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Dear Leah,

RE – Professional opinion on the Palmview Urban Development Investigation – Ecological Assessment (18-472) – FINAL

NGH Environmental have been engaged to provide a professional opinion on the ecological assessment component of the Urban Development Investigation conducted under Special Condition 2 of the *Palmview Structure Plan Area Infrastructure Agreement (IA) 2010*.

The scope of work has been to review the (Draft) Final Assessment Report prepared by Sunshine Coast Council and provide an expert professional opinion as to whether the Council's findings are practically reasonable for a local government to make with respect to:

1. Land that is an ecologically important area under Special Condition 2.2 (a)(i) of the Palmview IA.
2. Requirements for the Non-urban open space infrastructure network.

In forming my professional opinion, I have had regard for the following documents, with any additional literature referenced throughout:

- Palmview IA
- Palmview Structure Plan
- Investigation Areas B North, B South and C submissions (dated 2018)
- Peer review reports
- Peer review report representations
- (Draft) Final Assessment Report (version provided 17 April 2019).

The following contains general comments formulated through my review of the above, as well as my professional opinion on the findings in Council's (Draft) Final Assessment Report.

Separate chapters relate to each of Area B North, Area B South, and Area C.

Yours sincerely,

Beth Kramer (Principal Environmental Consultant)

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NGH Environmental

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1 INVESTIGATION AREA B NORTH

Urban Investigation Area (UIA) B North comprises 39 hectares (ha), of which 13.25 ha is contended by the landowner to be 'land suitable for urban development' under Special Condition 2.2 of the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No 2)*. The proposed development footprint is 9.9 ha (including roads). Note that the proposed development footprint is also referenced in the landowners' 2018 submission as being 13 ha.

All of the land proposed for development in Area B North is identified on Other Plans Map OPM P2(b) as being an ecologically important area, being identified as either a Regional Habitat Corridor (State), a Local Habitat Corridor or a 100 m buffer from State Significant Vegetation.

The Structure Plan (performance outcome 11) requires that development provides for a minimum of 483.4 ha of land for ecological protection and rehabilitation purposes. Where this cannot practically be achieved within the Master Planned Area, performance outcome 11 has provision for this 483.4 ha to be provided partly within the Master Planned Area and partly in areas proximate (within 20km) to the Master Planned Area. Offsets (Structure Plan (Table 10.2.4.3C)) will be required at a 1:1 ratio for any reduction in environmental enhancement area type B, at 1.5:1 for environmental enhancement area type B, and at 2 for 1 for a reduction in regional ecosystem (RE) 12.3.5 in the environmental protection area.

1.1 NON-URBAN OPEN SPACE INFRASTRUCTURE NETWORK - VALUES

Urban Investigation Area B North is designated as non-urban open space infrastructure network on the Other Plan Map OPM P12 of the Palmview Structure Plan and contains the following elements:

1. **Environmental Protection Area**, designated as such because it contains land with the highest in-situ environmental value, including one or more of the values in Table 1-1 below.
2. **Environmental Enhancement Area**, identified because it provides continuity between habitat and has been determined to represent a high priority for ecological rehabilitation:
 - a. **Type A** - an area undergoing natural regeneration,
 - b. **Type B** - an area located such that it provides a strategic opportunity for the creation of a large and intact ecological area.

Table 1-1 Values considered as Environmental Protection Areas (*Palmview Master Planned Area non-urban open space infrastructure network*), and those mapped within UIA B North

Values	Details of value in UIA Area B North (from JWA 2017)
an endangered regional ecosystem, of concern regional ecosystem or least concern regional ecosystem under the <i>Vegetation Management Act 1999</i>	Least Concern Regional Ecosystem (RE) 12.3.5
habitat or likely habitat for scheduled species under the Nature Conservation (Wildlife) Regulation 2006	Wallum Rocketfrog (<i>Litoria freycineti</i>) is known to occur. An additional six threatened fauna species under the NC Act are considered by JWA as likely to occur - Wallum sedge frog (<i>L. olongburensis</i>), Koala (<i>Phascolarctos cinereus</i>), Tusked frog (<i>Adelotus brevis</i>), Striped blind snake (<i>Anilius silvia</i>), Glossy black-cockatoo (<i>Calyptorhynchus lathami</i>); and Wallum froglet (<i>Crinia tinnula</i>). No threatened flora species were identified and there does not appear to have been an assessment of the likelihood that threatened flora species are present.
areas or likely areas of listed threatened species, listed threatened ecological communities, protected critical habitat or listed migratory species under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Wallum Sedgefrog (<i>L. olongburensis</i>) is known to occur. JWA consider that Koala and Grey-headed flying fox (<i>Pteropus poliocephalus</i>) are also likely to occur, along with eight migratory (or marine, noting the recent de-listing of Rainbow Bee-eater from migratory list).

Values	Details of value in UIA Area B North (from JWA 2017)
	No threatened flora species were identified and there does not appear to have been an assessment of the likelihood that threatened flora species are present.
essential habitat as mapped by the State government for the purposes of regulating vegetation clearing under the <i>Vegetation Management Act 1999</i>	Essential Habitat for the Wallum Froglet (<i>Crinia tinnula</i>) and Wallum Rocketfrog (<i>Litoria freycineti</i>) aligns with remnant vegetation extent.
a spring under the <i>Water Act 2000</i> ;	n/a
stream orders 3, 4 and 5 of watercourses under the <i>Water Act 2000</i>	Sippy Creek (stream order 4) runs along the boundary of UIA B North.
a coastal wetland, tidal waters, erosion prone area or coastal management district under the <i>Coastal Protection and Management Act 1995</i>	n/a
a wetland as mapped by the State government in partnership with the Commonwealth Government through the Queensland Wetlands Program	High Ecological Significance wetland areas
habitat for flora or fauna species of local ecological significance	Not addressed

1.2 CONSIDERATION OF ISSUES – UIA B NORTH

The area of UIA B North which the landowner wishes to develop is:

- identified as an ecologically important area on Other Plans Map OPM P2(b)
- part of the 483.4 ha required to be provided as non-urban open space infrastructure network to offset urban development in the Palmview Master Planned Area
- identified as environmental protection area and environmental enhancement area (Type A and Type B) on the Other Plans Map OPM P12.

1.2.1 Consideration of buffers

The landowner is proposing that buffers to State significant vegetation be 50 m in the north east, 100 m in the east, and between 39 m and 172 m from the property boundary along Sippy Creek. These were set at 100 m in the Structure Plan.

UIA B North submission (page 8, 2018) states that a 100 m buffer is proposed to be maintained to Sippy Creek in the south of the site. In actual fact, the proposed Sippy Creek buffer ‘averages’ more than 100 m width, but is much narrower than this in many areas. The buffer to Sippy Creek should be a minimum of 100 m, as measured from the high bank, or to the edge of the State significant vegetation (as required in the Structure Plan).

Buffers serve to alleviate impacts on environmental values from adjacent land uses, for example by protecting water quality, limiting trampling/physical damage, and reducing light and noise impacts. Buffers can also form part of the core area necessary for persistence of environmental values, i.e. by providing foraging habitat, enabling refuge from flood events, and expanding wildlife activity beyond areas of preferred habitat (McAlpine et al. 2007).

It would need to be demonstrated that a buffer of only 39 m to Sippy Creek can fulfil the required buffering functions.

Standards for buffers which are relevant to UIA B North include:

From *SPP State Interest Guideline - Biodiversity AO 3.1* -

1. A buffer for an area of state environmental significance (wetland protection area) has a minimum width of 50 m where the area is located within an urban area

From *Sunshine Coast Environment and Liveability Strategy (2017)* -

2. Buffers around the perimeter of natural wetlands and waterbodies are fully vegetated with suitable native plants to at least the following widths:
 - a. Urban: default – 50m, significant – 100m
3. Opportunities for wider vegetated buffers are investigated where:
 - a. they would build connectivity between biodiversity habitat areas
4. Where a recreation outcome is desirable, a minimum 15-30 m corridor to the riparian buffer is provided.
5. Infrastructure, stormwater treatment assets and cleared recreational areas are located outside of wetland buffer areas.

1.2.2 Consideration of proposed conveyancing channel

The landowner is proposing to include a flood conveyance channel in the buffer to Sippy Creek. This is not in keeping with *Sunshine Coast Environment and Liveability Strategy (2017)*, which requires stormwater treatment assets to be located outside buffer areas. It is also not in keeping with Performance Outcome 26 (Structure Plan) which requires that ‘development ensures that the stormwater infrastructure network **does not concentrate stormwater infrastructure including treatment, conveyance and storage within non-urban open space infrastructure** other than in the Environmental transition area where limited to soft elements of water sensitive urban design of stormwater infrastructure such as grass swales and compatible with the primary function of the Environmental transition area’.

The ‘Design Approach’ (page 33 of the landowner’s 2018 submission) suggests that the entirety of all buffer areas will be vegetated, with regional ecosystem native plant species found on site planted for buffering, habitat, shade, micro-climate control, visual cues, amenity and pulchritude. This approach to vegetated buffers aligns with relevant standards (i.e. *Environment and Liveability Strategy*).

The same report also notes that earthworks on the site have already been completed to facilitate flood conveyance (page 33). This is believed to be incorrect.

The cut and fill drawing (Allan and Dennis, Figure 5, page 216 of the landowner’s 2018 submission) suggests that required cut will be a maximum of 4.4 m, where existing AHD is 8 m and desired AHD is 3.6 m. The gradient and treatment of batters is unclear from the material reviewed and therefore it is difficult to comment on potential limitations to fauna movement as a result of the conveyancing channel. It is also unclear whether there is likely to be permanent or frequent standing water within the channel.

The conveyancing channel could be prohibitive to fauna movement by creating a physical barrier, for example where there is:

- a hardstand/gravel substrate or other constructed material (i.e. for erosion control)
- standing water
- a steep batter
- weed infestations.

This would be particularly undesirable in the east of UIA B North, where fauna movement is important between Sippy Creek through to Lower Mooloolah River Environmental Reserve and Mooloolah River National Park. It does appear that the cut in this region will be less, however there appears to be a requirement for fill, if the land needs to be brought from AHD 0/1 m to AHD 4 m.

In addition to physical barriers, the cut/fill necessary to construct the conveyance channel is likely to impact on hydrology.

1.3 RECOMMENDATIONS FOR UIA B NORTH

1.3.1 Opinion on Council's findings

Table 1-2 Opinion on Council's findings in respect of land that is an ecologically important area under Special Condition 2.2 – Area B North

Section 8.6 - Council findings Investigation Area B North	Professional opinion
In conclusion, Council has found that the portion of Investigation Area B (North) west of the drainage channel shown as suitable for urban purposes on Figure 18 is not an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview IA subject to the following requirements:	Agree
i. provision of a 100m buffer to the remnant vegetation in the north-western corner of the site;	Agree – 100m vegetated buffer to the edge of the State significant vegetation See Section 1.2.1.
ii. provision of a minimum 100m buffer along the full extent of Sippy Creek;	Agree – 100m vegetated buffer to the edge of the State significant vegetation See Section 1.2.1.
iii. conveyance channel is located outside of the 100m buffers;	Agree
iv. buffering of the existing drainage channel in the middle of the site and the rehabilitation of all land to the east of the drainage channel;	Agree
v. no development that would require the road connection (emergency or other) through to Claymore Road on the eastern boundary;	Agree
vi. no stormwater infrastructure or WSUD is to be located within the 50m buffer to ecologically important areas;	Unclear what this refers to; as the points above refer to a 100m buffer to ecologically important areas. Suggest remove '50m', or note that this could be placed in the outer 50m of a 100m buffer?
vii. proposed development is limited to compatible uses such as passive recreation.	Agree

1.3.2 Summary of key points

Key points considered during the formation of my professional opinion are summarised below. These may be appropriate for Council to include as part of their Final Assessment Report chapter 'Ecologically Important Area Assessment Investigation Area B North'.

