant change to surface runoff from the site. Proper design will ensure that flash flooding does not occur.
The effect of light and noise pollution on wildlife has not been considered.	Buffers to be provided to all environmental protection areas. Effect of light and noise, amongst other issues, will be considered in site-specific Buffer Management Plans.

ISSUES	PROPONENTS RESPONSE
Wildlife Corridors	
Protect ecological values by ensuring connectivity of habitat – concept plan does not do this. Concerned about impact of southern part of development which creates an interruption to the east – west wildlife corridor. Road corridor will have significant impact on wildlife populations. Redesign to provide greater linkages and connectivity for wildlife.	Appropriate fauna linkages and road crossings are provided for in the Concept Plan.
Impact of construction and operation of southern connector road to Cudgen Paddock south has not been appropriately addressed. All impacts - direct, indirect, during construction and post-construction should be fully considered at the concept plan stage. Has significant impact on wetlands, swamp sclerophyll forest EEC, and other fauna. Has particular impact on fauna passage due to obstruction of dispersal of species, and threat from traffic strike.	This impact has now been assessed – see Attachment E
No habitat compensation for loss of corridors	There is no loss of corridors.
Any urban development should not be commenced until all of the vegetation linkages and habitat replenishment are well established.	This requirement is unrealistic. Impacts of all development have been considered in the relevant management plans.
Conservation	
Apart from Area 1, all requested re-zonings from environmental protection to urban expansion apply to bushland areas with koala and other threatened species habitat value. In comparison, all proposals to rezone land from urban expansion to environmental protection are largely cleared and of low value. Conservation of threatened species identified is not properly addressed e.g. Swamp Sclerophyll forest (EEC), swamp mahogany, and heathland.	The rezoning proposal has been revised and is entirely reasonable. The proposal is supported by the Department of Environment and Climate Change.
Preserve whole of Kings Forest site for koala habitat.	Zonings have been resolved by SEPP (Major Development) 2005 (Amendment No 10).
Proposed Environmental Protection Areas fragmented by development. Leading to increased edge effects and invasion of exotic species. Development adjacent can lead to diminution of values of reserve. Impacts of pedestrian use will be significant. Pedestrian use is a secondary use to the principal purpose of nature reserves.	Zonings have been resolved by SEPP (Major Development) 2005 (Amendment No 10).
Footprint of southern connector road not considered in calculation of net gain of land for environmental protection.	The impact of these roads have now been assessed (see Attachment 7) The area of land to be rezoned to Environmental Protection in accordance with the revised rezoning proposals, compared to the nominal area proposed to be rezoned for urban purposes, is considered itself to adequately compensate for such impact.
Information presented does not recognise the inherent relationship that's exists between groundwater, surface drainage, and the site's conservation values.	The groundwater assessment and management plan was based on the development of a groundwater model. The model was designed based on the existing site topography, with the existing drainage systems and surface water features being fundamental inputs to the model. Various scenarios were modelled to identify surface and groundwater management strategies which

ISSUES	PROPONENTS RESPONSE
	would maintain groundwater levels (pre-development to post-development) within the natural range of variation experienced at the site during the period of ground monitoring. The modelling indicates that development of the site in accordance with the concept plan will not change the groundwater regime and consequently it is expected that there will be no adverse affect on the site's conservation values that are dependent on groundwater.
All areas marked for environmental protection should be dedicated to National Parks and Wildlife Service (NPWS).	Approximately 150 ha to be dedicated to DECC, currently negotiating with Council position on the remaining land to be dedicated.
Correction to EEC mapping in Appendix G (Figure 3a) to include more land as intended by Australian Koala Foundation mapping.	Zonings have been resolved by SEPP (Major Development) 2005 (Amendment No 10).
Increased maintenance burden on NPWS. Suggests covenant and management plan with regular compliance monitoring. Ensure residents pay an 'environmental levy' for maintenance costs that goes to NPWS.	DECC have not requested that residents pay an environmental levy.
Environmental restoration works on site to be funded by developer for a minimum of 10 years	The restoration works will be maintained for 5 years which is ample for restoration.
Statement of commitments does not currently include land zoned for environmental protection to be dedicated to Tweed Shire Council.	This is addressed in section 5 of the PPR.
Management regime for additional nature reserve area (150 ha.) unclear, particularly with regard to clearance of vegetation for stormwater management.	The site has abundant area available for the management of stormwater within the cleared portion of the site. It is not proposed, nor necessary to clear any vegetation within the area proposed to be dedicated for nature reserve. Maintenance of existing drains may be necessary to ensure that the conveyance of stormwater continues in its current capacity, however this would be undertaken on the basis of existing use rights or with approval from the appropriate authorities and would not involve clearing of any vegetation.
Increase size of southern environmental protection zone to include whole of Cudgen Paddock – therefore no need for road and larger area preserved for habitat. Provide public education area at northern end of Cudgen Paddock to increase awareness.	Zoning resolved by SEPP (Major Development) 2005 (Amendment No 10).
Transport	
Traffic	
Local roads not sufficient to cope with traffic generated by an extra 10,000 people e.g. Duranbah Road.	Veitch Lister Consulting (VLC) has undertaken a comprehensive assessment of the Tweed Shire Council's (TSC's) road network. The study includes taking into consideration traffic impacts from the Kings Forest development on the Shire's network. The traffic study and modelling forms the basis on the Tweed Roads Contribution Plan to fund the major road network projects required in the Shire.
Noise from traffic.	A noise report will be prepared by the proponent to meet Tweed Shire Council's noise attenuation requirements at subdivision stage. The traffic volumes and speed are not excessive and there are acoustic treatments

