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ADEQUACY OF REVISED OF OFFSETS FOR PARKSIDE, TERRIGAL

Dear Peter

The purpose of this letter is to discuss the adequacy of offsets for the proposed rezoning of Lot 2 DP 1111392, Lot 8 DP 876102, Lot 202 DP 831864, Lot 4 DP 37914 and Lot 1 DP 381971 (hereafter referred to as the 'subject lands') at 'Parkside', Terrigal.

1. BACKGROUND

Crighton Properties has submitted a rezoning application, including lodgement of a Local Environment Study, to facilitate the development of a mixed use estate including high-tech home office estate on the subject lands. An Ecological Site Assessment prepared by Conacher Environmental Group in October 2008 was submitted as part of the Local Environment Study (LES) and outlined the proposed conservation areas for the project. The layout was amended in early 2010, to include additional areas within land zoned for Private Conservation to increase the area of offsets. The most recent amendments to the layout, following discussions with Gosford Council, the Department of Environment, Climate Change and Water and Hunter-Central Rivers Catchment Management Authority, has resulted in the revision of the development layout to further minimise impacts to ecological values.

The revised layout includes a reduction of development along the western boundary (Lot 202 DP 831864), an expansion of development along the eastern boundary (Lot 4 DP 37914) and inclusion of additional conservation land in the central portion of the subject lands (Lot 1 DP 381971). **Figure A.1** shows the revised layout for the proposed rezoning.

This letter examines the current proposal for offsetting.

2. IMPACTS

The proposed rezoning and subsequent development of the subject lands will result in the loss of 7.63ha of open forest vegetation and associated habitat. Compared with the previously proposed loss of 10.4ha, this represents an approximate 2.8ha reduction. Under the current footprint, the following vegetation communities are proposed to be removed from the development footprint:

- Coastal Narrabeen Moist Forest (0.20ha);
- Narrabeen Coastal Blackbutt Forest (6.17ha);
- Disturbed Vegetation (Regenerating) (1.26ha); and
- Grassland with Scattered Trees (10.15ha).

The project will also result in the loss of known and potential habitat for a number of threatened species (12 known fauna species, 29 potentially occurring fauna species and 4 potentially occurring flora species). Without the provision of offsets, there would be a sizeable net loss of forest habitat.

3. ADEQUACY OF OFFSETS

Introduction

Principles for the use of biodiversity offsets that should be adhered to when proposing offsets for development impacts have been developed by the Department of Environment Climate Change and Water (DECCW). For biodiversity offsets to be considered 'appropriate', these principles must be adhered to where possible. Foremost among these, is the principle that impacts upon areas of ecological value must firstly be avoided then mitigated where total avoidance is not possible. Finally impacts to developments should be offset using compensatory measures if the two other components of the biodiversity offset hierarchy do not appropriately offset development impacts.

The proposed development has implemented a number of measures that would minimise the degree of impacts to ecological values. These measures include restricting development to areas containing disturbed vegetation, provision of next boxes and rehabilitation and management of riparian areas, including an area of the endangered ecological community (EEC) Lowland Rainforest. In addition to these measures, compensatory offsets have been proposed.

Avoidance Measures

A number of development designs have been proposed on the subject lands over the past decade. Recent modifications to the development footprint have seen a reduction of the footprint in open forest vegetation and an increase within the grassland vegetation in the eastern portion of the subject lands. This has resulted in a 3ha reduction in the amount of open forest vegetation to be removed within the development footprint. The revised layout achieves a

better ecological outcome than previous layouts due to the minimisation of impacts to areas with higher ecological values. The current revised layout reduces the development footprint within areas containing greater ecological values, such as buffers for EECs and old growth trees. Some areas with a high potential for regeneration have been included within the conservation lands. Where the development footprint has been expanded, it occurs within areas with lower ecological values.

The future development of the subject lands does not require the removal of any of the Lowland Rainforest EEC. Recent modifications to the development footprint have seen a reduction in development to the north west of the Lowland Rainforest EEC, allowing for a large buffer surrounding this vegetation community. Minor adjustments have been made to the perimeter road to exclude the road from the eastern boundary of the riparian zone.