- I agree with BAAM (2019) that there is an area in the west which could be considered potentially suitable for urban development, so long as:

- Sufficient buffers (see below) are provided to ecologically important areas
- Stormwater treatment infrastructure is located outside of these buffers, and conveyancing channels/associated earthworks do not create an insurmountable barrier to wildlife movement.
- Vegetated buffers to Sippy Creek should be applied to the edge of the ecologically important areas OR to the high bank, rather than to the Lot boundary/centreline.
- Buffers should be a minimum of 100 m to the ecologically important area along Sippy Creek, with regard to:
 - consistency with the 100 m buffer to significant wetlands in urban areas, as recommended in the *Sunshine Coast Environmental and Liveability Strategy*.
 - Consistency with the 100 m buffer prescribed in the Structure Plan.
 - Enhancing the existing wildlife corridor, which will further build connectivity along Sippy Creek.
- In accordance with the *Environment and Liveability Strategy* and Performance Outcome 26 (Structure Plan), stormwater treatment infrastructure (including conveyance) should be located outside of the non-urban open space infrastructure network.
- Stormwater infrastructure (and associated cut/fill) must not present a barrier to wildlife movement between Sippy Creek, Lower Mooloolah River Environmental Reserve and Mooloolah River National Park; nor should it impact on natural hydrological processes.
- The non-urban open space network at UIA B North was designed to consider future functionality as well as current status, providing contingency for a changing climate (refuge, wildlife movement, shifts to vegetation communities and flora species' range). This is particularly relevant in the east of UIA B North, which together with UIA D/Lower Mooloolah Conservation Reserve will provide a variety of vegetation types, across various stages of regeneration, maximising the suitability for a range of flora and fauna species.

2 INVESTIGATION AREA B SOUTH

UIA B South is 21.4 ha shown as an ecologically important area on the Other Plan Map OPM P2(b) of the Palmview Structure Plan, due to the presence of State Significant Vegetation and a 50 m buffer to State Significant Vegetation.

The landowner proposes to translocate 11.7 ha of the State Significant Vegetation (heathland vegetation - RE 12.3.13) from within UIA B (South) to a suitable offset area outside of the Palmview master planned area. The environmental offset ratio set in the Structure Plan (Table 10.2.4.3C) requires that this vegetation community be offset at a 1.5:1 multiplier.

2.1 NON-URBAN OPEN SPACE INFRASTRUCTURE NETWORK - VALUES

The Other Plan Map OPM P12 of the Palmview Structure Plan designates UIA B South as non-urban open space infrastructure network. The intent for Area B south includes:

3. **Environmental Protection Area**, designated as such because it contains one or more of the values in Table 1-1 below.
4. **Environmental Enhancement Area - Type A**: an area undergoing natural regeneration, identified because it -
 - a. provides continuity between habitat;
 - b. has been determined to represent a high priority for ecological rehabilitation.
5. **Environmental Transition Area**: an area required to separate and buffer the environmental protection area and the environmental enhancement area from the sources of environmental impacts and protect important habitat corridors.

Table 2-1 Values considered as Environmental Protection Areas (*Palmview Master Planned Area non-urban open space infrastructure network*), and those mapped within UIA B South

Values	Details of value in UIA Area B South (from JWA 2018)
an endangered regional ecosystem, of concern regional ecosystem or least concern regional ecosystem under the <i>Vegetation Management Act 1999</i>	Least Concern RE 12.3.13 Least Concern RE 12.3.5
habitat or likely habitat for scheduled species under the Nature Conservation (Wildlife) Regulation 2006	No threatened species records found by JWA (2018), although Wallum Sedgefrog and Wallum Rocketfrog found in previous study.
areas or likely areas of listed threatened species, listed threatened ecological communities, protected critical habitat or listed migratory species under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Suitable habitat for 11 threatened fauna species and 8 migratory fauna species. No threatened flora species were identified and there does not appear to have been an assessment of the likelihood that threatened flora species are present.
essential habitat as mapped by the State government for the purposes of regulating vegetation clearing under the <i>Vegetation Management Act 1999</i>	Essential habitat for Wallum Froglet (<i>Crinia tinnula</i>) and Wallum Rocketfrog (<i>Litoria freycineti</i>) within the regulated vegetation.
a spring under the <i>Water Act 2000</i> ;	n/a
stream orders 3, 4 and 5 of watercourses under the <i>Water Act 2000</i>	n/a
a coastal wetland, tidal waters, erosion prone area or coastal management district under the <i>Coastal Protection and Management Act 1995</i>	n/a
a wetland as mapped by the State government in partnership with the Commonwealth Government through the Queensland Wetlands Program	High ecological significance wetlands
habitat for flora or fauna species of local ecological significance	Not addressed

2.2 CONSIDERATION OF ISSUES – UIA B SOUTH

The area of UIA B South which the landowner wishes to develop is:

- identified as an ecologically important area on Other Plans Map OPM P2(b)
- part of the 483.4 ha required to be provided as non-urban open space infrastructure network to offset urban development in the Palmview Master Planned Area
- identified as environmental protection area, with a buffer that is environmental transition area on the Other Plans Map OPM P12.

2.2.1 Consideration of whether translocation is appropriate

The landowner makes the proposition that translocation off-site of 11.7 ha of RE 12.3.13 will ultimately result in a far superior environmental outcome, as it could 'form part of a much larger and better-connected habitat patch' (JWA 2018, page 41). The reasoning for this approach can be summarised as:

1. The patch in question is isolated
2. Adjacent urban development will encroach on the heathland, impacting on long term health and viability.

Connectivity

The above reasoning assumes that UIA C will be determined to be suitable for urban development. Any urban development in UIA C would only be possible if connectivity between UIA B South and Mooloolah River was able to be maintained (and enhanced). Therefore, any urban development in UIA C will not isolate UIA B South.

The above reasoning also assumes that connectivity to the north (to Sippy Creek) will be 'removed as development progresses in Area B' (page 2 of Innovative Planning Solutions submission; dated 29 October 2018). As noted by BAAM in their peer review (2019), an effective ecological landscape contains a variety of habitats. There is appropriate wildlife crossing infrastructure installed at Peter Crosby Way. To the north is open space, which can facilitate wildlife movement, especially for more mobile species, such as Koala, or Swamp Wallaby. Wildlife movement is proven across a range of land use zones, with retained (or restored) habitat features such as rocky outcrops, trees, or even shrubs able to function as 'stepping stones' (Wiens 2009).

Threatened frogs

Threatened acid frog species are known to expand and contract their range according to conditions. At Caloundra South, the EPBC Act Vulnerable Wallum Sedgefrog was found in depressions created by pine forestry, isolated sedge clumps and areas with dense exotic grasses when fauna surveys were conducted following extreme wet weather (Stockland 2016). Wallum Sedgefrog is capable of dispersing and recolonising over distances up to 500 m, where suitable movement corridors are available (Lewis and Goldingay 2005). Meyer et al. (2006) note that Wallum Froglet and Wallum Rocketfrog have been recorded in rainforest, eucalypt forest and eucalypt woodland, some distance from water.

Survey results are likely to vary depending on recent rainfall. JWA note that conditions were too cold in the August 2018 survey and were not suitable for frog surveys. Previous survey (July 2014) was also at an unsuitable period for frogs. Survey effort on the 10th March 2017 was during hot and dry weather conditions with no recorded rainfall during the survey. No targeted frog surveys have been undertaken on the site.

Given the suitability of the habitat, a precautionary approach should be taken, and it should be assumed that threatened acid frogs are present in UIA B South. They could reasonably be expected to use the adjacent woody vegetation, as well as potentially the cleared paddocks. Any translocation, if determined to be appropriate, would need to consider how to also translocate the fauna (amphibians, as well as other family groups) which relies on RE 12.3.13, including those species which periodically move into adjacent habitat.

Viable vegetation patch size

The patch of RE 12.3.13 is considered to be in good condition with no weed incursion. The adjacent vegetation (ground truthed as 12.3.5a) is considered to be in moderate condition, despite impacts from cattle and altered hydrology (JWA 2018).

The City of Gold Coast undertook a study to determine the minimum viable patch size of various vegetation communities, as a criteria for inclusion in the City's conservation estate (Chenoweth EPLA, 2009). Their method was based on the ecological sensitivity of each vegetation type along with estimated minimum reservable area, considering the viability of comparable remaining patches. RE 12.3.13 is not specifically included in this report, as this vegetation community is no longer represented within Gold Coast City, where vegetation in alluvial environments has been significantly impacted by historical clearing. Of relevance to UIA B South, Chenoweth EPLA (2009) concluded that minimal viable patch size ranged from 0.2 ha, with the largest minimum size being 10 ha for RE 12.3.5 only. Other alluvial RE types were found to be suitable for reserves at a minimum 5 ha patch size. This would suggest that the 11.7 ha of RE 12.3.13 at UIA B South is a viable and sustainable patch in its own right.

Sunshine Coast Council set desired standards of service for environment reserves within the Environment and Liveability Strategy 2017. Bushland reserves (comparable to UIA B South) are ideally >20 ha in size.

The area of RE 12.3.13 is therefore considered to be a viable patch size for this vegetation type. Combined with the adjacent remnant vegetation, the reservable area is 21.4 ha, which meets the minimum bushland reserve size recommended in the Environment and Liveability Strategy 2017.

The landowner's submission also states that UIA B South is currently in moderate to good condition, despite encroachment by cattle and an altered hydrological regime. BAAM (2019) suggests that condition is in fact good to excellent. Management requirements for UIA B South (from the Palmview Structure Plan 2018) are to retain and enhance remnant vegetation, re-establish habitat connectivity through mainly active mechanisms and protect habitat from the impacts of development. Given the relatively good baseline ecological condition, this management approach can reasonably be expected to further improve condition and therefore increase ecological functionality.

If the landowner is concerned about sustaining UIA B South's ecological values given surrounding urban development, perhaps buffer width and design should be reconsidered so that buffers to UIA B South are able to sufficiently serve their purpose of limiting impacts from adjacent land uses.

It is unclear how the landowner would propose to maintain the viability of the remaining State significant vegetation, given increased edge effects and encroachment from their desired urban development. It is unclear what buffers are proposed to the remaining State significant vegetation if the Subject Area of UIA B South is determined to be suitable for urban development.

The future functionality of UIA B South needs to also be considered as well as the current status. Retention of this area will also provide contingency for a changing climate (refuge, wildlife movement, shifts to vegetation communities and flora species' range).

2.3 RECOMMENDATIONS FOR UIA B SOUTH

2.3.1 Opinion on Council's findings

Table 2-2 Opinion on Council's findings in respect of land that is an ecologically important area under Special Condition 2.2 – Area B South

Section 20.5 - Council findings Investigation Area B South	Professional opinion
Council's finding is that Investigation Area B (South) is not considered suitable for urban development because it is included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned	Agree

Section 20.5 - Council findings Investigation Area B South	Professional opinion
Area Ecologically Important Areas) of the Palmview Structure Plan and Council has determined that it is an ecologically important area for the purposes of Special Condition 2.2(a)(ii) of the Palmview IA.	

2.3.2 Summary of key points

Key points considered during the formation of my professional opinion are summarised below. These may be appropriate for Council to include as part of their Final Assessment Report chapter 'Ecologically Important Area Assessment Investigation Area B South'.

1. The area of RE 12.3.13 (11.7 ha) is considered to be a viable patch size for this vegetation type (i.e. Chenoweth ELPA 2009). The total reservable area of UIA B South is 21.4 ha, which meets the minimum bushland reserve size recommended in the Environment and Liveability Strategy 2017.
2. Translocation should only ever be considered as a valid option when it can first be demonstrated that impacts have been appropriately avoided, minimised and then mitigated. In this instance, translocation has been proposed in order to achieve 'a superior environmental outcome' (JWA 2018) rather than to offset unavoidable impacts. Impacts to RE 12.3.13 are avoidable, and the point above demonstrates that retaining this vegetation community in situ would provide the superior environmental outcome. It is therefore considered that translocation is not appropriate for UIA B South.
3. If the landowner is concerned about sustaining UIA B South's ecological values given surrounding urban development, buffer width and/or design should be reconsidered so that buffers to UIA B South are able to sufficiently serve their purpose, which is limiting impacts from adjacent land uses.