ISSUES	PROPONENTS RESPONSE
	available to meet Councils requirements. The proponent is required at subdivision stage to meet all of Council's acoustics requirements.
Roads	
Kings Forest has inadequate road access for development area.	In its letter of 5 March 2008, TSC has advised as follows: "The future predicted traffic flows from the Kings Forest development and the Tweed Coast have been incorporated in council's traffic model prepared by Veitch Lister Consulting. Based on this model the future road network will be satisfactory. It is noted that the preliminary intersection design analysis provided by your consultants shows that a staged construction and upgrading of the intersection with the Tweed Coast Road will be required and will need to be conditional on any consents that may be issued. The preliminary Intersection Plans also demonstrate that the intersection can be physically constructed."
In support provided roundabout joining Tweed Coast Rd and Old Bogangar Rd is constructed prior to start of development.	Noted. An approved intersection will be constructed at the commencement of development.
Road design of proposed local area not adequate - should incorporate exclusion fencing, under/overpasses, glider poles and bird/bat screening.	Generally, the road design will be to Tweed Shire Council's Development Control Plan A5 Subdivision manual and to Council's requirements and standards. The Koala Management Plan deals in detail with Koala safety issues.
Duranbah Rd should be upgraded to provide for more traffic.	The impacts on Duranbah Road have been considered by the Tweed Shire Council's traffic planning consultant Veitch Lister Consulting and incorporated in the Tweed Road Development Strategy 2004 and 2007. The Section 94 Tweed Road Contribution Plan No. 4 has identified the road link from the Tweed Coast Road through to Duranbah Road, and any future upgrading required.
Access to Cudgen Paddock part of site should be enhanced (to 30m road reserve width) immediately, rather than staged. Critical for development potential of Cudgen Paddock.	Council's requirements for road reserve widths are specified within Council's Development Control Plan Section A5 'Subdivisions Manual'. Table A5-7 Function and Characteristics of Roads – Urban Section Elements and these will be incorporated into the detailed road design plans. Based on the lot yield at 740 proposed in the 'Cudgen Paddock', a road pavement of 9 metres in width within a road reserve of 17 metre to 20 metre width is all that is required or necessary.
Alternative access/egress points to/from site should be investigated.	The development will ultimately have two access points, namely at Tweed Coast Road and Duranbah Road. A third access to the north connecting with Reardons Road will be investigated in the future.
How will funding of expanded local roads occur?	Funding will be by Section 94 Tweed Road Contribution Plan.
Southern connector road: detailed environmental assessment should be carried out now, otherwise too late. Road will create a major disturbance in wildlife passage, impacts well beyond the road footprint	The impact of these roads has now been assessed. The area of land to be rezoned to Environmental Protection in accordance with the revised rezoning proposals, compared to the nominal area proposed to be rezoned for urban purposes, is considered itself to adequately compensate for such impact.

ISSUES	PROPOSERS RESPONSE
Public Transport	
Footpaths and cycleways be incorporated in site now.	The pedestrian and Cycle Network Plan has been amended to include and link with the Council's existing cycleway network external to the development. Cycleways and footpaths within Kings Forest will comply with Council's objectives and the requirements of Development Control Plan B9 linking all the residential areas with schools, community amenities, riparian areas, retail and commercial areas within the Kings Forest estate.
Provide public transport plan and walkable areas.	The Tweed Shire Council has a public transport policy for the determination of development applications in their Development Control Plan B9 – Tweed Coast Strategy with the inclusion of Map 3 Public Transport Plan. Our road network plan generally concurs with this policy. The existing bus Route 603 can be extended to include Kings Forest and the route is generally in accordance with Council's Public Transport Plan. In accordance with Section 94 Contribution Plan No 12, Council's objective of 90% of homes being located within 400m of a straight distance of a bus route will be accommodated.
Provide light rail system	No light rail network exists near the Kings Forest Development nor has the State Government planned for it in the future.
Buffers	
Agriculture, Ecological and Bushfire Buffers	
Reduction of agricultural buffer width. Buffers to agricultural land be increased to 150m.	Agricultural buffers of 150m are indicated in the current zoning plan which was established by the SEPP (Major Development) 2005 (Amendment No 10). However, the SEPP Amendment does not preclude development within those agricultural buffers, provided it is demonstrated that potential impacts to and from the adjoining agricultural land have been considered by the consent authority. A detailed assessment of the surrounding agricultural land uses has been undertaken and was submitted in support of the Concept Plan application. The outcomes of this assessment have shown that reduced buffer widths are appropriate where less intensive forms of agriculture are being undertaken (e.g. grazing) or where a biological or vegetated buffer is used. Reduced buffer widths are consistent with the Tweed Shire Council's Development Control Plan (DCP) Section A5 Subdivision Manual and the NSW Department of Primary Industries' advice. The DPI's recently released North Coast Living and Working in Rural Areas Handbook defers to the local DCP. The opportunity to reduce the agricultural buffer widths would be pursued in the Project Application supported by appropriate technical information and discussed with the DPI as required by the SEPP Amendment.

