

# **Draft Determination of Urban Development Investigation Areas within the Palmview Structure Plan Area**

**18 May 2018**



© Sunshine Coast Regional Council 2009-current.  
Sunshine Coast Council™ is a registered trademark  
of Sunshine Coast Regional Council.

**[www.sunshinecoast.qld.gov.au](http://www.sunshinecoast.qld.gov.au)**

[mail@sunshinecoast.qld.gov.au](mailto:mail@sunshinecoast.qld.gov.au)

**T 07 5475 7272 F 07 5475 7277**

Locked Bag 72 Sunshine Coast Mail Centre Qld 4560

#### **Acknowledgements**

Council wishes to thank all contributors and stakeholders  
involved in the development of this document.

#### **Disclaimer**

Information contained in this document is based on  
available information at the time of writing. All figures  
and diagrams are indicative only and should be referred  
to as such. While the Sunshine Coast Regional Council  
has exercised reasonable care in preparing this  
document it does not warrant or represent that it is  
accurate or complete. Council or its officers accept no  
responsibility for any loss occasioned to any person  
acting or refraining from acting in reliance upon any  
material contained in this document.

## Contents

1.0	Purpose .....	5
2.0	Executive Summary .....	5
3.0	Background .....	11
3.1	Location .....	11
3.2	Master Planned Area declaration .....	12
3.3	Palmview Structure Plan Infrastructure Agreement .....	13
3.4	Urban Development Investigation Areas .....	14
4.0	Assessment of Urban Development Investigation Areas.....	16
4.1	Urban Development Investigation Areas under the Palmview Infrastructure Agreement .....	16
4.2	Consultation process.....	19
5.0	Investigation Area B North .....	19
5.1	Palmview Structure Plan context .....	20
5.2	State's determination of ecologically important area .....	21
5.3	Council's determination of ecologically important area .....	23
5.4	Council's determination of flood prone land.....	29
5.5	Determination .....	36
5.6	Officer Recommendation – Investigation Area B North .....	36
6.0	Investigation Area B South .....	36
6.1	Palmview Structure Plan context .....	37
6.2	State's determination of ecologically important area .....	38
6.3	Council's determination of ecologically important area .....	39
6.4	Council's determination of flood prone land.....	44
6.5	Determination .....	46
6.6	Officer Recommendation – Investigation Area B South .....	46
7.0	Investigation Area C .....	46
7.1	Palmview Structure Plan context .....	47
7.2	State's determination of ecologically important area .....	48

7.3	Council's determination of ecologically important area	49
7.4	Council's determination of flood prone land	51
7.5	Determination	52
7.6	Officer Recommendation – Investigation Area C	52
8.0	Other Considerations	52
8.1	Adverse impacts	53
8.2	Social, economic and environmental considerations	53
8.3	Economic considerations	57
8.4	Other considerations	58
9.0	Preliminary outcome of investigation	59
10.0	Next steps	60
	Appendix 1 – Review Process Flow Diagram	62
	Appendix 2 – Further information notices	63
	Appendix 3 - Background to Structure Plan Area	68
	Appendix 4 – DEHP report	70

## 1.0 Purpose

The purpose of this report is to assess the submissions made by Landowner B and Landowner C in relation to the Urban Development Investigation Areas outlined in *Schedule 2 Urban Development Investigation* of the Palmview Infrastructure Agreement and to make a draft determination of the suitability of the Urban Development Investigation Areas for urban development.

## 2.0 Executive Summary

In early 2009, the Council commenced the preparation of the *Palmview Structure Plan (Palmview Structure Plan)* to identify the vision, strategic intent and planning framework for the future development and management of the Structure Plan Area. The premise of the structure planning exercise was to formulate a development outcome which provided certainty for the owners, in terms of the area of land suitable for development and the infrastructure required to service that land, but which was balanced with the public interest, by avoiding development in areas of environmental significance or biophysical constraints and in areas subject to natural hazards and climate change impacts.

During the renegotiation of the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No 2) (Palmview Infrastructure Agreement)*, Landowners B and C negotiated a process for Council to consider further areas suitable for urban development on the basis that the landowners believed Council's flooding and ecological studies to be inaccurate. The landowners were to provide Council with evidence confirming or rejecting the ecological and flooding constraints on the sites identified as the Urban Development Investigation Areas in the Palmview Structure Plan Area.

