Department of Climate Change, Energy, the Environment and Water

Your ref: PAE-73538709
Our ref: DOC24/576414-1

Chris Eldred
Senior Planning Officer
Department of Planning, Housing and Infrastructure

By email: christopher.eldred@planning.nsw.gov.au

Dear Chris

Subject: BCS Response re Huntlee New Town – Stage 2 (SSD-70748466) - EIS

Thank you for your Major Projects Portal request dated 18 July 2024 seeking advice from the Biodiversity, Conservation and Science (BCS) Group of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) on Huntlee New Town – Stage 2 (SSD-70748466).

BCS have identified a number of issues, with details provided in Attachment 1. Key issues identified include:

- the Planning Secretary's Environmental Assessment Requirements (SEARs) have not been met in relation to biodiversity
- inadequate impact assessments have been prepared for all listed species and ecological communities affected by the proposed development
- the proposed development will exceed clearing of Central Hunter Riparian Forest beyond that approved under the original Major Project approval
- incorrect treatment of park amenities and infrastructure as 'retained vegetation'.

In BCS's view, in light of the issues raise, development of the site should not proceed in its current form. The proposed footprint should be refined as informed by through undertaking appropriate impact assessments. This should include a Species Impact Statement for impacted listed species.

If you have any further questions about this issue, please contact our Hunter Central Coast Planning Team at huntercentralcoast@environment.nsw.gov.au.

Yours Sincerely

Joe Thompson
Director Hunter Central Coast
Biodiversity, Conservation and Science

20 November 2024

Enclosure – Attachment 1

Attachment 1 - BCS Comments

Project Name

In preparing this advice BCS has reviewed the following documents:

- Planning Secretary's Environmental Assessment Requirements (SEARs)
- Ethos Urban (2024) *Environmental Impact Statement, Huntlee New Town Stage 2, Huntlee New Town, North Rothbury*, Submitted to the Department of Planning, Housing and Infrastructure on behalf of Huntlee Pty Ltd. (EIS)
- EIS appendices, including Appendix N: MJD Environmental (2024) *Additional Ecological Information Report Huntlee New Town – Stage 2*, Prepared for Huntlee Pty Ltd. (AEIR)
- RPS (2010). *Ecological Assessment Report – Huntlee*. Prepared for Huntlee Pty Ltd. September 2010 (EAR).

Key Assessment Issues

1.	*The EIS does not address all species listed in the SEARs.*	The SEARs require detailed assessment of the likely direct and indirect biodiversity impacts of the development, paying particular attention to 34 threatened species and two endangered ecological communities that are likely to occur. Of the species listed in the SEARs, the EIS has only assessed one (*Persoonia pauciflora*). The impact assessment of *Persoonia pauciflora* is not detailed and is not adequate. **Recommended action:** *Additional detailed impact assessments should be undertaken to address the likely direct and indirect biodiversity impacts of the development upon listed species and communities, paying particular attention to the list of 34 threatened species and two endangered ecological communities listed in the SEARs, plus any other threatened species known or suspected to occur.*
	Extent and Timing	Pre-determination

2.	*The action proposed is likely to have an adverse effect on the life cycle of Persoonia pauciflora such that viable local populations are likely to be placed at risk of extinction.*	In accordance with the 'Threatened Species Test of Significance Guidelines' (OEH 2018) and 'Threatened species assessment guidelines, the assessment of significance' (DECC 2007), a local population of a threatened plant species is defined as '*those individuals occurring in the study area or the cluster of individuals that extend into habitat adjoining and contiguous with the study area that could reasonably be expected to be cross-pollinating with those in the study area*'. The AEIR did not identify the pollinator for *Persoonia pauciflora* and therefore failed to define and assess the impacts to 'local populations' as defined by these guidelines. A study undertaken in 2015-2016 by The Australian Botanic Garden Mount Annan found that *Leioproctus incanescens* and *Leioproctus speculiferus* comprised over 90% of the recorded visits to *Persoonia pauciflora* flowers (ABG Mount Annan, 2017). *Apis mellifera* and *Amegilla cingulate* were also recorded visiting flowers. The effectiveness of *Apis mellifera* as a pollinator relative to native bees is uncertain (Botanic Gardens of Sydney 2024). Leioproctus (sub-genus