The development footprint has also been reduced in the central portion of the subject lands, with no development proposed to the south of the perimeter road. This reduction will further assist in maintaining a wildlife corridor along the southern extent of the subject lands. The wildlife corridors on the subject lands will facilitate the movement of fauna across Kincumber Mountain Reserve and through riparian areas. The footprint also allows for the retention of a range of habitat features suitable for a suite of fauna species, including hollow-bearing trees and riparian areas.

The current development footprint extends further into the eastern portion of the subject lands. Previous and current land uses has resulted in a reduction in the ecological value of the land within the eastern portion of the subject lands. This area is primarily comprised of the vegetation community Grassland with Scattered Trees.

Mitigation Measures

The primary mitigation measure for the Parkside project is the management and rehabilitation of a number of areas of retained vegetation. The riparian areas on the subject lands, include a patch of Lowland Rainforest EEC will be retained within non-developable areas of the project. A vegetation management plan has been prepared to increase the biodiversity values of the riparian areas. Further areas of vegetation in the south western and south eastern portions of the subject lands will be rehabilitated and managed. In total, 5.04ha of land are proposed to be rehabilitated and managed and form part of the conservation areas for the project. These areas are shown in **Appendix A**. The rehabilitation of this land will add additional forest to the areas under conservation.

Compensatory Measures

Compensatory measures for the Parkside project have been developed to supplement the avoidance and mitigation measures, discussed above, and are being used to offset the loss of biodiversity values from the development footprint. The compensatory offset proposed for the Parkside project is the dedication of approximately 27.25ha of land in the southern portion of the subject lands to Gosford Council, should council accept the dedication. This area comprises an additional 8ha of land than previously proposed. Ideally, the 27.25 of land to be dedicated to Council is to become part of the Gosford Coastal Open Space System (COSS). The transfer of

the land into the Gosford COSS is considered to constitute greater protection of the vegetation and habitats. The Gosford COSS is based on the conservation and enhancement of the natural environmental for a multiple range of reasons that are in the public interest and essential for nature conservation and scenic quality[1]. Dedication of 27.25ha of the subject lands to the Gosford COSS will significantly add to the patch size of the vegetation in Kincumber Mountain Reserve. The area of land to be dedicated to the Gosford COSS is shown in **Appendix A**.

Adequacy of Offsets

Introduction

The offsets proposed for the subject lands are located *in situ*. Each of the four communities to be removed from the subject lands is to be represented within the retained vegetation. In addition to these, Coastal Warm Temperate Rainforest (Lowland Rainforest EEC) will also be retained, and a 50m buffer provided for this community. Habitat suitable for the range of threatened fauna species known to occur on the subject lands will also be retained.

A number of wildlife corridors and vegetation links will be retained on the subject lands following rezoning and development, including the link to Kincumber Mountain Reserve and riparian corridors. Implementation of the vegetation management plan within the riparian areas will also improve the riparian network of links.

Vegetation removal and retention ratios

Prior to the development of the DECCW principles for offsets, offset requirements were based on the vegetation retention and removal ratio. That is, the ratio of the retained vegetation to the amount of vegetation removed. This ratio was generally negotiated with government bodies to determine the adequacy of offsets, As a rough guide, projects of a similar nature were required to be offset at a 2:1 ratio. Ideally offsets were on a 'like for like' basis in that they offset identical vegetation communities, however where this was not possible, other communities were used as surrogates.

At present the proposal will remove 7.63ha of vegetation and as an offset will dedicate 27.25ha of vegetation to Council and maintain and manage a further 5.04ha of vegetation, giving an offset ratio of approximately 4.23:1. This offset ratio is considered appropriate for the Parkside project. In addition to the conservation of these vegetation communities, these areas will be managed to increase their biodiversity values.