ISSUES	PROPONENTS RESPONSE
Move business area north of Depot Rd into centre of development to provide visual buffer between nearby urban areas.	Not considered appropriate.
Placement of golf course within buffer zone on southern portion of site is likely to result in high impacts off-site into the EPZ. This aspect of the proposal is not sufficient to protect surrounding land with high environmental value. In addition, use of golf course as a buffer is not consistent with State Govt policy and would appear to be inappropriate (e.g. off-site effects of weed, pest sprays and nutrients on adjacent land)	<p>The advantages of developing a carefully planned, constructed and managed golf course within the buffer, in such a way that the golf course area itself constitutes the buffer, outweigh perceived risks to the EPZ. These advantages include:</p> <ul style="list-style-type: none"> - The site will be actively managed to maintain its ecological integrity. - The management will be paid for by the users of the course and not the rate payers and local government authority. - The designed water treatment works will actively control the flow of water and contaminants that may gain ingress to the SEPP14 wetlands. - Active regeneration of the ecology of the site will be undertaken - Access and security of the ecological zone will be actively managed - Monitoring of the golf course and ecological zones will ensure the environmental safety of the area. <p>This concept was integral to the decision on the zonings of Kings Forest made by way of the SEPP (Major Development) 2005 (Amendment No 10), having been thoroughly considered in conjunction with the DECC at that time. The Department supports the golf course concept, subject to rigorous management plans across all the relevant issues.</p> <p>A further report has been provided – Review of Environmental Management Program Proposed for Kings Forest Golf Course (Attachment M) which provides additional management measures to those proposed in the site based management plan for the golf course. On this basis E-par is of the opinion that the proposed golf course will provide the required protection to the EPZ.</p>
Buffers should not be multiple use as it compromises the ecological functions and integrity of the buffer. A minimum and unambiguous 50m buffer around all Environmental Protection Areas is required.	The terms of SEPP (Major Development) 2005 (Amendment No 10) and the Buffer Management Plan (attachment G) address this issue.
Around the areas of the greens and fairways of the golf course, there appears to be no naturally vegetated buffers. In addition with roads, footpaths, stormwater management, cycle-ways, fire trails and parks these activities cannot be considered low impact in an ecological buffer as they facilitate and aggravate all the processes that the buffer is designed to protect against: edge effects, nutrient enrichment of low nutrient natural systems, invasion of weeds and exotic species, and increased predation by domestic animal species.	<p>The golf course has been designed to ensure that if there will be surface runoff from the course directly towards an EPZ, there will be an artificial wetland to capture and treat the runoff. Where there is a natural catchment divide between the course and the EPZ these controls are not essential. The system of artificial wetlands will provide habitat enhancement and water quality treatment to prevent nutrient enrichment of the existing groundwater and associated groundwater dependent ecosystems.</p> <p>For the reasons discussed above it is considered that the proposed active use and management of the buffer will provide a greater long term benefit to the community, whilst still achieving the objectives of the buffer, than a buffer that is planted out and left to be maintained and managed by the local council.</p>

ISSUES	PROPONENTS RESPONSE
	Edge effects, weed invasion and nutrient enrichment will all be managed by careful design and implementation of the management strategies detailed within the Golf Course Site Based Management Plan, together with the additional measures proposed in the E-par report.
Bushfire APZ should not be part of EPZ buffers.	Buffer Management Plan deals with this.
Reduction of effective buffer width from 50m to 30m width outside the area of Cudgen Paddock is contrary to the intentions of Amendment 10 of the SEPP (Major Projects).	Buffer Management Plan addresses this issue.
Inadequate agricultural buffer between Tropical Fruit World and residential areas. In particular, farming practices will impact on new residents. Suggests buffer of 250m of open space (as previously planned).	<p>Agricultural buffers of 150m are indicated in the current zoning plan which was established by the SEPP (Major Development) 2005 (Amendment No 10). However, the SEPP Amendment does not preclude development within those agricultural buffers, provided it is demonstrated that potential impacts to and from the adjoining agricultural land have been considered by the consent authority.</p> <p>A detailed assessment of the surrounding agricultural land uses has been undertaken and was submitted in support of the Concept Plan application. This assessment concludes that a 40m biological or vegetated buffer would be appropriate. This is based on the Queensland Planning Guidelines, as NSW did not have the equivalent at the time. In the absence of aerial spraying this conclusion is consistent with the NSW Department of Primary Industries recommendation of a 40m + vegetated buffer to separate (non-aerially) sprayed crops.</p> <p>Another option is to place a restriction on the title of the allotments closest to the boundary with Tropical Fruit World, which acknowledges the lands proximity to agricultural land and the neighbour's right to continue with its agricultural use of the land. Such restrictions have been used successfully elsewhere in the Tweed Shire.</p> <p>As discussed above, the opportunity to reduce the agricultural buffer widths would be pursued in the Project Application and supported by appropriate technical information and discussed with the DPI as required by the SEPP Amendment.</p>
Significant modification of the natural ecosystem through use of man-made structures (nutrient stripping ponds and stormwater trains and devices, roads, paths bridges etc.) and artificial active and passive recreation areas (golf courses, parks, playgrounds, school yards) compromise ecological buffers and natural, ecologically sustainable functions. Lack of a detailed Buffer Management Plan makes assessment of the Environmental Assessment Report impossible.	The revised management plans, together with a Buffer Management plan that has been provided and the additional measures proposed in the E-par report with respect to the golf course, taken together, adequately deal with these matters.