		Cladocerapis) bees are widely reported to be frequent visitors to eastern Australian Persoonias. The body size of Leioproctus species ranges between 4-16 millimetres (mm). Small solitary bees in this size range typically forage up to 75-125 metres (m) from their nest. While they are capable of travelling up to seven times this distance, it is rare and comes with a significant energy and resource cost (Hofmann et al 2020). The *Persoonia pauciflora* plants within the north of the study area are greater than 2 kilometres (km) from all other populations. Therefore, the northern plants are regarded as a separate local population. As the proposal intends to remove all known northern plants, based on current knowledge, the action proposed would result in a viable local population becoming extinct. **Recommended action:** *A Species Impact Statement (SIS) should be prepared for impacts to Persoonia pauciflora.* *Impacts to the northern population of Persoonia pauciflora should be avoided as far as possible*
	Extent and Timing	Pre-determination

3.	*Persoonia pauciflora may be placed at risk of extinction due to indirect impacts associated with high volumes of displaced Kangaroos*	As part of the *Persoonia pauciflora* translocation project being undertaken through the NSW Government's Saving our Species Program, trial planting sites were established in 2015. These sites trialled the survival rates of fenced and unfenced plants. Annual translocation monitoring in May 2024 reported that all eight unfenced mature trial plants were suffering from heavy macropod grazing at levels not previously encountered. These plants occur approximately 100m south of the Huntlee Stage 1 development area. In July 2024 BCS staff visited a large *Persoonia pauciflora* population off Tuckers Lane, approximately 800m south of the Stage 1 development area. Mature plants at this location were observed to be under significant stress due to intensive grazing pressure. In August 2024 BCS staff undertook targeted surveys within the Huntlee offset area closest to the Stage 2 development area (north of Hanwood Road). A full census of this site was last undertaken in 2021 at which time eight mature plants and 34 seedlings were recorded. The August 2024 survey attempted to find new plants and verify the presence of previously recorded plants. No new plants were recorded. Two of the eight mature plants remained alive, however were observed to be very close to dying. Just seven of the 34 seedlings could be found. One seedling appeared healthy, with the rest being heavily grazed, in poor health and suffering from insect attack. It is possible that additional young plants were alive, but missed as the small size and poor health made all detections difficult. These plants would be nearing the age where they can produce flowers and fruit, but the considerable defoliation is making this unlikely. By contrast, fenced translocated plants were observed to be healthy and producing flowers. The surveys and observations made from May 2024 to August 2024 suggest that the displacement of large quantities of kangaroos is causing significant damage to wild *Persoonia populations* across the

		species' entire range. The heavy grazing appears to be preventing the production of fruit. As the Stage 2 development is likely to further displace kangaroos, this indirect impact may be further exacerbated and prolonged over the next 10+ years of housing delivery. This indirect impact has potential to have an adverse effect on the life cycle of all remaining viable local populations such that the species is being placed at further risk of extinction. **Recommended action:** *The proponent should prepare a SIS for impacts to Persoonia pauciflora. The SIS should include a detailed assessment of indirect impacts and cumulative impacts, including the impacts from displaced kangaroos.* *Measures to manage grazing pressure on Persoonia pauciflora in offset areas should be developed and implemented for the construction period and an appropriate timeframe following construction, to be determined in consultation with BCS.*
	Extent and Timing	Pre-determination

4.	*Results of targeted surveys for Persoonia pauciflora do not represent the total number of plants being impacted.*	Due to the heaving grazing pressure described above, it is likely that young plants would be missed during targeted surveys. BCS is aware of at least one mature *Persoonia pauciflora* within the proposed development footprint that was missed during surveys. This plant is clearly visible from the boundary of the conservation area and occurs on the edge of a track. The absence of this plant from the results indicates that other plants are also likely to have been missed. The limitation of detectability should be a factor when assessing the impacts of the populations and habitats being lost. **Recommended action:** *The size of the Persoonia pauciflora population to be impacted by the Stage 2 development is greater than what is currently stated in the AEIR.* *The proponent should prepare a SIS for impacts to Persoonia pauciflora that considers all direct and indirect impacts to the species.*
	Extent and Timing	Pre-determination

5.	*The names and qualifications of staff is not specified*	The AEIR omits the names and qualifications of the staff who undertook the surveys. Hence, the experience of the staff undertaking the work is unknown. **Recommended action:** *The proponent should provide the names and qualifications of all staff who contributed to biodiversity assessment.*
	Extent and Timing	Pre-determination