Consistency with DECCW principles for offsets

The DECCW principles for offsets were also used to assess the adequacy of the proposed Parkside project offsets. These principles have been derived from the Guidelines for Biodiversity Certification of Environmental Planning Instruments Working Draft[2]. The proposed offsets for the Parkside project have been targeted towards offsetting in accordance with the DECCW principles for offsets. **Appendix B** to this letter lists the DECCW principles and how they have been met by the offsets proposed for the Parkside Project. The Parkside project offsets are considered adequate given the amount of compliance with the principles.

4. CONCLUSION

The proposed ecological offsets will address the loss of vegetation from the proposed development, providing a sustainable development outcome that provides habitat for threatened species and adds to the conservation areas associated with Kincumber Mountain Reserve. The offsets proposed will maintain habitat linkages with sizeable areas of forest on Kincumber Reserve and conserve *in situ* substantial areas of forest. The offset package is clearly consistent with the latest principles for offsetting of DECCW.

5. REFERENCES

1. Gosford City Council (2009) **Draft Gosford Development Control Plan** Gosford City Council, Gosford, NSW.

2. DECC (2007) **Guidelines for Biodiversity Certification of Environmental Planning Instruments Working Draft** Department of Environment and Climate Change (NSW), Sydney.

Yours sincerely

David Robertson

Director

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Appendix A

Proposed Parkside Conservation Areas

Legend

- Subject Site Boundary
- Riparian Protection Area
- Private Conservation
- Transfer to Council
- Area Subject to Management Plan
- Development Area

Appendix B

Adequacy of Offsets in Relation to DECCW Principles for Offsets

Table B.1 ADEQUACY OF OFFSETS IN RELATION TO DECCW PRINCIPLES FOR OFFSETS

DECCW Principles for Offsets	Proposed Parkside Offsets
1. Impacts must be avoided first by using prevention and mitigation measures. *Offsets are then used to address remaining impacts. This may include modifying the proposal to avoid an area of biodiversity value or putting in place measures to prevent offsite impacts.*	The layout of the Parkside project has been designed to minimise the impacts upon the Lowland Rainforest EEC and threatened fauna habitat. A number of modifications have recently been made to the layout of the development and include the following - Exclusion of development to the north west of the Lowland Rainforest EEC within a 50m buffer; - Exclusion of the perimeter road from the riparian zone; - Exclusion of development to the south of the perimeter road. Mitigation and compensatory measures have been proposed to minimise the impact of the Parkside project primarily on retained vegetation in the conservation areas. Mitigation and compensatory measures also assist the improvement of biodiversity values of both the conservation areas and habitat within the development footprint.
2. All regulatory requirements must be met. *Offsets cannot be used to satisfy approvals or assessments under other legislation, e.g. assessment requirements for Aboriginal heritage sites, pollution or other environmental impacts (unless specifically provided for by legislation or additional approvals).*	All regulatory requirements for the Parkside project will be met.
3. Offsets must never reward ongoing poor performance. *Offset schemes should not encourage landholders to deliberately degrade or mismanage offset areas in order to increase the value from the offset.*	The conservation areas within the Parkside project will be managed to increase their ecological values over time and will not be deliberately degraded or mismanaged.
4. Offsets will complement other government programs. *A range of tools is required to achieve the NSW Government's conservation objectives, including the establishment and management of new national parks, nature reserves, state conservation areas and regional parks and incentives for private landholders.*	The proposed Parkside project mitigation and compensatory measures will complement other government programs for conservation in that it will address recovery plans and recommendations for management of weeds and feral animals. The southern portion of the conservation area, comprising 27.25ha of land, is proposed to be incorporated into the Gosford Coastal Open Space System (COSS). Those areas not incorporated are proposed to be funded and managed within a