The landowners provided their submissions on the Urban Development Investigation Areas, Area B North, Area B South and Area C on the 1 April 2017 and provided additional information (on request) in November and December 2017 for Investigation Area C and Investigation Area B respectively.

An assessment of the information provided by the landowners has been undertaken by the State government and by Council, specifically in relation to ecologically important areas and flood hazard in accordance with Special Condition 2.2 of the Palmview Infrastructure Agreement. Special Condition 2.2 specifies that land within an Urban Development

Investigation Area is only to be considered suitable for urban development if the landowners have demonstrated the areas are not 'Ecologically Important Areas' nor flood prone. Refer to **Section 4.1** for the detailed assessment criteria.

In accordance with Special Condition 2.2, if the Urban Development Investigation Area is determined by the State or Council to be an 'Ecologically Important Area' further investigations were not required. However, for completeness, the flood hazard has also been assessed. An assessment of the overriding need in the public interest to develop land considered flood prone was undertaken for Urban Investigation Area B North only, as the development proposal included in the submissions included community uses rather than residential alone which was proposed for the other two Urban Development Investigation Areas.

The outcome of the assessment for each of the three Urban Development Investigation Areas is as follows.

### **Area B North Findings**

#### *Assessment of Ecological Importance*

The State assessment determined that Investigation Area B North is within the *ShapingSEQ* Regional Biodiversity Corridor, contains remnant vegetation with State biodiversity values and recommended that rehabilitation should occur to restore linkages to support the ecologically important areas to the north and the south.

While the State is not opposed on ecological grounds to limited development within the western portion of the Investigation Area B North, Council environment officers consider the whole of Investigation Area B North provides critical habitat and wildlife movement linkages, is naturally regenerating and consider the area to be an 'Ecologically Important Area' which should be retained in its entirety for environmental purposes.

The ecological assessment prepared by JWA Ecological Consultants for Landowner B confirms that Sippy Creek (and associated riparian vegetation) and the patch of remnant vegetation in the north-western portion of the site contain the highest environmental values in the Structure Plan Area and are considered to be 'Ecologically Important Areas'. Council officers consider that Investigation Area B North provides a far greater level of habitat functionality, appropriate for fauna and flora species, than a connection through Lower Mooloolah River Environmental Reserve as proposed by the JWA report.

### *Assessment of Flood Modelling*

Assessment of the flood modelling confirms that the area is entirely flood prone and the overriding need in the public interest has not been demonstrated. Further, the engineered drainage solution proposed by the landowner has not been proven as suitable, and in fact conflicts with Council policy positions contained in the *Sunshine Coast Planning Scheme 2014* and *Environment and Liveability Strategy*. The assessment considers that development of the site would generate adverse material impacts, including:

- flood level increases (up to 300 mm);
- diversion of frequent flows away from the Lower Mooloolah River Environmental Reserve; and
- loss of flood storage (45,000 m<sup>3</sup>).

In addition, if development of the site established a precedence for allowing loss of flood plain storage, this would be exacerbated with a cumulative loss of flood plain storage with future development in other locations in the region and again would be inconsistent with Council's stated policy positions in the *Sunshine Coast Planning Scheme 2014* and the *Environment and Liveability Strategy 2017*.

### *Assessment of overriding Need in the Public Interest*

Assessment of the development proposal which is proposed to include sporting fields, community facility land, educational and emergency services land and residential land in the form of a retirement village, indicates it is not consistent with Council's current policy direction and network planning for sporting or community facilities. The proposal would deliver below standard facilities and would duplicate and compete for funding with planned projects. It is not considered a good financial offer for Council and will require a substantial investment by Council.

The submission therefore has not demonstrated an overriding public need in the public interest to develop flood prone land.

### *Officer Recommendation*

In accordance with Special Condition 2.2, the Urban Development Investigation Area B North has been determined by the State or Council to be an 'Ecologically Important Area' and has been determined to be flood prone land and is therefore not considered suitable for urban development. No overriding need in the public interest has been demonstrated to warrant the development of flood prone land.