ISSUES	PROPONENTS RESPONSE
Cumulative Impacts of Development	
Too much development. Reduce urban sprawl. Tweed Shire overdeveloped, development unnecessary as there is enough already, development cap needed. Are both Cobaki and Kings Forest developments really needed?	This site has been identified and zoned for urban development for more than 20 years. It is also part of the land designated for urban development in the Far North Coast regional strategy to meet the housing needs for the growing population in the Tweed Shire.
Cumulative impact of developments in area on native fauna habitat (especially koala) and natural environment.	Comprehensive assessment equivalent to 7 part tests has been conducted.
Housing development of this size and scale are drivers of population growth and create demand. The environmental costs of this are significant.	It is rather population growth that creates demand to which the proposed development will respond in an ecologically sustainable manner.
Heritage	
Indigenous heritage lost for good.	A comprehensive Cultural Heritage Management Plan will be finalised in consultation with representatives of the Traditional Owners.
Water	
Land too low-lying for development – flood prone.	Preliminary flood modelling undertaken by Philip Bell and Partners shows that the land proposed to be developed has an adequate level of flood immunity. Further assessment conducted by Gilbert & Sutherland demonstrates that adequate freeboard has been built in to the proposed floor levels to accommodate inaccuracies in the model and possible increases to flood levels associated with sea level rise predictions.
No trunk drainage plans provided to complete the stormwater plan.	Adequate detail has been provided to assess the Concept Plan and that the provision of trunk drainage plans is contrary to the intent of the concept planning process. Detailed hydrological and flood modelling needs to be completed before meaningful volume/area/discharge provisions can be made. Such modelling will be completed at the next stage of the development, at which time trunk drainage plans will be provided.
Flood Modelling	
The results of existing relevant flood modelling have been misrepresented to give the impression that the relevant 100-yr ARI design flood level for the whole of the site is 3.6m AHD. Best estimates to date are in the range of 3.8 – 4.2m AHD.	The Preliminary Flood Assessment (Gilbert & Sutherland 2008) states previous flood study report levels for the site on page 3-1 as varying between RL 3.6m and 4.2m AHD. In Chapter 2, 1st dot point, the reference to Philip Bell & Partners' report was accurate, but for clarity could have added that the RL 3.6m was at the downstream end of the site.
Impact of proposed, existing hydraulic structures on flood levels (e.g. bridges, culverts, drains, levees), particularly in relation to constrictions, has not been assessed. All modelling undertaken to date has failed to take into account the impact that levees (spoil banks) along Blacks Creek would have on flood flows and levels.	Two new waterway crossings are envisaged by the current master plan. These would be designed for minimal afflux. Both the WBM Cudgen Creek studies and the Philip Bell and Partners (PBP) work takes account of downstream bridges and culverts. Any existing levee banks will be taken into account in the proposed detailed flood modelling for the site.

ISSUES	PROPONENTS RESPONSE
<p>More detailed modelling required now. Because if flood levels are found to be higher, more filling will be required, and this will potentially impact on ecological buffer zones. Therefore flood storage capacity needs to be considered in greater detail, with impacts considered both onsite and offsite.</p>	<p>The levee banks would limit the existing site flood storage on lesser flood events; hence flood modelling to date would be conservative. Impacts of the banks would be localized, and detailed modelling proposed will take account of this. Given that over 90% of the site is 1 metre above RL 3.6m AHD, the ARI 100 year flood level estimate by PBP for the downstream site extent, it is unlikely that localized effects from these banks will significantly impact on the site master plan.</p>
<p>Section 3.7 of the DGRs not satisfied: detailed modelling not carried out to account for increased storm tide levels, sea level and rainfall intensity and frequency (does not include new data by DECC). Sea level rise of 0.4 to 1.0 m for flood modelling does not include ice sheet, glacial melting now thought to be a likely event. Climate change impacts not appropriately considered, resulting in considerable uncertainty for flood modelling and design levels. Therefore precautionary principle not exercised.</p>	<p>The current draft NSW Government policy recently released for public comment recommends an allowance of 910mm for sea level rise by 2100. The Gilbert & Sutherland 2008 report considered the then current IPCC upper limit of 0.88m rise. The 30mm difference between this estimate and the current draft policy will not significantly affect planning levels for the site.</p>
<p>Water Quality</p>	
<p>Golf course and connecting roads will impact adversely on hydrology and water quality of adjacent SEPP 14 wetland. Ensure controls are put in place on golf course construction and maintenance, including nutrient traps to avoid contamination of waterways.</p>	<p>The two new waterway crossings envisaged by the current master plan would be designed for minimal afflux and as such would not significantly impact on the hydrology of the SEPP14 wetlands. A highly detailed Site Based Management Plan has been prepared in support of the concept plan and provides specific management controls, based on current best practice, for the construction and operation of the golf course. Pesticide and nutrient management are addressed in detail as these represent a concern for many stakeholders (including the DECC) and the public generally. Specific controls are discussed below.</p>
<p>Adverse impact of pesticides, herbicides, water use not considered e.g. leaching could lead to algal blooms in adjacent waterways.</p>	<p>These issues are all addressed in detail in the Golf Course Site Based Management Plan. Significantly, it is proposed to install impermeable liners below all tees and greens, which traditionally have the highest fertiliser and pesticide use, to collect any leachate which may contain elevated nutrient concentrations or pesticides. The leachate will be recycled and re-irrigated to the tees and greens to maximise the uptake of nutrients and efficacy of pesticides. Integrated Pest Management will be used for the control of pests, to minimise the need for pesticide and herbicide use. Fertiliser application will occur at the lowest possible rates, based on the advice of a horticulturist and slow release fertilisers will be used to minimise the leaching of nutrients.</p>
<p>Golf Course</p>	
<p>Will adversely impact on hydrology and of adjacent wetland/lake through nutrient runoff and sediment loading.</p>	<p>These issues are addressed in detail in the Golf Course Site Based Management Plan as discussed above. The benefits of the golf course are discussed above. Additional undertakings are made in accordance with the E-par Report (Attachment M).</p>