6.	*The potential outcomes of translocation efforts are not a factor when assessing the impacts of the proposal.*	The AEIR makes several references to translocation work that has occurred through the NSW Government's Saving our Species program, including a statement in the 7-part test that the '*identified individuals from contemporary surveys are available to be harvested and further population security stocks installed within adjacent conservation reserves*'. The NSW Government's policy on translocations is that they are no substitute for in situ conservation of extant ecosystems and populations, which may be irreplaceable if lost (DPIE, 2019). It is also inappropriate for the proponent to burden NSW Government with the responsibility of mitigating any impacts associated with the proposed development, especially high-risk actions, such as translocations. The proposal should only be assessed on the avoidance, mitigation and offset measures which are clearly described, adequately resourced and the proponent is responsible for implementing. **Recommended action:** *The proposal should not rely on translocation, harvesting and salvage as a measure to mitigate the impacts to threatened flora. Impacts to threatened flora should be avoided wherever possible.*
	Extent and Timing	Pre-determination

7.	*Impacts to Pterostylis chaetophora have not been fully considered and are unlikely to represent the total number of plants being impacted*	When applying the 7-part test, DECC (2007) states *'it is important that the applicant/proponent not only has an understanding of the species' life cycle, but also an understanding of the way in which a species makes use of its habitat, the way this may change at particular times or in certain seasonal conditions, and whether the life cycle is dependent on a particular disturbance'*. In early October 2023 the NSW *Pterostylis chaetophoroa* Accountable Officer (AO) conducted a search of all known locations of the species within the Huntlee Conservation area immediately adjacent to the Stage 2 development area. Only a few individuals could be found at one known location. A revisit occurred by the AO in August 2024 and 53 basal rosettes were found in four locations. An additional visit occurred in October 2024 and 24 flowering plants could be found at two of the locations. Whilst the 2023 targeted surveys within the Stage 2 development area was appropriate for confirming presence of *Pterostylis chaetophora*, the numbers recorded do not reflect the actual number and extent of impact to this species. It is highly likely that several more plants and populations occur within the development footprint, but went undetected due to dormancy, wilting in the dry weather or grazing of flowers. The size of the *Pterostylis chaetophora* population to be impacted by the Stage 2 proposal is greater than what is currently stated in the AEIR. The assessment of impacts within the AEIR can therefore not be relied upon to determine the application and further assessment is recommended. Due to the unfavourable conditions in 2023, additional surveys in more favourable survey seasons are needed. **Recommended action:**

		Undertake additional surveys for Pterostylis chaetophora to understand the actual impacts to the *Pterostylis chaetophora* local populations.
	Extent and Timing	Pre-determination

8.	*The action proposed is likely to have an adverse effect on the life cycle of Pterostylis chaetophora such that viable local populations are likely to be placed at risk of extinction.*	In accordance with the Threatened Species Test of Significance Guidelines OEH (2018) and DECC (2007) a local population of a threatened plant species is defined as '*those individuals occurring in the study area or the cluster of individuals that extend into habitat adjoining and contiguous with the study area that could reasonably be expected to be cross-pollinating with those in the study area*'. The AEIR failed to identify the pollinator for *Pterostylis chaetophora* and therefore failed to define and assess the impacts to 'local populations'. Pterostylis species are pollinated by Fungus gnats (order Diptera). Gnats only disperse short distances and adults have a life span of seven to ten days. The shortest distance between the recorded *Pterostylis chaetophora* populations within the proposed footprint is ~213m and these populations are separated from recorded populations within conservation areas by >400m. Based on current information, there are likely to be several isolated local populations that will be completely removed by the proposal. Therefore, the action proposed is likely to result in viable local populations becoming at risk of extinction. **Recommended action:** The proponent should prepare a Species Impact Statement (SIS) for impacts to *Pterostylis chaetophora*.
	Extent and Timing	Pre-determination