It is recommended that the entire area of the proposed Area B North be retained to:

- deliver habitat connectivity and wildlife movement (Corridor 3 - Figure 2, Chenoweth 2005) connecting Sippy Creek to the patch of remnant vegetation in the north-western portion of the site (Area B North), described as 'Ecologically Important Areas' in accordance with the definitions within the Structure Plan and Palmview Infrastructure Agreement
- deliver habitat and wildlife connectivity between the Mooloolah River National Park and 'Ecologically Important Areas' in the Palmview development through the enhancement and reinstatement of Regional Ecosystem types 12.3.5 (Melaleuca Forest) and 12.3.13 (Heath) which would provide the greatest level of habitat functionality appropriate for local fauna and flora species,
- protect and enhance the areas of natural regeneration described by Chenoweth (2005) as Areas of High Rehabilitation Potential;
- protect flood storage;
- prevent the diversion of flows away from the Lower Mooloolah River Environmental Reserve; and
- prevent flood level increases.

## **Area B South Findings**

### *Assessment of Ecological Importance*

The State assessment identified that Area B South contains over 90% of intact remnant regional ecosystems, including a large portion of heath community and that it has a diverse number of threatened species and many MSES values and therefore considered to be an 'Ecologically Important Area'.

The State does not support any development of Area B South, nor does it support the translocation of the identified ecologically important vegetation within the site as proposed by the landowner as the existing heath is already a source of habitat for endangered and vulnerable species and translocation methods do not seem capable of maintaining a functioning ecosystem. In addition, the State considers that for Area B South to remain ecologically viable, the adjoining Area C also needs to be retained to ensure the connection to larger regional habitats. This position is supported by Council environmental officers.



The ecological assessment prepared by JWA Ecological Consultants for Landowner B confirmed that the remnant heath vegetation on the site is recognised as representing 'Ecologically Important Areas' and that all vegetation communities identified on site were in either good or excellent condition. The report failed to recognise that Area B South is also identified within a Biodiversity Enhancement Corridor at a sub-regional scale.

In addition, the JWA report proposed to translocate the remnant heath vegetation to Council owned land without recognising that the proposed translocation site is not appropriate as a receiving site for the heath vegetation (in terms of soil type and hydrology) and which would be double dipping, given this land is already part of the 483.4 hectares to be provided as part of this development.

The JWA report also recommended that the location and size of buffers should be determined at the detailed design phase. However, the State and Council, during preparation and negotiation of the Palmview Structure Plan and infrastructure agreement, buffers to some 'Ecologically Important Areas' were already reduced and agree to provide certainty to all parties and on the basis that a road edge would be maintained along these areas and the securing of 483.4 hectares for ecological protection and rehabilitation.

#### *Assessment of Flood Modelling*

Assessment of the flood modelling prepared by Cardno for Investigation Area B South confirms that a significant area of the Investigation Area B South is inundated by floodwaters up to two metres in depth. The assessment also determined that there is a portion of the Urban Development Investigation Area that is not inundated by the defined flood event and could be suitable for urban development were it not identified as an 'Ecologically Important Area'.

#### *Officer Recommendation*

In accordance with Special Condition 2.2, the Urban Development Investigation Area B South has been determined by the State or Council to be an 'Ecologically Important Area' and is therefore not considered suitable for urban development. It has also been determined that a significant area of the site is flood prone land.

It is recommended that the whole of Investigation Area B South be retained to preserve the remnant vegetation which is identified as 'Ecologically Important' in order to maintain habitat connectivity and wildlife movement to the north (Sippy Creek and Mooloolah River National Park) and the south (through Area C to Mooloolah River)

## **Area C Findings**

### *Assessment of Ecological Importance*

State assessment of Investigation Area C determined that the remnant vegetation in Area C provides an important link providing connectivity from Area B South to the adjoining habitat along the creek in the south. Investigation Area C was also identified as containing many MSES values in Regulated Vegetation and significant wetlands. The State does not support further development within Investigation Area C.

The Saunders Havill report commissioned by Landowner C confirms that the Investigation Area C contains areas of State High Ecological Significance wetlands identified over the western creek line and vegetation in the south of Area C. Two areas of [state] Least Concern remnant vegetation (RE 12.3.5 Melaleuca open forest) are also located in the west and south of Area C and that the area is mapped within a Biodiversity Enhancement Corridor'.

Maintaining connectivity through Investigation Area C to the Mooloolah River is considered critical by both the State and Council to ensure effective habitat connectivity and wildlife movement to Investigation Area B South which is recognised as an 'Ecologically Important Area' (remnant heath vegetation) and has a strong reliance of the connectivity provided by Investigation Area C. The assessment also considered whether this connectivity could be achieved with reduced buffers but it was determined that this has the potential to significantly impact on the functionality of the habitat connectivity and would be highly susceptible to edge effects resulting in an ineffective corridor connecting to Investigation Area B South.