ISSUES	PROPOSERS RESPONSE
No need for golf course. Already have enough golf courses in surrounding area.	Opinion noted – the proponent does not agree.
Golf course not appropriate use of land – elitist, unproductive, does not serve fundamental needs of growing population, occupies nearly half of developable area.	Opinion noted – the proponent does not agree. The golf course occupies approximately 10% of the developable area.
Golf course is not an appropriate buffer between residential development and wetlands (especially for Wallum froglets) and other low-nutrient (oligotrophic) habitat. Construction of the golf course will destroy high quality plant and animal habitat, including habitat for a number of threatened species (TSC Act). Open nature of a golf course will facilitate the invasion of weeds and introduced fauna (e.g. cane toads, fox, plague minnow).	<p>For the reasons discussed above it is considered that the proposed active use and management of the buffer will provide a greater long term benefit to the community and the EPZs that the buffer is there to protect, than a buffer that is planted out and left to be maintained and managed by the local council. The buffer will be actively maintained and managed by the operators of the golf course and resources will be dedicated to ensuring that the pest management strategies described in the Revised Feral Animal Management Plan (see Attachment H) are implemented. The plan includes specific controls for the management of foxes and cane toads. Plague minnow are not considered to be a threat.</p> <p>The Golf Course Site Based Management Plan includes recommendations for the planting and management of the wetlands and stormwater treatment devices to minimise the suitability of the habitat for the cane toad, whilst maximising suitability to the Wallum Froglet.</p> <p>The design of the golf course is such that it occupies mostly cleared areas, including areas the subject to development approval for pasture improvement and grazing, and areas under a tea tree plantation. Accordingly, disturbance of high quality habitat is minimal.</p> <p>The suite of revised management plans, a buffer management plan and the additional measures proposed in the E-par report, in combination, comprehensively deal with these matters.</p>
Golf Course Management Plan incorrectly states that ecological buffers are intended to be “passive”. This is contrary to s.7 of Amendment 10 to the SEPP (Major Projects). Plan is not strategic and pro-active, but reactionary in its proposal to provide remedial action once a problem has manifested e.g. monitoring and pH controls should be included.	See above.
Constructed water bodies as part of the golf course will only provide for an increase in the more competitive cane toad population. This will result in displacements of wallum frog species. These ponds will also provide a very good mosquito breeding habitat that will impact on adjacent residents.	The constructed waterbodies will be vegetated with thick swards of reeds or sedges around their perimeter to minimise access by cane toads and to maximise the habitat value to the Wallum Froglet. Many of the wetlands will not hold water for long enough for mosquito larvae to grow. Where water will be held permanently, the pond will be designed to minimise suitability for mosquito oviposition (i.e. depth will be > 600mm). Further detail on this issue will be provided in support of the project application. The Feral Animal MP includes details for cane toad control within the golf course.
Provision of koala food trees in golf course will only endanger koalas more due to the threat from being in close proximity to residential areas provided by domestic animals and traffic.	The Koala Plan of Management recommends the planting of these trees.