3 INVESTIGATION AREA C

Urban Investigation Area (UIA) C covers a total area of 18 hectares and provides a linkage between Investigation Area B (South) and Mooloolah River. The landowner believes that 2.9 ha (hereafter the 'UIA C Subject Area') of Area C is 'land suitable for urban development' under Special Condition 2.2 of the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No 2)*.

The Other Plan Map OPM P2(b) of the Palmview Structure Plan shows that UIA C contains an "ecologically important area" comprising State Significant Vegetation, a 50 m buffer from State Significant Vegetation, and a Local Habitat Corridor.

It is worth noting that drafts of the Structure Plan originally included 100 m buffers from State Significant Vegetation, however this was negotiated down to 50 m, in recognition of the overall contribution to the non-urban open space infrastructure network across the entire Palmview area. The Structure Plan (performance outcome 11) requires that development provides for a minimum of 483.4 ha of land for ecological protection and rehabilitation purposes. Where this cannot practically be achieved within the Master Planned Area, performance outcome 11 has provision for this 483.4 ha to be provided partly within the Master Planned Area and partly in areas proximate (within 20 km) to the Master Planned Area.

The environmental offset requirements set by the Structure Plan (Table 10.2.4.3C) state that 'where the environmental offset is required due to infrastructure preventing the achievement of the 483.4 hectare ecological protection and rehabilitation requirement (i.e. by impacting upon an Environmental transition area or other area not already covered in this table), the environmental offset is to be provided as rehabilitated land within 20km of the site and within the local government area on a 1 for 1 basis. Consideration is to be given to using an environmental offset on private land where an infrastructure agreement is in place.'

The landowner submission for UIA C does not appear to account for any offset for the proposed loss of 2.9 ha of area required for ecological protection and rehabilitation.

3.1 NON-URBAN OPEN SPACE INFRASTRUCTURE NETWORK - VALUES

The Other Plan Map OPM P12 of the Palmview Structure Plan designates Urban Investigation Area C as non-urban open space infrastructure network. The intent for Area C includes:

6. **Environmental Protection Area**, designated as such because it contains one or more of the values in Table 1-1 below.
7. **Environmental Enhancement Area - Type A**: an area undergoing natural regeneration, identified because it -
 - a. provides continuity between habitat;
 - b. has been determined to represent a high priority for ecological rehabilitation.
8. **Environmental Transition Area**: an area required to separate and buffer the environmental protection area and the environmental enhancement area from the sources of environmental impacts and protect important habitat corridors.

Table 3-1 Values considered as Environmental Protection Areas (*Palmview Master Planned Area non-urban open space infrastructure network*), and those mapped within UIA C

Values	Details of value in UIA Area C (from SHG 2018)
an endangered regional ecosystem, of concern regional ecosystem or least concern regional ecosystem under the <i>Vegetation Management Act 1999</i>	RE 12.3.5
habitat or likely habitat for scheduled species under the Nature Conservation (Wildlife) Regulation 2006	Wildlife Online search by SHG (2017, 2018) identified fourteen (14) plant species listed as threatened under the NC Act as having potential to occur. SHG (2018) note that none of these

Values	Details of value in UIA Area C (from SHG 2018)
	species were observed, and they do not consider any likely to occur within the UIA. The Peer Review Report for UIA C (BAAM 2019) considered that acid frogs were likely to occur.
areas or likely areas of listed threatened species, listed threatened ecological communities, protected critical habitat or listed migratory species under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	Protected Matters Search Tool (EPBC Act) identified seventeen (17) listed threatened flora species as having potential to occur on-site. None of these species were observed, nor are they considered likely to occur within the UIA.
essential habitat as mapped by the State government for the purposes of regulating vegetation clearing under the <i>Vegetation Management Act 1999</i>	Essential habitat for Wallum Froglet (<i>Crinia tinnula</i>) and Wallum Rocketfrog (<i>Litoria freycineti</i>) within the regulated vegetation.
a spring under the <i>Water Act 2000</i> ;	n/a
stream orders 3, 4 and 5 of watercourses under the <i>Water Act 2000</i>	n/a
a coastal wetland, tidal waters, erosion prone area or coastal management district under the <i>Coastal Protection and Management Act 1995</i>	n/a
a wetland as mapped by the State government in partnership with the Commonwealth Government through the Queensland Wetlands Program	High Ecological Significance and General Ecological Significance wetland areas
habitat for flora or fauna species of local ecological significance	Not addressed

3.2 CONSIDERATION OF ISSUES – UIA C

The area of UIA C which the landowner wishes to develop is:

- not directly identified as an ecologically important area on Other Plans Map OPM P2(b)
- part of the 483.4 ha required to be provided as non-urban open space infrastructure network to offset urban development in the Palmview Master Planned Area
- identified as an environmental transition area on Other Plans Map OPM P12.

The environmental transition area at UIA C is intended to both protect the environmental protection area (ecologically important area) from impacts and protect important habitat corridors.

Required buffers were set (in OPM P2(b)) at 50 m around ecologically important areas when it was understood that these would be further supported by the broader environmental transition area shown on Other Plans Map OPM P12.

With the proposed reduction in environmental transition area, a buffer of 50 m should not be automatically assumed to be appropriate, and instead the non-urban space infrastructure supplied in UIA C should be re-considered in light of the required functions, which are; buffering impacts to the ecologically important area, and protecting corridors.

3.2.1 Consideration of buffers

Buffers serve to alleviate impacts on environmental values from adjacent land uses, for example by protecting water quality, limiting trampling/physical damage, and reducing light and noise impacts. Buffers can also form part of the core area necessary for persistence of environmental values, i.e. by providing foraging habitat, enabling refuge from flood events, and expanding wildlife activity beyond areas of preferred habitat (McAlpine et al. 2007).

Standards for buffers which are relevant to UIA C include:

From *SPP State Interest Guideline - Biodiversity AO 3.1* -

6. A buffer for an area of state environmental significance (wetland protection area) has a minimum width of 50 metres where the area is located within an urban area

From *Sunshine Coast Environment and Liveability Strategy (2017)* -

7. Buffers around the perimeter of natural wetlands and waterbodies are fully vegetated with suitable native plants to at least the following widths:
 - a. Urban: default – 50m, significant – 100m
8. Opportunities for wider vegetated buffers are investigated where:
 - a. they would build connectivity between biodiversity habitat areas
9. Where a recreation outcome is desirable, a minimum 15-30 m corridor to the riparian buffer is provided.
10. Infrastructure, stormwater treatment assets and cleared recreational areas are located outside of wetland buffer areas.

From the *Palmview Structure Plan* –

Relevant performance outcomes include (but are not limited to):

Performance Outcome 9 - Development provides for the environmental transition area specifically identified on **Other Plans Map OPM P12 (Palmview Master Planned Area Non-urban Open Space Infrastructure Network)** to be:

- (a) rehabilitated as a buffer to the environmental protection area and environmental enhancement area to ensure the following:
 - (i) maintenance and appropriate buffering of existing vegetation and habitat;
 - (ii) maintenance of habitat corridors and fauna movement through the area;
 - (iii) maintenance of water quality and natural hydrological conditions;
 - (iv) maintenance of public safety.

Performance Outcome 12 - Development ensures the following:

- (a) the protection of the biodiversity and ecosystem values of springs, waterways and wetlands;

A relevant ecological protection and rehabilitation objective (from Table 10.3.4.3A) for the environmental transition area is to *'provide for establishment of buffer areas that enhance the ecological values of Environmental Protection and Environmental Enhancement Areas and protect them from the impacts of adjacent development'*.

Ecological protection and rehabilitation outcomes (from Table 10.3.4.3B) specific to UIA C are to:

1. Increase the extent of wetland ecosystems, with particular emphasis on active regeneration of land enclosed by remnant vegetation.
2. Rehabilitation of wetland ecosystems to remnant status.

These outcomes are to be achieved in the following way:

The management of this landscape unit is to retain and enhance remnant vegetation, re-establish habitat connectivity through mainly active mechanisms and protect habitat from the impacts of development. Management actions are to include the following:

- a. active revegetation, with particular emphasis on consolidating and expanding wetland vegetation and reconnecting habitat from north to south;
- b. maintain a grassed transition zone between residential development and vegetated areas.

3.2.2 Consideration of connectivity and edge effects

UIA C provides linkage between UIA B (South) and Mooloolah River.

It is understood that the landowner for UIA B believes that UIA B (South) is isolated (JWA 2017) with compromised long-term environmental health. The SHG (2018) report also suggests that corridor connectivity has been compromised by open space land uses north of Area B South (page 9). This fails to recognise that wildlife movement can be facilitated through a range of land use zones, with retained (or restored) habitat features such as rocky outcrops, trees, or even shrubs able to function as 'stepping stones' (Wiens 2009). This is particularly the case for more mobile species, such as Koala, or Swamp Wallaby.

The SHG (2018) report (page 9) also suggests that 'remnant vegetation volume and connectivity will be enhanced and increased by multiple factors under the proposal'. This does not acknowledge that the connectivity originally envisioned by the Structure Plan will be reduced by urban development in the UIA C Subject Area.

Page 10 of SHG (2018) states that Area C 'does not maintain suitable wetland habitat to provide connectivity for expected and potential wetland species' and further infers that acid frogs (Wallum Froglet and Wallum Rocketfrog) are unlikely to occur given prevailing levels of disturbance. These two species are however known to breed in disturbed areas and have also been observed dispersing into areas of woodland and eucalypt forest (Meyer et al. 2006). The Peer Review Report (BAAM 2019) suggests that acid frogs are likely to periodically colonise the UIA C Subject Area. There is opportunity for restoration within the non-urban open space infrastructure network to improve habitat for threatened wildlife.

Conservation areas with a high edge to area ratio are likely to have reduced habitat quality and ecological function. Edge effects include increased predation, physical impacts (light, noise, etc) and reduced sensitive species, such as small woodland birds. Edge effects are thought to be present from 0 m up to 100 m (or even further) into the interior of a landscape (i.e. Lawrence et al. 2007; Pocock & Lawrence 2005)

The Environment and Liveability Strategy (Sunshine Coast Council 2017) sets standards for environmental reserves for inclusion in Council's conservation estate. Of relevance to UIA C, these standards include that:

- land should have a shape and size to ensure the viability of the environmental values are functional and protected
- The number of adjoining landowners should be minimised and potential impact of adjacent land uses should be considered to reduce edge effects and management issues.

The *SPP State Interest Guideline – Biodiversity* (Policy 5) states that maintaining vegetation in patches of the greatest possible size and with minimal edge to area ratio will help maintain movement of significant species and gene flow between populations.

The proposed urban development within UIA C will compromise the ability of the non-urban open space infrastructure network to satisfy the above. The edge to area ratio is significantly increased by developing within the environmental transition area, and the number of adjoining landowners (particularly if the land use is residential) is substantially greater.

If development occurs within UIA C, the future cost to the ongoing land manager in order to maintain and improve environmental values within the non-urban open space infrastructure network would be greater than if no development takes place.

3.2.3 Consideration of impacts from flood events +/- 1% AEP

There does not appear to be readily available information on water quality as part of landowner C's submission. It can be inferred by the vegetation communities present that the pH is relatively low, and the water table is likely to be high. Wallum heath/RE 12.3.5 are characterised by an acidic, nutrient poor and frequently water logged environment.

Vegetated buffers will assist with natural processes, including infiltration which mimics natural hydrology and provides opportunity for pH adjustment to occur.

The two waterways enter Mooloolah River approximately 100 m south of UIA C. Remnant vegetation mapped as RE 12.3.1(a) occurs approximately 200 m downstream from the boundary of UIA C. This community is considered to be Endangered under the *Vegetation Management Act 1999*, and is analogous with the Critically Endangered Lowland Rainforest of Subtropical Australia Threatened Ecological Community under the EPBC Act. Discharges from UIA C, including in high flow events, must be managed to limit impacts on this matter of national environmental significance.