9.	*The current proposal exceeds the clearing of Central Hunter Riparian Forest Endangered Ecological Community (EEC) beyond that approved by the Major Project Approval.*	In Section 6 of the AEIR, under sub-heading ***Central Hunter Riparian Forest (CHRF)***, the following statement is made: *Section 5.4 including Table 5-3 of the EAR states that, 'impacts could occur to the majority of extant vegetation within the proposed Huntlee development precincts which includes areas of EEC's'.* This quote is missing part of the original sentence and failed to include an ellipsis, incorrectly suggesting that the sentence is complete and used in context. To avoid confusion the relevant quote from Section 5.4 of 2010 EAR is provided below. **5.4 Vegetation Communities** Impacts could occur to the majority of extant vegetation within the proposed Huntlee development precincts, which includes areas of EEC's, mainly the Central Hunter Ironbark - Spotted Gum - Grey Box Forest. Two other EEC's namely Central Hunter Riparian Forest and Hunter Lowlands Redgum Forest, occur predominately within the development area, however open space and riparian corridors has been allocated over large proportions of these communities to see the majority retained and managed for their ecological value. The Wollombi Redgum - River Oak Woodland and Hunter Valley Dry Rainforest will most likely be entirely retained within the conservation lands and a riparian corridor along Black Creek.

The above extract highlighted in blue clearly shows that the '*majority of extant vegetation*' is mostly comprised of Central Hunter Ironbark-Spotted Gum- Grey Box Forest, not CHRF.

The part of the extract shown in yellow then states that the '*majority*' of CHRF '*within the development area*' will be *'retained and managed for their ecological value*'.

The AEIR uses this sentence under the CHRF sub-heading and omits the remainder of the paragraph making it lose relevant context. This should be rewritten.

Also provided in the 2010 EAR is 'Table 5-3: Impacts on Vegetation Communities'. Given the name of this Table, it is the obvious point of reference for identifying the magnitude of residual impacts (i.e. after avoidance and mitigation) of the original approval. To avoid confusion, Table 5-3 has been provided below.

Table 5-3: Impacts on Vegetation Communities

Community	Huntlee Impact Details	Reasoning
Hunter Valley Dry Rainforest (EEC)	Reserved in entirety within proposed conservation area.	Reserved in entirety. Potential for weed removal and rehabilitation of known occurrence to significantly improve the condition of this community.
Central Hunter Riparian Forest (EEC)	Approx 62ha of this community occurs at Huntlee outside proposed conservation zones. This figure is likely to include Open Space areas and retained creekline corridors, so the actual figure is likely to be approximately half this figure (i.e @27ha.) In addition to this figure, approx 38ha is contained within dedicated conservation reserve areas on site.	Approx 2/3rds of occurrence likely to be retained within the Huntlee site, including 38ha within dedicated conservation reserves. This community is also likely to be enhanced in extent via proposed revegetation works in key areas around Black Creek, associated tributaries and floodplain area. However, with information to hand it does not appear that this community type occurs within any of the proposed conservation offset lands. This community specific shortfall needs to be considered against the numerous beneficial holistic outcomes provided by the development conservation offsets package, including large positive conservation excesses for the vast majority of vegetation communities relevant to the package.

It is clear from Table 5-3 that the original Huntlee concept proposed to limit impacts to CHRF to 27 hectares (ha) (highlighted in yellow), *'approximately half'* of the 62 ha within the Huntlee development area. This would mean that approximately 35 ha (62 ha-27 ha) within the development area would be avoided. This is '*in addition*' to the 38 ha within the conservation reserve areas. The commitment to avoid the majority of the CHRF is then reiterated by stating that approximately '2/3rds' of the CHRF occurrence is likely to be retained (highlighted in blue). Two thirds retention of CHRF can only be achieved through the 38 ha conservation area, plus an additional ~35 ha of avoidance within the development area, leaving an impact footprint of ~27 ha.

The AEIR suggests that the EAR only ever intended for the retention of 37.45 ha, enabling up to 62 ha of impact. This is incorrect as it is inconsistent with Table 5-3 of the EAR. It is also inconsistent with the maintain or improve requirements of the Part 3A Assessment.

The Stage 2 project proposes a cumulative total loss of CHRF of 52.21 ha. This is inconsistent with the EAR and major project approval.