ISSUES	PROPOSERS RESPONSE
No details of bulk earthworks provided.	The details of the bulk earthworks proposed are in the Project Application and are subject to separate assessment.
Land Use	
Alternative land use could be ecotourism, or a smaller, more sustainable development produced by increment rather than all at once.	This site has been identified and zoned for urban development for more than 20 years. The Concept Plan encompasses the whole of the future development however; the various stages of the development will only be constructed incrementally over a 15-20 year development period. This land is needed to provide new housing lots for the growing population of the Tweed. It has been designated for urban development in the Far North Coast Regional Strategy.
Inappropriate for majority of site to be used for urban expansion as area is biodiversity hotspot. Find alternative site. Could development elsewhere intensify by building up or under, rather than sprawling?	The zoning was resolved by SEPP (Major Developments) 2005 (Amendment No 10).
Golf course occupies nearly half of developable area. Increased availability of land by removing golf course could allow for more flexible land use.	See above.
Loss of productive agricultural land. Will rezoning allow further development to occur?	The land has been zoned and designated for urban development for more than 20 years. This development will cater for the population growth in this location for 15-20 years. There should be no need for further rezoning in the short term.
Potential to include much needed aged-care space, skatepark, large shopping centre within development.	This land will provide for a master planned community with recreation, schools, community and retail facilities and possibly aged care.
Perhaps cane fields could be used instead, as their biodiversity values are lower?	This is a matter for Tweed Shire Council.
Houses for sale in other developments: Casuarina, Salt, Koala Beach, SeaBreeze, Cotton Beach, Santai. Why clear land that is good habitat if there is so much housing capacity already?	The land is zoned for development with very limited clearing at all is required.
Blurring between areas of recreational open space, passive open space, service and stormwater facilities and corridors, cycle and pedestrian pathways and environmental protection areas. Document lacks detail as to how this will work collectively – including costs, responsibilities and management of threatened species.	The integration of recreational and passive open space with stormwater treatment measures was identified as a novel approach to providing a manageable ecological buffer. Substantial detail was provided in the EA and supplementary reports on the management of threatened species. Otherwise, it is considered that adequate detail has been provided to assess the Concept Plan application. Further detail on the costs and responsibilities for the management of these areas will be provided in support of a project application.
Approval of the Application will require all relevant issues to be properly dealt with.	Noted.
General Objections	
Whole proposal not ecologically sustainable development. Proposal leaves many environmental, social questions unanswered.	Approval of the Application requires that it be ecologically sustainable and that relevant matters are fully addressed.

ISSUES	PROPOSERS RESPONSE
Concept plan lacks sufficient detail for accurate and proper assessment of vital elements like ecological buffers.	See above.
Reduce scale of development to reduce impacts.	See above.
Project too large to consider and assess appropriately. Community consultation insufficient to allow for proper consideration.	The public exhibition period was extended beyond the statutory period. The community consultation on this Concept Plan application is detailed in the PPR.
Soils	
Problems with acid sulphate soils on the site. Will this be another Tugun bypass disaster for downstream wetlands, fisheries and farms?	<p>Acid sulphate soils are present on the site, however the most problematic areas of acid sulphate soils correspond with SEPP 14 Wetlands or Environmental Protection Areas which will not be disturbed. 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. The extent of the disturbance for the Tugun bypass was vastly greater than any of the works required to facilitate the development of the site in accordance with the concept plan.</p> <p>Dewatering in areas of Acid Sulphate Soils will be avoided wherever possible to prevent the oxidation of acid sulphate 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 sulphate soils will be carefully managed in accordance with the acid sulphate 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>
Can downstream impacts be prevented? Perfect remediation techniques required.	As discussed above, downstream impacts can be prevented through the implementation of best practice environmental management of acid sulphate soils. Providing adequate assessment is available to support the detailed design and management strategies are planned and implemented based on best practice, the prevention of impacts to receiving waters is simply a management issue.
Issue of contamination from Duranbah dip site has not been considered in EA.	The issue of contamination from the Duranbah cattle tick dip is addressed in Gilbert & Sutherland's report entitled Soil Survey, Acid Sulphate Soil Assessment and Management Plan, Geotechnical Review and Contamination Assessment, Kings Forest Concept Plan, Kings Forest, Cudgen, New South Wales (March 2008). Previous investigations have delineated the extent and severity of contamination and a remediation action plan has been prepared.

ISSUES	PROPONENTS RESPONSE
	It is proposed that the dip site will be remediated to facilitate residential development. DECC have identified in their response that the dip needs to be remediated and have indicated that this is technically feasible and that it is acceptable to defer these works until specific development applications are lodged.
Socio-Economic	
Economic growth and job generation must be provided for in proposal. Tweed region already has high unemployment. The 250 jobs created will only be temporary. Currently no viable industry or employment prospects to support a further 10,000 people. This inturn will create pressure on infrastructure (roads and transport) through commuting to employment centres.	The Tweed Shire Council has engaged the consultant group GHD to carry out a comprehensive review of the employment land needed within the Tweed Shire. This report is being used to inform the new Tweed LEP. There is no requirement for employment land within the Kings Forest estate in this review strategy. Additionally, the Far North Coast Regional strategy has identified all of the employment land required for the existing and future population in the Tweed Shire and this does not include any part of the Kings Forest estate. Nevertheless, the Kings Forest estate is proposed as a master planned community with schools, shopping, recreation areas and commercial activities in the town and neighbourhood centres. This will help provide employment opportunities within the estate and reduce the need for travel trips external to the site.
Proposed lake (extension) should be retained in private ownership to reduce burden of maintenance on ratepayers.	Public facilities whether parkland, lakes, boardwalks or community buildings should always be maintained by local government. The proposed lake and its surrounds will be designed and submitted to Tweed Shire Council for approval.
Social and economic cost of infrastructure requirements for large development will impact adversely on existing ratepayers.	The Tweed Shire Council has one of the most comprehensive S94 Contribution Plans in NSW which ensures that all future growth, including the Kings Forest development, will pay an equitable proportion for all the new and existing facilities required for that growth.
Increased stress on existing amenity of Tweed Coast, environment (beaches and estuaries), and infrastructure.	The impacts of increased population will occur with or without the Kings Forest development. The Kings Forest development is isolated from the Tweed's coastal roads and its visual impact will be minimal on the current urban character of the Tweed. Growth will only occur incrementally over a 20 year period and all external impacts on infrastructure are being funded through S94 Contribution Plans. The additional rate base will enable Tweed Shire Council to manage and maintain the environment with minimal impacts from increased population growth.
Development out of character with surrounding area. Loss of sense of village communities. Reduced strength and cohesion of local communities.	The land has been zoned for development following comprehensive, appropriate studies.
Development will result in decreased scenic amenity. Loss of aesthetic qualities of bushland by its removal – should be kept as reserve to provide relief from sprawling urban areas.	The Kings Forest site is generally isolated from passing traffic and from any adjoining urban development. There will be no detrimental impacts on the visual appearance of the Tweed Coast from the future population growth within the Kings Forest estate.