Table B.1 ADEQUACY OF OFFSETS IN RELATION TO DECCW PRINCIPLES FOR OFFSETS

DECCW Principles for Offsets	Proposed Parkside Offsets
	community scheme which will exist in perpetuity.
5. Offsets must be underpinned by sound ecological principles.	The proposed Parkside project conservation areas will enhance and manage existing habitat and secure these habitats for biodiversity;.
They must:	
Include the consideration of structure, function and compositional elements of biodiversity, including threatened species	The proposed conservation areas will protect woodland and forest community types that will be removed from the subject land, as well as be enhanced, thus ensuring that ecological structure and function of representative communities in the locality will be maintained and improved. This includes supplementary planting with local or endemic species, and protecting and enhancing habitat for a range of threatened species such as threatened fauna, including the Powerful Owl, Yellow-bellied Glider and Grey-headed Flying-fox.
Enhance biodiversity at a range of scales	The proposed conservation areas will enhance biodiversity at the local scale by protecting a range of habitat types, including riparian and forest vegetation. Within the proposed conservation areas, understorey complexity and other habitat features such as logs, stags and tree hollows will be preserved and protected to encourage fauna and flora use of these habitats. The southern portion of the conservation areas is proposed to be incorporated into the Gosford COSS. Those areas not incorporated are proposed to be funded and managed within a community scheme which will exist in perpetuity.
Consider the conservation status of ecological communities	The proposed conservation areas will maintain and improve occurrences of EECs.
Ensure the long-term viability and functionality of biodiversity.	Within the proposed conservation areas, understorey complexity and other habitat features such as logs, stags and tree hollows will be preserved and protected to encourage fauna and flora use of these habitats. The southern portion of the conservation areas is proposed to be incorporated into the Gosford COSS. Those areas not incorporated are proposed to be funded and managed within a community scheme which will exist in perpetuity.
6. Offsets should aim to result in a net improvement in biodiversity over time.	The proposed conservation areas will result in a net improvement in riparian and forest communities over time, with commensurate benefits to threatened species.
Enhancement of biodiversity in offset areas	

Table B.1 ADEQUACY OF OFFSETS IN RELATION TO DECCW PRINCIPLES FOR OFFSETS

DECCW Principles for Offsets	Proposed Parkside Offsets
should be equal to or greater than the loss in biodiversity from the impact site. Setting aside areas for biodiversity conservation without additional management or increased security is generally not sufficient to offset against the loss of biodiversity. Factors to consider include protection of existing biodiversity (removal of threats), time-lag effects, and the uncertainties and risks associated with actions such as revegetation. Offsets may include enhancing habitat, reconstructing habitat in strategic areas to link areas of conservation value, or increasing buffer zones around areas of conservation value and removal of threats by conservation agreements or reservation.	The proposed conservation areas will protect areas of intact vegetation for the Parkside project in numerous locations. The proposed conservation areas will also enhance existing vegetation through management actions. There are also provisions for the installation of nest boxes within the conservation areas.
7. Offsets must be enduring – they must offset the impact of the development for the period that the impact occurs. *As impacts on biodiversity are likely to be permanent, the offset should also be permanent and secured by a conservation agreement or reservation and management for biodiversity. Where land is donated to a public authority or a private conservation organization and managed as a biodiversity offset, it should be accompanied by resources for its management. Offsetting should only proceed if an appropriate legal mechanism or instrument is used to secure the required actions.*	The southern portion of the conservation areas is proposed to be incorporated into the Gosford COSS. Those areas not incorporated are proposed to be funded and managed within a community scheme which will exist in perpetuity.
8. Offsets should be agreed prior to the impact occurring. *Offsets should minimise ecological risks from time-lags. The feasibility and in-principle agreements to the necessary offset actions should be demonstrated prior to the approval of the impact. Legal commitments to the offset actions should be entered into prior to the commencement of works under approval.*	The nature and extent of the proposed conservation areas will be agreed prior to commencement of the Parkside project. Management strategies will be implemented at the commencement of construction ensuring staged impacts on biodiversity are balanced by the benefits gained from improvement of the conservation areas.
9. Offsets must be quantifiable – the impacts and benefits must be reliably estimated. *Offsets should be based on quantitative assessment of the loss in biodiversity from the clearing or other development and the gain in*	The area of impact, types of communities and species to be impacted, extent of existing and future connectivity, condition of habitat and conservation status of ecological communities have been documented within the ecological assessment report. The report also