3.3 RECOMMENDATIONS FOR UIA C

With respect of the above standards, I consider that the following (at a minimum) should be applied to UIA C:

1. Western creek line – apply a 100 m fully vegetated buffer from the edge of the environmental protection area. This:
 - a. Will meet performance outcomes 9 and 12 of the Structure Plan.
 - b. Restores buffer width to the original 100 m, noting that this was negotiated down to 50 m during development of the Structure Plan on the assumption that there would be 483.4 ha of non-urban open space provided within the Palmview master planned area.
 - c. Is consistent with the 100 m buffer to significant wetlands in urban areas, as recommended in the *Sunshine Coast Environmental and Liveability Strategy*.
 - d. Is consistent with the 100 m buffer applied to State significant vegetation in UIA B North, which is the same vegetation community (RE 12.3.5).
 - e. Creates a structural linkage/wildlife corridor which will:
 - i. Build connectivity between wildlife habitat areas (UIA B South and Mooloolah River)
 - ii. Will allow for ‘re-established connectivity’, which is a management requirement for UIA C (Structure Plan Table 10.3.4.3B).
 - iii. Provides an alternative linkage to that on the eastern side, increasing the potential for wildlife movement and providing redundancy in case anthropogenic or other influences/events reduce functionality along one of the creek lines.
 - iv. Reduce the edge to area ratio (compared with any lessor buffer width).
 - f. Provides appropriate buffering, allows for fauna movement and maintenance of natural hydrological conditions in accordance with performance outcome 9 (Structure Plan)
2. Western creek line – 50 m fully vegetated buffer from the edge of the environmental enhancement area. This:
 - a. Is consistent with the default 50 m buffer recommended in the *Sunshine Coast Environmental and Liveability Strategy*
 - b. Continues the structural linkage/wildlife corridor between patches of environmental protection area.
3. Eastern creek line – apply a 50 m fully vegetated buffer from the edge of the environmental protection area. This:
 - a. Is consistent with the average buffer provided elsewhere in the Palmview Master Planned Area.
 - b. Creates a structural linkage/wildlife corridor, with benefits as per the western creek line.
4. Stormwater management in UIA C should aim to maintain water quality, including the typically low pH of wallum habitat (particularly relevant to the western and southern wetland areas) and minimise potential offsite impacts to Endangered/Critically Endangered RE 12.3.1 downstream.
5. Infrastructure should be located outside of the vegetated buffer, including water sensitive urban design for stormwater infrastructure, pedestrian trails and cycle paths, and other amenities typically associated with recreational parks and open space.

Note the Structure Plan (Table 10.2.4.3A) allows for compatible passive recreation uses including pedestrian and cycleways, picnic areas and open play areas and water sensitive urban design features within the UIA C environmental transition area. However, this was determined at the time that the entirety of UIA C was considered to be non-urban open space infrastructure. If the environmental transition area is to be reduced to a buffer, then passive recreation and water sensitive urban design features should be located outside of this buffer.

The Structure Plan (Table 10.2.4.3B; Landscape Unit 7) also notes that management should ‘maintain a grassed transition zone between residential development and vegetated area’ however this is not analogous with required buffers. It would be

considered necessary for buffers to the eastern and western waterways to be actively revegetated rather than grassed if urban development was determined to be appropriate for UIA C.

The two points above reflect the approach necessary to separate and buffer the environmental protection area and the environmental enhancement area from impacts associated with any potential urban development within UIA C, as well as protecting (and providing) important habitat corridors.

The BAAM (2019) peer review noted that an area can be conserved and managed for its **potential** to provide important ecological values, including strategic, long term habitat management and wildlife movement. This is a view which I agree with. This approach also acknowledges that a changing climate presents an additional threat to sustaining ecology.

Sunshine Coast Council subscribe to a 'no regrets' approach to decision making that acknowledges that management decisions should be precautionary due to the uncertainty of future climate change (Sunshine Coast Council 2017). The precautionary approach includes providing for broad connectivity zones with a range of vegetation types, soil type and habitat features (Bentrup 2008) which will assist wildlife to shift their microhabitat and/or range in response to changing conditions.

If it is determined that UIA C contains land suitable for urban development, the proponent would need to provide a suitable offset to account for any reduction in area of the 483.4 ha required to be provided as non-urban open space infrastructure network to offset urban development in the Palmview Master Planned Area.

3.3.1 Opinion on Council's findings

Table 3-2 Opinion on Council's findings in respect of land that is an ecologically important area under Special Condition 2.2 – Area C

Section 20.5 - Council findings Investigation Area C	Professional opinion
The highest ecological values in Investigation Area C are in those areas containing the remnant vegetation and associated essential habitat and the two waterways on the boundaries of Investigation Area C.	Agree
<p>In respect of ecological protection and rehabilitation requirements for Investigation Area C:</p> <ul style="list-style-type: none"> • the Ecologically Important Area (along the western creek line and at the south of Investigation Area C) should be restored, and protected by a 50 m wide vegetated buffer • the Environmental Protection Area (along the eastern creek line) and the Environmental Enhancement Area - Type A should be regenerated, and protected by a 50 m wide vegetated buffer • the wetland ecosystems, being the areas shown as Flood Prone Land following the eastern creek line and the western creek line on Other Plans Map OPM P2(a), should be increased, rehabilitated to remnant status, actively regenerated, and consolidated, and protected by a 50 m wide buffer. 	<p>Note suggested rewording.</p> <p>Suggest that the Ecologically Important Area be buffered by 100 m wide vegetated buffer - See Section 1.2.3</p> <p>Agree with the second dot point.</p> <p>Consider whether the third dot point is necessary?</p>
In conclusion, once the above requirements have been considered, there remains a portion of Investigation Area C that has not been identified as being within the mapped ecologically important areas.	<p>Agree</p> <p>Suggest Council move this point to the end of Section 20.5 and note that any reduction in environmental transition area will require an offset in accordance with the Structure Plan.</p>

Section 20.5 - Council findings Investigation Area C	Professional opinion
<p>Maintaining the connectivity from Investigation Area B (South) through Investigation Area C to the Mooloolah River is considered critical to ensure the ongoing habitat viability of Investigation Area B (South)'s remnant heath vegetation and to ensure that habitat corridors provide an effective and functioning habitat for all species of fauna identified, in particular those in Investigation Area B (South).</p>	<p>Agree</p> <p>Consider addition of 'This connectivity will also provide contingency for a changing climate (refuge, wildlife movement, accommodating range shifts of vegetation communities and species).</p>
<p>Council considers that this area constitutes an important area for long term habitat management and fauna movement from Area B (South) through to the Mooloolah River.</p>	<p>Agree</p>
<p>In addition, any development that has the potential to result in an unacceptable impact on the ecologically important wetlands and retained habitats should not be supported.</p>	<p>Agree</p>

Section 23.2 – Peer Review Report conclusion Investigation Area C provides detail from the Peer Review – Ecology report on appropriate fauna crossing structures. I suggest removing the points from (xi) onwards (starting with 'Other key design considerations include the following'), as the level of detail provided, while relevant to best practice fauna mitigation measures, is beyond the scope of this Final Assessment Report.

3.3.2 Summary of key points

Key points considered during the formation of my professional opinion are summarised below. These may be appropriate for Council to include as part of their Final Assessment Report chapter 'Ecologically Important Area Assessment Investigation Area C'.

- The area of UIA C which the landowner wishes to develop is:
 - Not directly identified as an ecologically important area on Other Plans Map OPM P2(b).
 - Part of the 483.4 ha required to be provided as non-urban open space infrastructure network to offset urban development in the Palmview Master Planned Area. Offsets will therefore be required if this area is reduced.
 - Identified as an environmental transition area on Other Plans Map OPM P12, with the intended function of:
 - protecting the environmental protection area (ecologically important area) from impacts
 - protecting important habitat corridors (between UIA B North and Mooloolah River).
- The context in which the ecologically important area and buffers were prescribed in the Structure Plan assumes they would be supported by the entirety of UIA C as non-urban space infrastructure.
- With the proposed reduction in environmental transition area, the non-urban space infrastructure supplied in UIA C should be re-considered in light of the required functions (see above).
- The non-urban space infrastructure network at UIA C should:
 - Consider standards for environmental reserves (see Sunshine Coast Council 2017); reduce the edge to area ratio and minimise the number of adjoining landowners.
 - Provide a wildlife corridor, which will build connectivity between wildlife habitat areas (UIA B (South) and Mooloolah River)
 - Consider future functionality as well as current status, providing contingency for a changing climate (refuge, wildlife movement, shifts to vegetation communities and flora species' range)

- Appropriate buffers are:
 - Eastern side of the UIA – apply a 50 m fully vegetated buffer from the edge of the environmental protection area.
 - Western side of the UIA –fully vegetated buffers 100 m from the edge of the environmental protection area and 50 m from the edge of the environmental enhancement area.
- Infrastructure should be located outside of the vegetated buffer, including water sensitive urban design for stormwater infrastructure, pedestrian trails and cycle paths, and other amenities typically associated with recreational parks and open space.
- Bushfire buffers and suitable adjacent land uses (i.e. esplanade road) should be located outside of the vegetated buffer.
- Stormwater management in UIA C should aim to maintain water quality, including the typically low pH of wallum habitat (particularly relevant to the western and southern wetland areas) and minimise potential offsite impacts to Endangered (VM Act)/potentially Critically Endangered (EPBC Act) RE 12.3.1 downstream.
- Non-urban open space infrastructure should include provision of appropriate fauna fencing and road crossing treatments.

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Our Reference: PP13.2019 Palmview Review
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PERKINS
P L A N N I N G

28 May 2019

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Dear Leah

REVIEW OF COUNCIL'S FINAL ASSESSMENT REPORT - URBAN DEVELOPMENT INVESTIGATION AREAS UNDER THE PALMVIEW STRUCTURE PLAN AREA INFRASTRUCTURE AGREEMENT 2010 (CONSOLIDATION NO. 2)

Perkins Planning has been commissioned by Sunshine Coast Regional Council to undertake a Peer Review of Council's Final Assessment Report - Urban Development Investigation under the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2)* ("Palmview IA") dated 28 May 2019 and to determine whether we agree with Council's findings as per the scope of works documented in Council's letters of 30 January 2019 and 21 March 2019.

The Final Assessment Report has been prepared to provide a reason for Council's determination under Special Condition 2.3(c)(ii) of the Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No 2) (Palmview IA). The relevant Special Conditions in Schedule 2 state (emphasis added) are:

2.2 Land suitable for urban development

Land within an Urban Development Investigation Area is only to be considered suitable for urban development if:

- (a) *for an ecologically important area, the land:*
 - (i) *is not included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Structure Plan; or*
 - (ii) *is included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Structure Plan and is determined by the State government and the local government not to be an ecologically important area; and*
- (b) *for a flood hazard, the land:*
 - (i) *is not flood prone land as defined in the Structure Plan (Flood Prone Land); or*
 - (ii) *if the land is Flood Prone Land, the Council in its absolute discretion has determined that incorporating the Flood Prone Land in the land suitable for urban development satisfies an overriding need in the public interest in that:*

- (A) *it would not result in any material adverse impact both upstream and downstream of the land; and*
- (B) *it would result in a significant overall benefit for a significant part of the community in social, economic or environmental terms; and*
- (C) *the benefit cannot otherwise be satisfied by other land that is suitable and reasonably available. (p79-80)*

2.3 Urban Development Investigation

- ...
- (c) *If Landowner B or Landowner C complies with paragraph (a), the Council is to:*
 - (i) *determine as soon as reasonably practicable whether it is satisfied that all or part of the relevant Urban Development Investigation Area is land **suitable for urban development** in the Structure Plan Area subject to the provision by the relevant Landowner of necessary infrastructure to service the land for urban development at no cost to the Infrastructure Authorities; and*
 - (ii) ***provide a reason for its determination.** (p80)*

Assumptions

Our peer review relies on the following planning studies and documentation:

- Palmview Structure Plan;
- Peer review reports, in particular:
 - Investigation Area B (North):
 - BAAM Ecological Consultants dated 7 February 2019 (Area B (North) Ecology Peer Review Report);
 - WMA Water dated 14 February 2019 (Area B (North) Flood Hazard Peer Review Report);
 - Investigation Area B (South):
 - BAAM Ecological Consultants dated 7 February 2019 (Area B (South) Ecology Peer Review Report);
 - WMA Water dated 14 February 2019 (Area B (South) Flood Hazard Peer Review Report);
 - Investigation Area C:
 - BAAM Ecological Consultants dated 7 February 2019 (Area C Ecology Peer Review Report); and
 - WMA Water dated 14 February 2019 (Area C Flood Hazard Peer Review Report).
- Representations from Landowners regarding Peer Review Reports:
 - Peer Review Report for Investigation Area B North and Investigation Area B South dated 4 April 2019; and
 - Peer Review Report for Investigation Area C dated 14 March 2019.
- Final Assessment Report prepared by Sunshine Coast Regional Council dated 28/05/2019.