ISSUES	PROPONENTS RESPONSE
Impacts on surrounding agricultural activities and impacts of surrounding agricultural activities on new residents: Chemical spray drift and dust from agricultural activities will impact on new residents.	The potential conflict between the surrounding agricultural properties and new residents is addressed in Gilbert & Sutherland's Off-site Impacts Assessment report presented as part of the Environmental Assessment. Provided appropriate buffers and/or planning controls are provided the potential for conflict between the different land-uses can be overcome.
Lack of infrastructure will reduce ease of travel and will lead to social impacts, such as reclusive or anti-social behaviour, or arson.	The land has been zoned for development following comprehensive, appropriate studies.
Increased crime and pollution from larger population.	The land has been zoned for development following comprehensive, appropriate studies.
Environment not valued in economic terms, or in intrinsic terms therefore sustainability not taken into account.	The land has been zoned for development following comprehensive, appropriate studies.
An area of land within the development needs to be set aside for a place of worship, to provide a support base and community spirit.	The Concept Plan allows for any number of worship facilities to be proposed within the estate to reflect the religious needs of the different religious groups that will build up in this community over time. It is not possible to designate particular sites for this use at this time, but such requirements are accommodated by the Concept Plan.
Type and size of development will change social identity of Tweed and make it similar to the more consumer-oriented Gold Coast. Tweed's competitive advantage over the Gold Coast tourist market is the quality of coastal habitat and wildlife, this will be lost if development proceeds as is.	The land has been zoned for development following comprehensive, appropriate studies.
Changing population demographics: population in Tweed Shire Coast area is aging. This will lead to an increase in property sales in the coming years. Therefore maybe no need for large developments, only incremental developments as and when needed.	The land has been zoned for development following comprehensive, appropriate studies.
Maintain food producing land.	The land has been zoned for development following comprehensive, appropriate studies
Public Open Space	
Unspecified walking tracks, boardwalks in the EPZ as Active Open Space?	The walking tracks will be submitted in detailed design applications for each precinct. All of the issues in relation to location will be addressed at that stage. The plans submitted at this stage are conceptual only.
11 ha. of open space-unstructured do not appear on Open Space network map.	The location of the local parks within each Precinct have not been designed or located at this stage. There is no way these areas could be mapped and located until detailed subdivision design has been carried out. The location, size and amount of local parks will all meet Tweed Shire Councils normal requirements and will be submitted to them for assessment and approval. In the Statement of Commitments there is a statement that Council's requirements for structured and unstructured open space of 2.83 hectares per 1,000 population will be met.

ISSUES	PROPONENTS RESPONSE
28.3 Ha. provided. For an estimated population of 11,250 this figure is not consistent with Tweed Shire Council's Contribution Plan No. 5 requiring 2.83ha./1,000 residents.	The estimated population for Kings Forest on which the open space provision in accordance with Council's formula has been based is 10,000 EP. There is ample opportunity for adjustment to this as the development unfolds.
Does above area (28.3 ha.) include Turners Quarry Lake? If so, unacceptable.	The open space commitment for Kings Forest does not include Turners Quarry Lake.
Population of Release Area A must have access to appropriate areas of suitably located playing fields at the time of initial occupation.	Residents of Release Area A will have access to appropriate playing fields within a reasonable time of occupation.
Use of sports fields for flood storage is problematic and can make sports fields regularly unusable and difficult to maintain.	Sports fields are commonly designed with a lower level of flood immunity than habitable land and will therefore be mapped as inundated during a Q100 flood event. Sports fields will be designed with sufficient flood immunity to satisfy the requirements of Tweed Shire Council's DCP 16 Subdivision Manual (Table 4.33C).
Affordable Housing	
Supports the need for more affordable residential development in the coastal zone to stimulate the market and promote home ownership.	There will be a wide range of housing sizes provided in Kings Forest including smaller lot sizes to reduce costs.
Housing Density	
Inconsistent with Tweed Shire Council's development controls in respect to lot sizes and building setbacks.	A Development Code has been prepared for the Kings Forest development. This code provides for sound urban design outcomes for lot sizes which are not permitted in the Tweed LEP.
More detailed design necessary to ensure environmentally sustainable outcome.	The Concept Plan does not enable any development to proceed unless detailed designs are submitted or approval by the Department of Planning as a Project Application or submitted as development applications for subdivision approval to the Tweed Shire Council. The areas proposed for development are only those found suitable after appropriate environmental studies and assessments have been carried out.
Climate Change	
Energy inefficient houses will increase burden on power generation and lead to climate change impacts through greater carbon emissions. These controls must be specified. For example, Tweed council could impose higher standards than just BASIX requires e.g. solar panels, batteries, solar hot water, rainwater tanks for water supply, northern facing aspect for dwellings, and flow-through ventilation.	The energy efficiency of individual dwellings and the implications for climate change is not relevant to the assessment of the concept plan application. Dwellings will be designed in accordance with the relevant policies and legislation at the time they are designed. This may include requirements beyond the current BASIX provisions. - The layout of the proposed development, as indicated by the concept plan seeks to minimise the distance between residents and places of employment, retail centres and neighbourhood conveniences etc, thereby minimising the need for vehicle usage. - Nearly all of the area zoned for development is already cleared Greenhouse gas emissions will be off-set by large areas of the site which will be revegetated.