Recommended action:

		The proposal should be revised to limit any proposed additional impacts to CHRF beyond the originally approved 27ha impact threshold as this is not covered by the S34 Certification. *If this cannot be achieved, assessment of additional impacts is required under the Biodiversity Conservation Act 2016.*
	Extent and Timing	Pre-determination

10.	*Indirect impacts have not been adequately considered against avoidance and mitigation.*	It is a requirement of the 7-part test of significance to consider indirect impacts upon listed species and ecological communities. OEH (2018) states: > *Indirect impacts occur when project-related activities affect species or ecological communities in a manner other than direct loss within the subject site. Indirect impacts may sterilise or reduce the habitability of adjacent or connected habitats. Indirect impacts can include loss of individuals through starvation, exposure, predation by domestic and/or feral animals, loss of breeding opportunities, loss of shade/shelter, reduction in viability of adjacent habitat due to edge effects, deleterious hydrological changes, increased soil salinity, erosion, inhibition of nitrogen fixation, weed invasion, noise, light spill, fertiliser drift, or increased human activity within or directly adjacent to sensitive habitat areas. As with direct impacts, consideration must be given, when applying each factor, to all of the likely indirect impacts of the proposed activity or development. When applying each factor, both long-term and short-term impacts are to be considered.* 'Retained vegetation' of Huntlee Stage 2 includes a series of small, isolated patches of riparian vegetation that are just 25 m in width. These are treated as being avoided, with no consideration of the likely indirect impacts they may be exposed to. Factors that are likely to be relevant to these patches include edge effects, deleterious hydrological changes, erosion, weed invasion and increased human activity. These small narrow patches include 2.52 ha of potential additional impact to the Central Hunter Riparian Forest EEC. The EIS recognises the impacts of urban heat as a result of the Huntlee Stage 2 development. The EIS proposes measures to 'minimise' urban heat, but there is no suggestion that it will be entirely eliminated though any mitigation measures. The effects of urban heat may be relevant to several threatened species and listed ecological communities that occur within conservation areas and avoidance areas. **Recommended action:** *Additional impact assessments are undertaken to address the threat of indirect impacts upon listed species and ecological communities.*
	Extent and Timing	Pre-determination

11.	*Areas proposed to be occupied by*	Appendix I of the EIS appears to show park amenities for the area named 'Black Creek Park'. These park amenities appear within the

	park amenities are incorrectly treated as 'retained vegetation' in ecological impact assessments.	areas identified in the AEIR as 'retained vegetation'. Park infrastructure proposed for Black Creek Park include an off-leash dog park, playground equipment, managed turf kickaround space, walking trails that provide physical access to the creek, a creekside picnic area, seating, paved areas and a bike skills pump track. Any proposed infrastructure needs to be assessed as impacted and not part of the 'retained vegetation' area. Any other areas of Black Creek Park that may be removed, modified, fragmented or isolated from direct or indirect impacts needs to also be clearly identified and assessed. '*Reinstatement of the endemic native grasslands and trees…*' of Black Creek Park (appendix I of the EIS) also suggests that the retained vegetation will be modified as there is no naturally occurring grassland vegetation types within the locality. Any areas that are not identified as impacted are assumed to be avoided and excised for the Huntlee Stage 2 development footprint and any associated public use. Retained vegetation would be subject to a separate assessment under the BC Act if impacts to these areas are proposed in the future. **Recommended action:** *The proponent should revise the ecological impact assessment and/or footprint to ensure all proposed park amenities and facilities are not within 'retained vegetation'.*
	Extent and Timing	Pre-determination

List of references:

ABG Mount Annan (2017) *North Rothbury Persoonia (Persoonia pauciflora) conservation research program*, Unpublished report, The Australian Botanic Garden Mount Annan (Final Report August 2017)

Botanic Gardens of Sydney (2024) *Persoonia conservation*, https://www.botanicgardens.org.au/our-science/what-we-do/conservation-and-horticulture-australian-plantbank/key-projects-australian-0 (date accessed 06/11/2024).

DECC (2007) *Threatened species assessment guidelines, The assessment of significance*, Department of Environment and Climate Change NSW

DPIE (2019) *Translocation operational policy*, NSW Department of Planning, Industry and Environment, https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Threatened-species/translocation-operational-policy-190552.pdf (date accessed 06/11/2024).

Hofmann MM, Fleischmann A, Renner SS (2020) *Foraging distances in six species of solitary bees with body lengths of 6 to 15 mm, inferred from individual tagging, suggest 150 m-rule-of-thumb for flower strip distances*. J Hymenopt Res 77:105

OEH (2018) *Threatened Species Test of Significance Guidelines*, Office of Environment and Heritage NSW