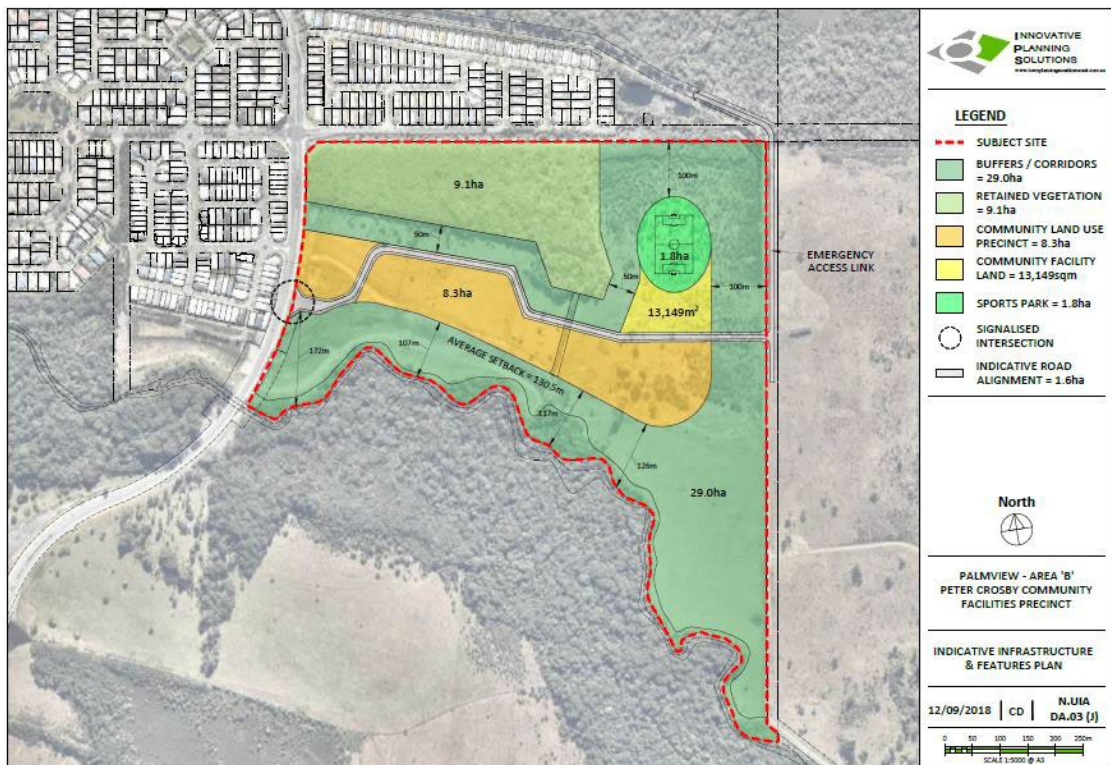
1.0 INVESTIGATION AREA B (NORTH)

Investigation Area B (North) is located on part of Lot 201 on SP287474, Cavalry Road, Sippy Downs and covers a total area of 39.6 hectares. The Landowner submits that 13 hectares of the land is suitable for urban development, or 28.8ha if the flood conveyance channel is included. The current concept plan for the proposed development in Investigation Area B (North) is shown below in **Figure 1**. The proposal includes land for:

- a single sporting field with an area of 1.8 hectares;
- 1.3 hectares of land for Community Facilities including a building/clubhouse (1600 sqm covered and 400sqm building), dog off-leash area (1,372sqm), car parking (2,150sqm) and community square (1,170sqm);
- a financial contribution of \$2.5 million for the construction of playing fields, the community building and community gardens or an offer for the Landowner to construct the playing fields, building and gardens;
- a community use precinct, being 8.3 hectares of land for school or retirement living, which is proposed to be revenue generating;
- an ecological corridor, being 100m wide along the eastern boundary;
- a flood conveyance channel covering an area of 15.8 hectares and up to 4m deep in some parts and located entirely within the environmental buffer; and
- an access road (1.6 hectares).

Source: SCRC Assessment Report, 28/05/19, Section 5.2(e).

Figure 1. Current concept plan (Source: Innovative Planning Solutions, 12.09.2018).



Overview of Council's Assessment

Ecological

Other Plan Map OPM P2(b) of the Palmview Structure Plan maps all of Investigation Area B (North) as being an "ecologically important area", being mapped as State Significant Vegetation, Regional Habitat Corridors (State Government), a Local Habitat Corridor and a 100m buffer from State Significant Vegetation.

Council concludes based on an assessment of the ecological assessments that a portion of Investigation Area B (North) west of the drainage channel totalling approximately 2.77 hectares, is suitable for urban purposes subject to the following requirements:

- provision of a 100m buffer to the State significant remnant vegetation in the north-west corner of the site;
- provision of a minimum 100m buffer from the edge of the State significant vegetation along Sippy Creek or from the high bank;
- buffering of the existing drainage channel in the middle of the site and the rehabilitation of all land to the east of the drainage channel;
- no development that would require the road connection (emergency or other) through to Claymore Road on the eastern boundary;
- Any conveyance channel would need to be located outside the 100m buffers;
- no stormwater treatment infrastructure or WSUD is to be located within the buffer to ecologically important areas;
- stormwater infrastructure (and associated cut and fill) must not present a barrier to wildlife movement between Sippy Creek, Lower Mooloolah Environmental Reserve and the Mooloolah River National Park, nor should it impact on natural hydrological processes;
- proposed development is limited to compatible uses such as passive recreation which do not require filling of the area;
- provision of other necessary infrastructure.

Source: SCRC Assessment Report, 28/05/19, Section 8.6(a).

Flood

Other Plan Map OPM P2(a) of the Palmview Structure Plan maps all of Investigation Area B (North) as being an area inundated by the Defined Flood Event (DFE). Council's assessment report notes "*The Landowner acknowledges that all of Investigation Area B (North) is flood prone land*" (SCRC Assessment Report, 28/05/19, Section 9.1(a)). As such Council is to determine whether the flood prone land would satisfy an overriding need in the public interest.

The Landowner's proposal seeks to incorporate the following:

- a single sporting field with an area of 1.8 hectares;
- 1.3 hectares of land for Community Facilities including a building/clubhouse (1600 sqm covered and 400sqm building), dog off leash area (1,372sqm), car parking (2,150sqm) and community square (1,170sqm);
- a financial contribution of \$2.5 million for the construction of playing fields, the community building and community gardens or an offer for the Landowner to construct for playing fields, building and gardens;
- a community use precinct, being 8.3 hectares of land for school, aged care or retirement living, which is proposed to be revenue generating;
- an ecological corridor, being 100m wide along the eastern boundary;
- a flood conveyance channel covering an area of 15.8 hectares and up to 4m deep in some parts and located entirely within the environmental buffer; and

- an access road (1.6 hectares) (SCRC Assessment Report, 28/05/19, Section 9.4.1).

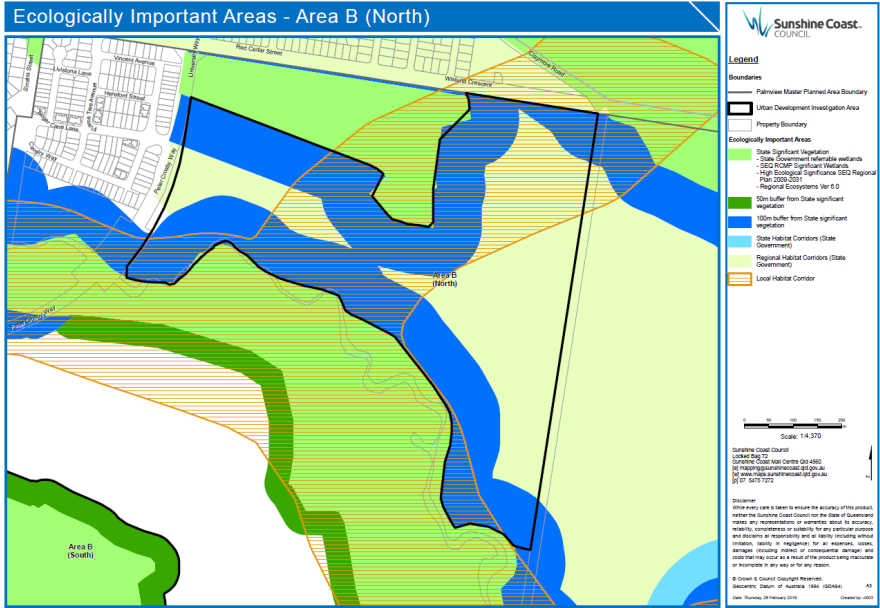
Council has determined that it should not be incorporated in the land suitable for urban development as it does not satisfy an overriding need in the public interest as it would result in material adverse offsite impacts, it would not result in a significant overall benefit for a significant part of the community and any proposed benefit can otherwise be satisfied by other land that is suitable and reasonably available (SCRC Assessment Report, 28/05/19, Section 9.4.2).

Finding

Council has determined that no land in Investigation Area B (North) is suitable for urban development.

Our Assessment

The following table provides a high level assessment of the suitability of Investigation Area B (North) for urban development based on Special Condition 2.2 and 2.3 of the Palmview IA to assist in the review of Council’s findings.

Special Condition Summary		Overarching Assessment Investigation Area B (North)
2.2 Ecologically important area		
<p>(a) (i) The land is ... <i>“not included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Structure Plan; or”</i></p>	<p>Other Plan Map OPM P2(b) of the Palmview Structure Plan maps all of Investigation Area B (North) as being an "ecologically important area", being mapped as State Significant Vegetation, Regional Habitat Corridors (State Government), a Local Habitat Corridor and a 100m buffer from State Significant Vegetation, as such as such condition (a) (ii) applies (refer Figure 2).</p>	<p>Figure 2. Extract from Sunshine Coast Planning Scheme – Other Plans Map OPM P2(b) with approximate Investigation Area B (North) (Source: extracted SCRC Assessment Report, 28/05/19).</p>
		

**Special Condition
Summary**

Overarching Assessment Investigation Area B (North)

(a)
(ii) The land is ... "included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Structure Plan and is determined by the State government and the local government not to be an ecologically important area; and"

On the basis of the supporting ecological assessments, Council has determined that part of Area B (North) is an ecologically important area, with a balance area located to the west of the existing drainage channel determined to not be an ecologically important area (refer **Figure 3**), subject to a number of requirements documented in section 12.1 of Council's assessment. It is noted that no State input has been received.

Figure 3. Area identified as suitable for urban development (Council's Assessment Report, 28/05/19).

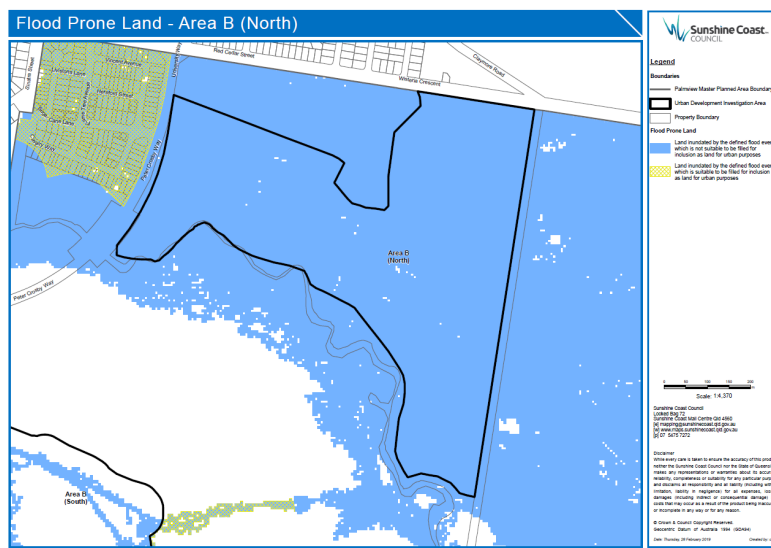


2.2 Flood hazard area

(b)
(i) The land is ... "not flood prone land as defined in the Structure Plan (Flood Prone Land); or"

N/A - The site is defined as Flood Prone Land in the Structure Plan, as such compliance with Special Condition (b)(ii) must be demonstrated (refer **Figure 4**).