ISSUES	PROPONENTS RESPONSE
	The EPZ areas around the site are largely wetlands and these are subject to flooding irrespective of climate change.
Impacts from extra traffic on road, and lack of rail to move people around therefore adverse impacts from exhaust emissions on the atmosphere.	As above.
No carbon footprint of development undertaken.	This was not a Director General requirement at the time of submission.
Deforestation will impact on net greenhouse gas emissions.	As above.
Built area appears to be above flood levels as a result of climate change, but EPZ areas not.	As above.
Strategic	
Development has not adequately shown how it meets <u>all</u> the requirements of the sustainability guidelines as outlined in the Far North Coast Regional Strategy e.g. provision of employment lands, avoidance of risks to adjoining land, infrastructure etc.	This site has been identified in the Far North Coast Regional Strategy as an urban release site to meet the housing needs for a growing population in the Tweed Shire. The site has been identified and zoned for urban development for more than 20 years. There have been extensive environmental studies carried out by a number of environmental consultants to ensure that there has been a balanced approach between the competing objectives of the economic, social and environmental components of sustainability. All of the impacts of the development have been included in Director General requirements for the proposal and comprehensively addressed in the Environmental Assessment Report and associated studies.
Too many town centres exist that are not well linked together. A new town centre would be better located further south near Pottsville. Kings Forest too close to existing town centres and is of environmental importance. No development in Cudgen Creek area – no need for road and less ecological impact.	The town centre in the Kings Forest Concept Plan accords with the Tweed Shire Council’s Retail Strategy report for town centres.
The type and size of the Kings Forest development will forever change the status quo of the region. Proposal will demand more urban amenities which in turn will pressure more land releases. This will change the unique social identity of the Tweed.	The Kings Forest development is designated for urban development in both the Far North Coast Regional Strategy and the Tweed L.E.P. in order to cope with anticipated growth.
Concentrate development in existing urban centres e.g. Tweed Heads. Build up, not out.	As above.
Infrastructure	
No cost-benefit provided for constructing/maintaining essential services. Responsibilities of developer in providing these is unclear.	The essential services for the Kings Forest development will be constructed by the developer as conditions of subdivision approval.
Want condition inserted on development to provide fibre optic infrastructure/cabling for broadband to service each lot.	Noted.
Increased population growth promoted by developers has unsustainable impacts on infrastructure. Stormwater and drainage infrastructure inadequate for a town of 10,000 people. Major upgrade of Tweed Coast Rd, Duranbah Rd, new water and sewer supply infrastructure, water supply reservoir all required.	All of the major infrastructure providers have provided advices that their service networks will be upgraded progressively to cater for the demand from Kings Forest. This land has been zoned for urban expansion for more than 20 years and the major service providers have planned for the future demands from this urban release area.

ISSUES	PROPOSERS RESPONSE
<p>Increased pressure on water supply: where is the water going to come from? Possibility of increased droughts from climate change.</p>	<p>The Tweed has planning in place to extend the capacity of the existing dam or construct a new dam depending on the growth rate and changes in water demand. These scenarios are included in the Tweeds Water and Sewerage Strategy. The rainfall in the Tweed is significant compared to other areas of NSW. There is a requirement for all new development to have water saving devices and rainwater tanks which will reduce bulk water supply requirements and overall water demands. There is a possibility of both increased rainfall and droughts from climate change. The bulk water yield of the current water supply system is based on best practice and the worst drought period over the rainfall record periods. There are no constraints on water supply from the amount of rainfall in the Tweed.</p> <p>The proposed IWCM approach will minimize the demand from this development on the existing municipal water supply.</p>
<p>Fire</p>	
<p>Increased population will increase the threat of fire - an inherent danger in a 'forest' type community. Therefore bushfire safety paramount. Site has recent history of fires, including arson.</p>	<p>Bushfire Management Plan. Kings Forest will be designed to comply with the Planning for Bush Fire Protection guidelines – 2006.</p>
<p>Inadequate separation between vegetation and habitation.</p>	<p>Bushfire Management Plan. Kings Forest will be designed to comply with the Planning for Bush Fire Protection guidelines – 2006.</p>
<p>Fire Management Plan (FMP) is not clear on who will be responsible for maintaining APZs.</p>	<p>Ultimately Council will be responsible for maintaining APZ's.</p>
<p>Land Ownership</p>	
<p>Disputed by Tim Barr Pty Ltd (Sub. #136)</p>	<p>There is no basis upon which Tim Barr Pty Ltd can lawfully claim presently to have the status of an "owner".</p>