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DECCW Principles for Offsets	Proposed Parkside Offsets
biodiversity from the offset. The methodology must be based on the best available science, be reliable and used for calculating both the loss from the development and the gain from the offset. The methodology should include: *The area of impact* *The types of ecological communities and habitat/species affected* *Connectivity with other areas of habitat/corridors* *The condition of habitat* *The conservation status and/or scarcity/rarity of ecological communities* *Management actions* *Level of security afforded to the offset site.* *The best available information/data should be used when assessing impacts of biodiversity loss and gains from offsets. Offsets will be of greater value where:*	discusses the ecological values and area of the conservation areas. The proposed Parkside project makes provisions for the management of the conservation areas to ensure that there will be a net benefit in biodiversity values. A large part of the conservation areas is proposed to be incorporated into the Gosford COSS and would therefore be conserved in perpetuity. This security will ensure that there is a net gain in biodiversity in the wider locality in the long term. Areas not being incorporated into the Gosford COSS will be conserved in perpetuity within a community scheme.
They protect land with high conservation significance	The proposed Parkside project has high conservation significance in that they contain EECs, habitat for threatened species, known occurrences of threatened species and significant riparian habitats.
Management actions have greater benefits for biodiversity	The management actions that are proposed, such as weed management and cessation of cattle grazing have a high probability of providing a significant conservation benefit.
The offset areas are not isolated or fragmented	The Parkside project conservation areas adjoin a relatively large patch of vegetation connecting to Kincumber Mountain Reserve.
The management for biodiversity is in perpetuity (e.g. secured through a conservation agreement).	The southern portion of the conservation areas is proposed to be incorporated into the Gosford COSS, Those areas not incorporated are proposed to be funded and managed within a community scheme which will exist in perpetuity.
10. Offsets must be targeted. *They must offset impacts on the basis of like-for-like or better conservation outcome. Offsets should be targeted according to biodiversity priorities in the area; based on the conservation status of the ecological community, the*	The proposed Parkside offsets are targeted to deliver a like-for-like conservation outcome for EECs and threatened species. Within the proposed Parkside conservation areas, Lowland Rainforest EEC has been targeted. Habitat for threatened species identified in proposed development

Table B.1 ADEQUACY OF OFFSETS IN RELATION TO DECCW PRINCIPLES FOR OFFSETS

DECCW Principles for Offsets	Proposed Parkside Offsets
presence of threatened species or their habitat, connectivity and the potential to enhance condition by management actions and the removal of threats. Only ecological communities that are equal or greater in conservation status to the type of ecological community lost can be used for offsets. One type of environmental benefit cannot be traded for another: for example, biodiversity offsets may also result in improvements in water quality or salinity but these benefits do not reduce the biodiversity offset requirements.	footprint has also been targeted, including habitat for threatened birds, mammals and microchiropteran bats.
11. Offsets must be located appropriately. *Wherever possible, offsets should be located in areas that have the same or similar ecological characteristics as the area affected by the development.*	The Parkside conservation areas are located adjacent to development footprint and contains the same ecological characteristics as the area affected by the development.
12. Offsets must be supplementary. *They must be beyond existing requirements and not already funded under another scheme. Areas that have received incentive funds cannot be used for offsets. Existing protected areas on private land cannot be used for offsets unless additional security or management actions are implemented. Areas already managed by the government, such as national parks, flora reserves and public open space cannot be used as offsets.*	The proposed conservation areas have not been used previously as an offset. Therefore if approval is granted, the proposed conservation areas can be considered supplementary in that they will be proposed exclusively for the proposed Parkside project and will not be at that time already funded or managed for biodiversity value for another development proposal.
13. Offsets and their actions must be enforceable through development consent conditions, license conditions, conservation agreements or a contract. *Offsets must be audited to ensure that the actions have been carried out, and monitored to determine that the actions are leading to positive biodiversity outcomes.*	The proposed Parkside project conservation areas will be enforceable through development consent conditions and will be auditable to ensure that required actions have been carried out. Further security could be provided by way of a Voluntary Planning Agreement.