Figure 4. Sunshine Coast Planning Scheme – Other Plans Map OPM P2(a) with approximate Investigation Area B (North) – extracted SCRC Assessment Report, 28/05/19.



Special Condition Summary		Overarching Assessment Investigation Area B (North)
(b) (ii)	<p><i>"If the land is Flood Prone Land, the Council in its absolute discretion has determined that incorporating the Flood Prone Land in the land suitable for urban development satisfies an overriding need in the public interest in that:</i></p>	<p>Other Plans Map OPM P2(a) of the Palmview Structure Plan maps identifies most of Investigation Area B (North) as being an area inundated by the Defined Flood Event (DFE). This definition does not include land inundated in the Probable Maximum Flood (PMF). Accordingly, for this land to be determined suitable for urban development, it must satisfy an overriding need in the public interest as determined by criteria (A) – (C).</p> <p>The following rows provide an assessment of the Landowner Area B (North) current development proposal against criteria (A) – (C).</p>
(A)	<p><i>it would not result in any material adverse impact both upstream and downstream of the land; and</i></p>	<p>Council has concluded that the proposed development of Investigation Area B (North) results in unacceptable material adverse offsite impacts <i>"These impacts include flood level increases to adjacent private property that are substantially beyond the 10mm thresholds that are considered reasonable and tolerable by Council. The material adverse impacts also include the diversion of natural flows away from a conservation area. It is considered that this will dramatically change the hydrological characteristics of flows to an environmentally sensitive area."</i> (SCRC Assessment Report, 28/05/19, Section 9.3(o)).</p>
(B)	<p><i>it would result in a significant overall benefit for a significant part of the community in social, economic or environmental terms; and</i></p>	<p>In accordance with section 9.4.2 of Council's Assessment Report, Council has considered that Landowner B has failed to demonstrate a significant overall benefit in terms of social, economic or environmental terms.</p> <p>Key issues that informed Council's determination are summarised as follows:</p> <ul style="list-style-type: none"> • The proposal is inconsistent with and conflicts with Council's adopted policy direction, and desired standards of service in regard to function, size, location, safety and access for Open Space and Social Infrastructure, including: <ul style="list-style-type: none"> ○ Sporting field: A standalone single sporting field at 1.8 ha does not meet minimum size requirements of 15ha and does not comply with the centralisation or road frontage requirements; ○ Recreation Park: The proposed recreation park meets the required size of 0.5 hectares for park purposes under the Environment and Liveability Strategy 2017 but not under the Palmview Structure Plan and Palmview IA. However the proposal does not meet the required road frontage of 50%; ○ Community Centre/Clubhouse: a stand-alone building in an isolated area away from an Activity Centre is not supported unless the proposed use has a synergy or specific purpose with the adjoining Lower Mooloolah River Environmental Reserve and Mooloolah National Park such as an environmental education centre or nature based recreation. • The revised proposal could be considered a duplication of facilities being delivered and planned in the adopted Network Blueprint; • Concerns regarding capital and operational costs; • The proposal conflicts with Council's strategic policy direction of more compact and self-contained neighbourhoods, vibrant Activity Centres and ongoing protection of the natural environment; and • There is no evidence in the Investigation Area B (North) Submission or need demonstrated for additional land to be rezoned for either a school or retirement/aged living outside the Palmview Structure Plan urban footprint. <p>On the basis of Section 9.4.2 of Council's Assessment Report, it is considered that the Landowner's proposal for the development of Investigation Area B (North) would not result in a significant overall benefit for a significant part of the community in terms of social, economic or environmental impacts.</p>

Special Condition Summary		Overarching Assessment Investigation Area B (North)
	<i>(C) the benefit cannot otherwise be satisfied by other land that is suitable and reasonably available”.</i>	It is considered that the land uses or benefit proposed by Landowner’s proposal for Investigation Area B (North) could be satisfied by other land that is suitable and reasonably available within Palmview and as such the proposal does not demonstrate compliance with this condition.
2.3 Infrastructure		
(c) (i)	<i>... provision by the relevant Landowner of necessary infrastructure to service the land for urban development at no cost to the Infrastructure Authorities</i>	Not applicable – on the basis of the above evaluation, the land is not considered suitable for urban development.

Investigation Area B (North): Peer Review Finding

Part of Investigation Area B (North) has been determined by Council to be an ecologically important area, with a balance area to the west of the existing drainage channel determined to not be ecologically important. Notwithstanding this, the entire site has been determined by Council to be flood prone land and therefore cannot be considered suitable for urban development as the current proposal by Landowner B (North) does not satisfy an overriding need in the public interest prescribed by Special Condition 2.2(b)(ii), as:

- (A) it would result in a material adverse impact both upstream and downstream of the land; and
- (B) it would not result in a significant overall benefit for a significant part of the community in social, economic or environmental terms; and
- (C) the benefit can otherwise be satisfied by other land that is suitable and reasonably available.

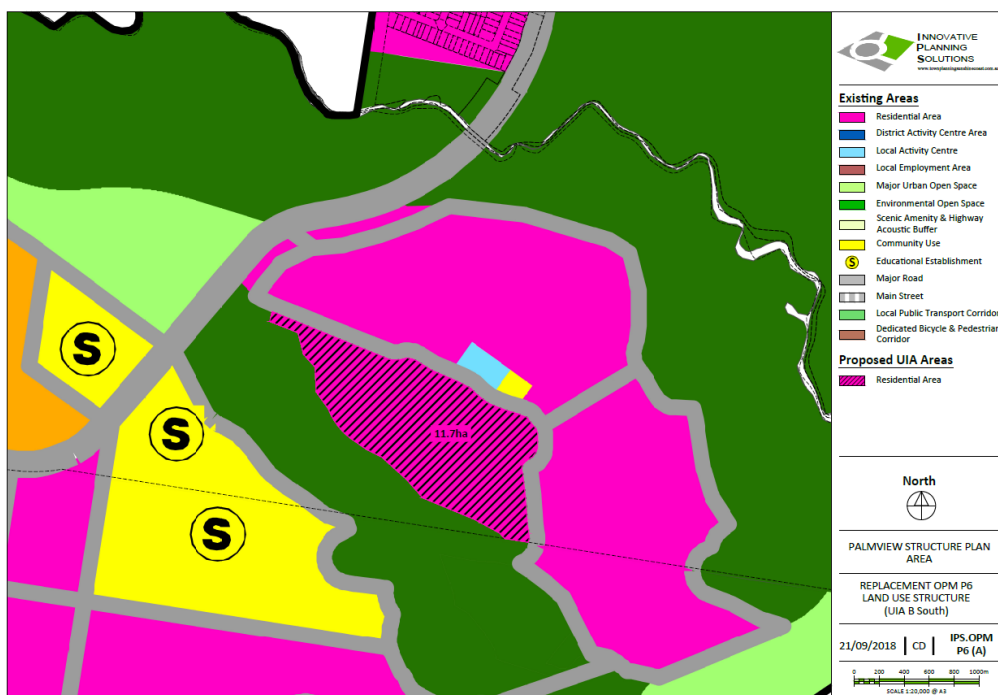
Accordingly, we agree with Council’s assessment that no land in Investigation Area B (North) is suitable for urban development in accordance with Special Condition 2.2(a) and 2.2(b) of the Palmview IA (Schedule 2).

2.0 INVESTIGATION AREA B (SOUTH)

Investigation Area B (South) is located on part of Lot 347 SP287466, Laxton Road, Palmview and covers a total area of 21.4 hectares. The Landowner acknowledges that Investigation Area B (South) is an ecologically important area, being an area containing State Significant Vegetation.

The proposal by the Landowner includes 11.7 hectares of land for residential purposes (refer **Figure 5**) with an estimated development yield of 200 dwellings and the translocation of up to 10 hectares of State Significant Vegetation.

Figure 5. Subject area identified as suitable for Urban development by the Landowner Submission.



Overview of Council's Assessment

Ecological

Other Plan Map OPM P2(b) of the Palmview Structure Plan maps that part of the site being investigated as being an "ecologically important area", being mapped as State Significant Vegetation and 50m buffer from State Significant Vegetation. Investigation Area B (South) contains an area of remnant heath vegetation (RE 12.3.13) of approximately 10 hectares. In summary, Council's Assessment Report (28/05/19, s14.4) states:

- (a) *Investigation Area B (South) contains an area of remnant heath vegetation (RE 12.3.13) of approximately 10 hectares. The JWA Report confirms that the area is an ecologically important area because it contains State Significant Vegetation. This is reconfirmed in the State's assessment and in the Investigation Area B (South) Ecology Peer Review which also note the area contains over 90% of intact regional ecosystems, has a diverse number of threatened species and many Matters of State Environmental Significance.*

- (b) *The JWA Report identifies all vegetation communities identified on the site as being in either good or excellent condition. Investigation Area B (South) is also sufficiently large enough, with Investigation Area C in place, to function effectively as an intact remnant regional ecosystem providing connectivity south to the un-named creek and onto the Mooloolah River, contrary to the JWA Report which states it has “limited connectivity”... (SCRC Assessment Report, 28/05/19, Section 14.4)*

Council considers all of the defined Investigation Area B (South) subject to current review by the landowner, to be an ecologically important area and not suitable for urban development (SCRC Assessment Report, 28/05/19, Section 14.4(l)).

It is noted that Council has also considered the translocation proposal submitted by the Landowner even though it is not required to be considered under Special Condition 2 of the Palmview IA. Council officers have determined that it does not provide a superior ecological outcome and do not support the proposal (SCRC Assessment Report, 28/05/19, Section 1.4.4 (m)).

Flood

Other Plan Map OPM P2(a) of the Palmview Structure Plan maps part of Investigation Area B (South) as being an area inundated by the DFE.

Council has concluded that in respect of a “flood hazard” under Special Condition 2.2(b) of the Palmview IA, Investigation Area B (South) is “*Investigation Area B (South) is predominantly flood prone land. There is an area of the site that is not identified as being flood prone land but this may become flood affected when the DFE is considered for local area flooding*”. (SCRC Assessment Report, 28/05/19, Section 15.5).

Finding

Council has found that Investigation Area B (South) is not land suitable for urban development.

Our Assessment

The following table provides a high level assessment of the suitability of Investigation Area B (South) for urban development based on Special Condition 2.2 of the Palmview IA to assist in the review of Council’s findings.

Criteria Summary **Overarching Assessment Investigation Area B (South)**

It is noted that condition 2(a)(ii) does not provide for consideration of the translocation of ecological important areas and as such this proposal has not been considered.

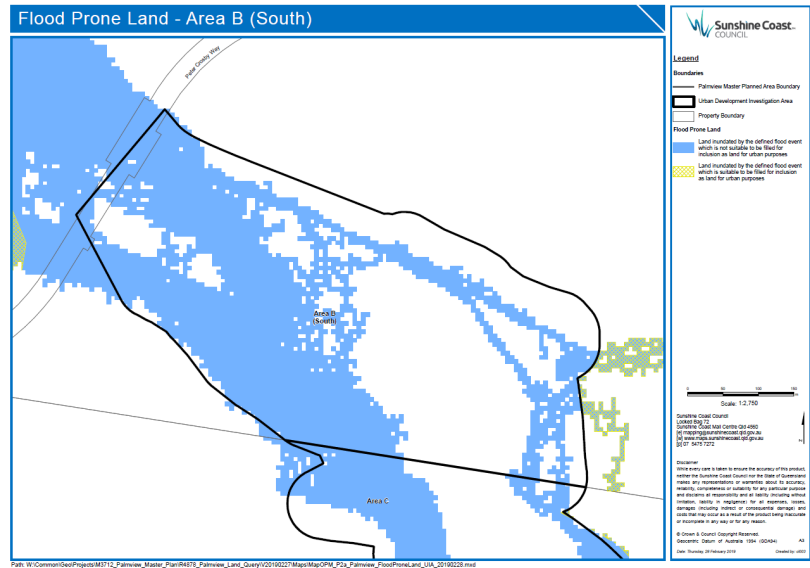
Council's finding is that Investigation Area B (South) is not considered suitable for urban development because it is included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Palmview Structure Plan (SCRC Assessment Report, 28/05/19, Section 14.5). It is noted that no State input has been received.

2.2 Flood hazard area

(b) The land is ...
(i) "not flood prone land as defined in the Structure Plan (Flood Prone Land); or"

Other Plan Map OPM P2(a) of the Palmview Structure Plan identifies that part of Investigation Area B (South) is an area inundated by the DFE with a balance area not flood prone land (refer **Figure 7**). The Landowner submits that it has demonstrated that a significant part of Investigation Area B (South) is not flood prone land and that it is within those areas that the Landowner proposes urban development, being an area of approximately 11.7 hectares. (SCRC Assessment Report, 28/05/19, Section 15.1(b))

Figure 7. Extract from Sunshine Coast Planning Scheme – Other Plans Map OPM P2(a) with approximate Investigation Area B (South) – extracted SCRC Assessment Report, 2019.



(b) "If the land is Flood Prone Land, the Council in its absolute discretion has determined that incorporating the Flood Prone Land in the land suitable for urban development satisfies an overriding need in the public interest in that:

In respect of a "flood hazard" under Special Condition 2.2(b) of the Palmview IA, it is noted that Council in their assessment concludes that "flooding constraints significantly impede the development potential of Investigation Area B (South). The overlapping flood extents of Figures A1.11 and C1.7 in the Allan & Dennis Flood Study Report (hatched area in Figure 35 below) show most of Investigation Area B (South) to be flood affected and this may increase further when the DFE is considered for local area flooding" (SCRC Assessment Report, 28/05/19, Section 15.3(e)).

The proposal for Investigation Area B (South) is for residential development only, with an estimated yield of 200 dwellings. As such the proposal would not satisfy an overriding need in the public interest.

Criteria Summary		Overarching Assessment Investigation Area B (South)
	(A) <i>it would not result in any material adverse impact both upstream and downstream of the land; and</i>	Does not comply - Council in their assessment concludes that “ <i>flooding constraints significantly impede the development potential of Investigation Area B (South). The overlapping flood extents of Figures A1.11 and C1.7 in the Allan & Dennis Flood Study Report (hatched area in Figure 35 below) show most of Investigation Area B (South) to be flood affected and this may increase further when the DFE is considered for local area flooding</i> ” (SCRC Assessment Report, 28/05/19, Section 15.3(e)).
	(B) <i>it would result in a significant overall benefit for a significant part of the community in social, economic or environmental terms; and</i>	Does not comply. The proposal for Investigation Area B (South) is for residential development only, with an estimated yield of 200 dwellings. There is no significant overall benefit arising from this proposal for a significant part of the community in social, economic or environmental terms.
	(C) <i>the benefit cannot otherwise be satisfied by other land that is suitable and reasonably available”.</i>	Does not comply. Council has determined that there is no overriding need in the public interest for residential development in this location as any benefit can otherwise be satisfied by other land that is suitable and reasonably available for residential development. (SCRC Assessment Report, 28/05/19, Section 15.4(b))
2.3 Infrastructure		
(c) (i)	<i>... provision by the relevant Landowner of necessary infrastructure to service the land for urban development at no cost to the Infrastructure Authorities</i>	N/A - The proposal for Investigation Area B (South) is for residential development only, with an estimated yield of 200 dwellings. There is no significant overall benefit arising from this proposal.

Investigation Area B (South): Peer Review Finding

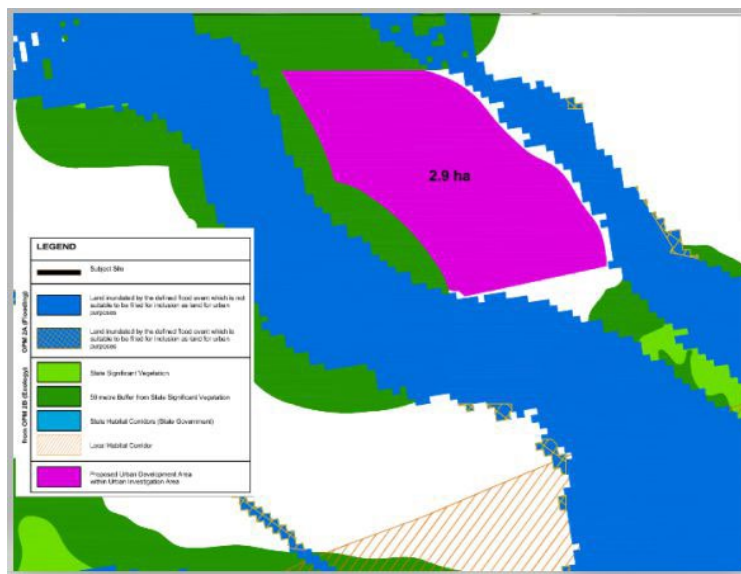
The area of Investigation Area B (South) currently under review has been determined by Council to be an ecologically important area and in accordance with Special Condition 2.2(a)(ii) of the Palmview IA this land cannot be considered suitable for urban development, notwithstanding that part of the site is not flood prone land. While the Landowner of Investigation Area B (South) has identified options for the translocation of ecological important areas, such a proposal does not comply with the provisions of the Palmview IA and as such has not been further considered.

Accordingly, we agree with Council’s assessment that no land in Investigation Area B (South) is suitable for urban development in accordance with Special Condition 2.2(a) of the Palmview IA (Schedule 2).

3.0 INVESTIGATION AREA C

Investigation Area C is located on part of Lot 2 on SP288657, Cavalry Road, Sippy Downs and covers a total area of 18 hectares. The Landowner has identified 2.9 hectares of land within the 18 hectares of Investigation Area C as being suitable for urban development as it is not constrained by ecological values. The Landowner has identified that the 2.9 hectares would provide for a development yield of approximately 50 - 87 dwellings (refer **Figure 8**).

Figure 8. Subject area identified as suitable for Urban development by the Landowner Submission.



Overview of Council's Assessment

Ecological Assessment

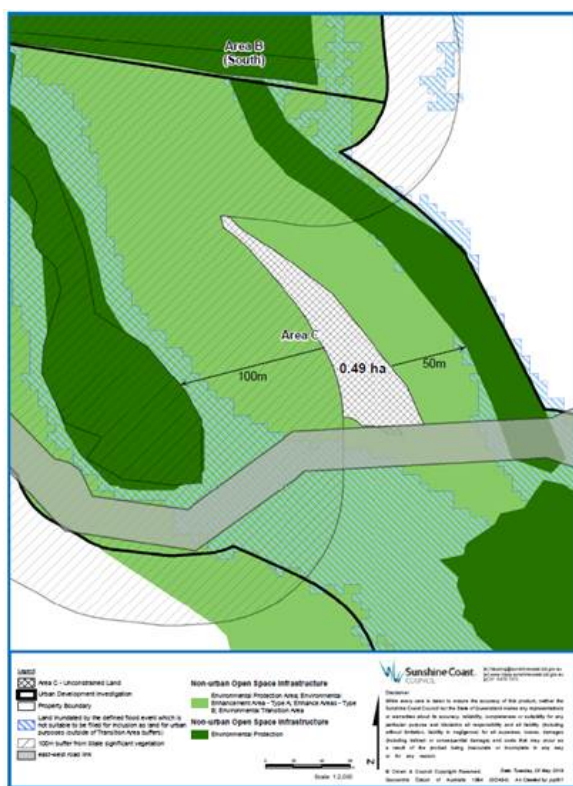
Other Plan Map OPM P2(b) of the Palmview Structure Plan maps part of Investigation Area C as being an "ecologically important area", being identified as a Local Habitat Corridor, State Significant Vegetation and a 50m buffer from State Significant Vegetation.

Council's assessment states that:

- (a) *The Council has determined that the highest ecological values in Investigation Area C are in those areas containing the remnant vegetation and associated essential habitat and the two waterways on the boundaries of Investigation Area C, which also provide a connection between Investigation Area B (South) and the Mooloolah River.*
- (b) *Some of those areas are within the area included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b). The Council has therefore determined that these areas are an ecologically important area under Special Condition 2.2(a) of the Palmview IA and should not be considered suitable for urban development...*
(SCRC Assessment Report, 28/05/19, Section 20.5(a)-(b))

Following provision of the buffers set at 100m and 50m, Council has identified that an area of **approximately 0.49ha** may be suitable for urban development subject to the necessary infrastructure being provided (refer **Figure 9**).

Figure 9. Investigation Area C Land Suitable for Urban Development – subject to infrastructure (Source: SCRC Assessment Report, 28/05/19).



Flooding Assessment

Other Plan Map OPM P2(a) of the Palmview Structure Plan maps part of Investigation Area C as being an area inundated by the DFE. Council notes that the Investigation Area C Flood Hazard Peer Review includes the following conclusions:

- (i) *The peer reviewer could not comment on the setup of the flood models as the information had not been provided by the Landowner.*
- (ii) *Mapping for the 1% AEP climate change flood event ... shows that the area considered for future development in the Investigation Area C Submission is outside the 1% AEP climate change flood event extent except for a small section in the south west corner. However, the impact mapping shows there may be an increase in flood levels of up to 0.5m along the western side of the site and may result in an unacceptable impact on the potentially ecologically important wetlands and retained habitats. (SCRC Assessment Report, 28/05/19, Section 21.2.1(a)).*

Council is of the view that regional flooding constraints do not prevent the development of part of Investigation Area C, however local (stormwater) flooding also needs to be considered (SCRC Assessment Report, 28/05/19, Section 21.3(a)).

Finding

Council has found that:

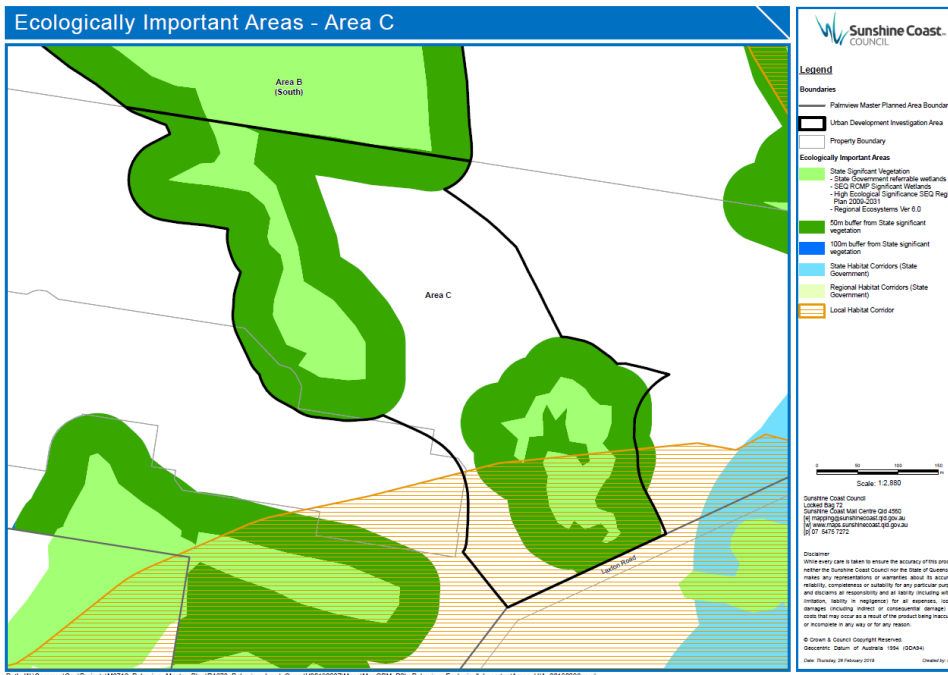
- (a) There appears to be an area that is not identified as an ecologically important area and which is not identified as a flood hazard area and is therefore suitable for urban development; and

- (b) This area will need to be modified to ensure that the flood impacts currently identified on the boundary of the site are eliminated and that any impacts associated with urban stormwater runoff are managed within the development footprint.

(SCRC Assessment Report, 28/05/19, Section 1.4.1).

Our Assessment

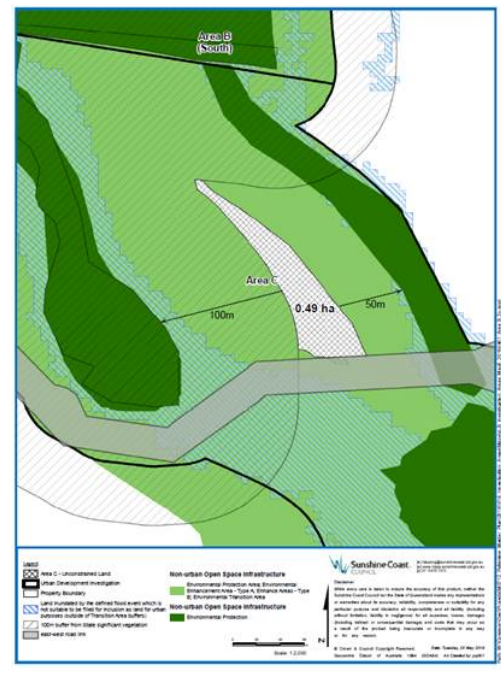
The following table provides a high level assessment of the suitability of Investigation Area C for urban development based on Special Condition 2.2 and 2.3 of the Palmview IA to assist in the review of Council’s findings.

Criteria Summary		Overarching Assessment Investigation Area C
2.2 Ecologically important area		
<p>(a) (i)</p>	<p>The land is ... “not included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Structure Plan; or”</p>	<p>Other Plan Map OPM P2(b) of the Palmview Structure Plan maps part of Investigation Area C as being an ecologically important area, being identified as a Local Habitat Corridor, State Significant Vegetation and a 50m buffer from State Significant Vegetation, with the balance area not included in an ecologically important area (refer Figure 10).</p> <p>Figure 10. Extract from Sunshine Coast Planning Scheme – Other Plans Map OPM P2(b) with approximate Investigation Area C – extracted SCRC Assessment Report, 30/4/19.</p>  <p>The map, titled 'Ecologically Important Areas - Area C', shows various ecological features. A legend on the right identifies: <ul style="list-style-type: none"> Boundaries: Palmview Master Planned Area Boundary (dashed line), Urban Development Investigation Area (dotted line), Property Boundary (solid line). Ecologically Important Areas: <ul style="list-style-type: none"> State Significant Vegetation (light green) State Government referable wetlands (medium green) SEPP Significant Wetlands (dark green) High Ecological Significance (ESA) Region Plan 2006-2011 (yellow-green) Regional Ecosystems (red) 100m buffer from State significant vegetation (orange) 100m buffer from State significant vegetation (dark orange) State Habitat Corridors (State Government) (blue) Regional Habitat Corridors (State Government) (light blue) Local Habitat Corridor (orange hatched) The map also includes a scale of 1:2,800 and a disclaimer: 'Disclaimer: While every care is taken to ensure the accuracy of this printed matter the Sunshine Coast Council nor the State of Queensland makes any representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and therefore any representations and/or claims made in this document, whether in negligence or otherwise, are excluded to the maximum extent permitted by law. Council does not accept any liability for any loss or damage that may occur as a result of the product being inaccurate or incomplete in any way or for any reason.'</p>
<p>(a) (ii)</p>	<p>The land is ... “included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Structure Plan</p>	<p>Council has determined that the highest ecological values in Investigation Area C are in those areas containing the remnant vegetation and associated essential habitat and the two waterways on the boundaries of Investigation Area C, which also provide a connection between Investigation Area B (South) and the Mooloolah River (SCRC Assessment Report, 28/05/19, Section 20.5). Council has applied 100m and 50m buffers to these areas as outlined in section 23.3 of the SCRC Assessment Report, 28/05/19 (refer Figure 11).</p> <p>It is understood that the State has provided no input on this issue.</p>

Criteria Summary **Overarching Assessment Investigation Area C**

and is determined by the State government and the local government not to be an ecologically important area; and”

Figure 11. Investigation Area C Land Suitable for Urban Development Subject to Provision of Necessary Infrastructure (Source: SCRC Assessment Report, 28/05/19).

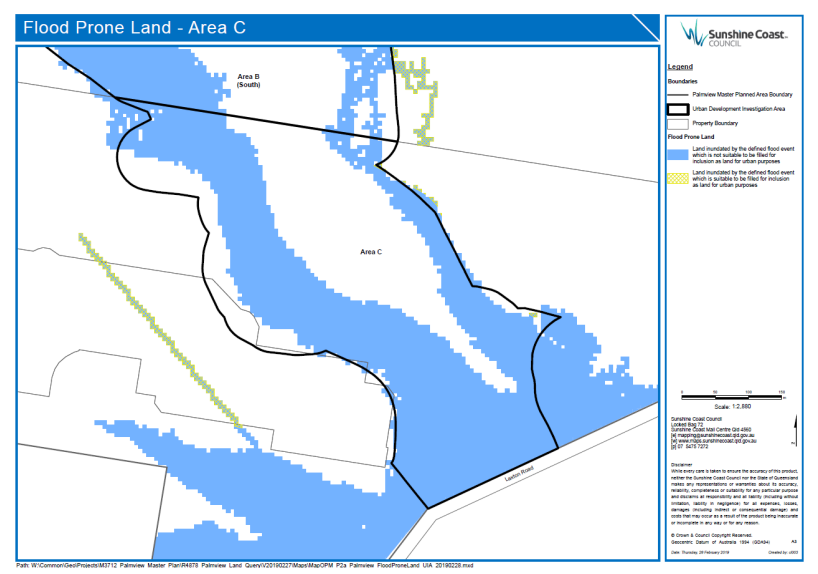


2.2 Flood hazard area

(b) The land is ... “not flood prone land as defined in the Structure Plan (Flood Prone Land); or”

Other Plan Map OPM P2(a) of the Palmview Structure Plan maps part of Investigation Area C as being an area inundated by the Defined Flood Event with the balance area not flood prone land. This definition does not include land inundated in the Probable Maximum Flood.

Figure 12. Extract from Sunshine Coast Planning Scheme – Other Plans Map OPM P2(a) with approximate Investigation Area C – extracted SCRC Assessment Report, 28/05/19.



Criteria Summary		Overarching Assessment Investigation Area C
(b) (ii)	<i>"If the land is Flood Prone Land, the Council in its absolute discretion has determined that incorporating the Flood Prone Land in the land suitable for urban development satisfies an overriding need in the public interest in that:</i>	An assessment of the overriding need in the public interest is not applicable in this instance, as the proposal to develop Investigation Area C avoids flood prone areas.
	(A) <i>it would not result in any material adverse impact both upstream and downstream of the land; and</i>	N/A
	(B) <i>it would result in a significant overall benefit for a significant part of the community in social, economic or environmental terms; and</i>	N/A
	(C) <i>the benefit cannot otherwise be satisfied by other land that is suitable and reasonably available".</i>	N/A
2.3 Infrastructure		
(c) (i)	<i>... provision by the relevant Landowner of necessary infrastructure to service the land for urban development at no cost to the Infrastructure Authorities</i>	The residual area of 0.49 hectares may be suitable for urban development noting that this figure is subject to review to accommodate all necessary infrastructure, including: <ul style="list-style-type: none"> (i) <i>Road transport infrastructure</i> (ii) <i>Public transport infrastructure</i> (iii) <i>Bicycle and pedestrian infrastructure</i> (iv) <i>Water Supply and Sewerage infrastructure</i> (v) <i>Stormwater infrastructure</i> (vi) <i>Urban open space infrastructure</i> (vii) <i>Non-urban open space infrastructure</i> (viii) <i>Community facilities infrastructure</i> Refer to section 23.3, SCRC Assessment Report, 28/05/19.

Investigation Area C: Peer Review Finding

Part of Investigation Area C is suitable for urban development as it has been determined by Council to not be an ecologically important area (Special Condition 2.2(a)(ii)) or flood prone land (Special Condition 2.2(b)(i)). Accordingly, we agree with Council's assessment that a residual area of approximately 0.49 hectares may be suitable for urban development, noting that this figure is subject to review to accommodate all necessary infrastructure as required under Special Condition 2.3(c)(i).

Accordingly, we agree with Council's assessment that only a small residual portion of land in Investigation Area C (South) is suitable for urban development.

While not part of this technical assessment, the resulting land deemed 'suitable for urban development' as part of Area C is isolated, poorly shaped, and is unlikely to meet other assessment provisions included in the Palmview Structure Plan, including (but not limited to):

- *PO2 The form, pattern and structure of development provides for the establishment of a transit oriented community with the following characteristics:-
(a) a compact urban form with strongly defined edges which protect important ecological and landscape values;...*
- *PO7 Development protects and enhances the environmental protection area specifically identified on Other Plans Map OPM P12 (Palmview Master Planned Area Non-urban Open Space Infrastructure Network);*
- *PO8 Development provides for the ecological rehabilitation of the environmental enhancement area specifically identified on Other Plans Map OPM P12 (Palmview Master Planned Area Non-urban Open Space Infrastructure Network) in order to reconnect isolated patches of remnant vegetation, support wildlife corridors and actively assist the process of natural regeneration.*

CONCLUSION

A peer review of Council's Final Assessment Report – Urban Development Investigation under the Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2), relying on Special Conditions 2.2(a), 2.2(b) and 2.3(c)(i) in Schedule 2, has found that:

- Investigation Area B (North) – Part of Investigation Area B (North) has been determined by Council to be an ecologically important area, with a balance area to the west of the existing drainage channel determined to not be ecologically important. Notwithstanding this, the entire site has been determined by Council to be flood prone land and cannot be considered suitable for urban development as the current proposal does not satisfy an overriding need in the public interest prescribed by Special Condition 2.2(b)(ii). Accordingly, we agree with Council's assessment that no land in Investigation Area B (North) is suitable for urban development in accordance with Special Condition 2.2(a) and 2.2(b) of the Palmview IA (Schedule 2);
- Investigation Area B (South) – The area of Investigation Area B (South) currently under review has been determined by Council to be an ecologically important area and in accordance with Special Condition 2.2(a)(ii) of the Palmview IA this land cannot be considered suitable for urban development, notwithstanding that part of the site is not flood prone land. While the Landowner of Investigation Area B (South) has identified options for the translocation of ecological important areas, such a proposal does not comply with the provisions of the Palmview IA and as such has not been further considered. Accordingly, we agree with Council's assessment that no land in Investigation Area B (South) is suitable for urban development in accordance with Special Condition 2.2(a) of the Palmview IA (Schedule 2); and
- Investigation Area C - Part of Investigation Area C is suitable for urban development as it has been determined by Council to not be an ecologically important area (Special Condition 2.2(a)(ii)) or flood prone land (Special Condition 2.2(b)(i)). Accordingly, we agree with Council's assessment that a residual area of approximately 0.49 hectares may be suitable for urban development, noting that this figure is subject to review to accommodate all necessary infrastructure as required under Special Condition 2.3(c)(i). Accordingly, we agree with Council's assessment that only a small residual portion of land in Investigation Area C (South) is suitable for urban development. in accordance with Special Condition 2.2(a), 2.2(b) and 2.2(c)(i) of the Palmview IA (Schedule 2).

Should you have any queries, please do not hesitate to contact me by telephone on 0413626690 or email david@perkinsplanning.com.au.

Yours faithfully



David Perkins

Director
Perkins Planning