### *Assessment of Flood Modelling*

Assessment of the flood modelling prepared by Water Technology for Investigation Area C indicates that the south-western corner of the Urban Development Investigation Areas is inundated by up to 750mm and that there is some minor flooding along the western edge and north east corner. The assessment also confirmed that there is a portion of the Urban Development Investigation Area C that is not inundated by the defined flood event and could be suitable for urban development were it not identified as an 'Ecologically Important Area'.

### *Officer Recommendation*

In accordance with Special Condition 2.2, the Urban Development Investigation Area C has been determined by the State or Council to be an 'Ecologically Important Area' and is therefore not considered suitable for urban development even though a portion of the site is not subject to flood inundation.

It is recommended that the whole of Investigation C be retained in order to maintain habitat connectivity and wildlife movement from Investigation Area B South to the Mooloolah River.

In summary, the three Urban Development Investigation Areas contain many high biodiversity and conservation values that are considered ecologically important at both a State and Council level. In addition, the areas that are not considered to be ecologically important (only a portion of Area B North) were also confirmed to be flood prone and an overriding need to develop the sites in the public interest was not demonstrated.

It is recommended that Urban Development Investigation Areas B North, B South and Area C be retained for conservation purposes under the Palmview Structure Plan.

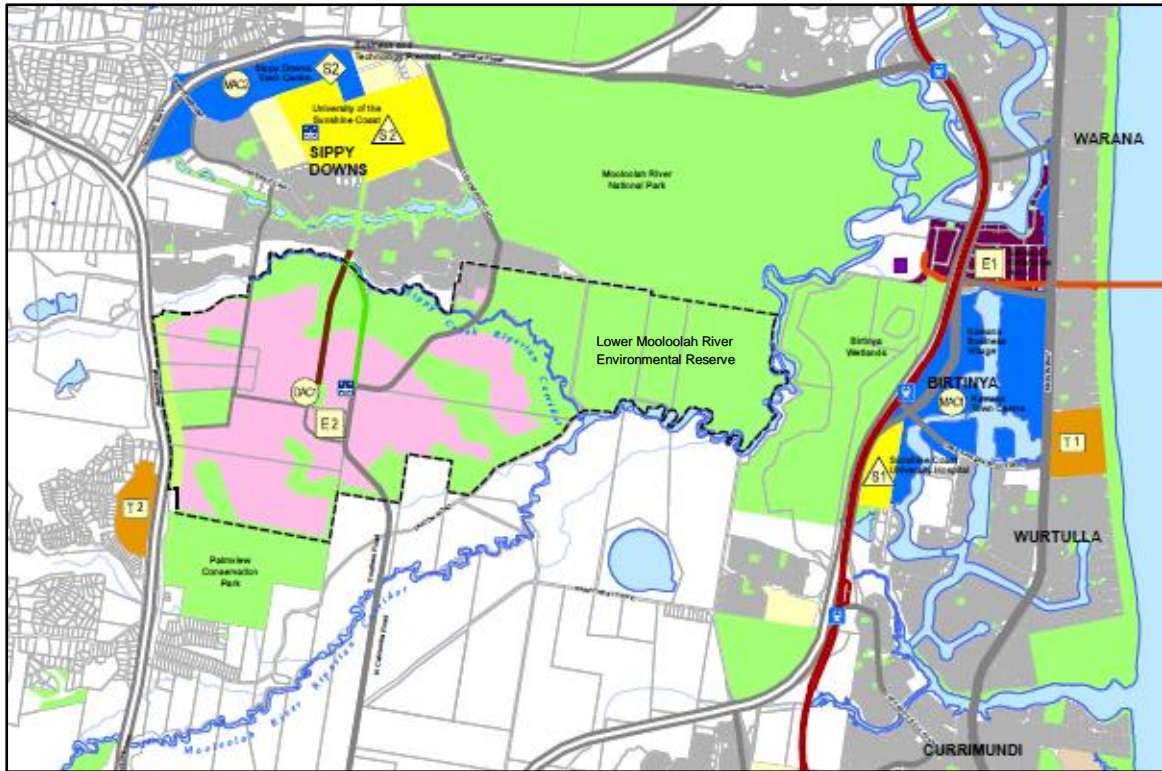
## 3.0 Background

### 3.1 Location

The Palmview Structure Plan Area is located immediately south of the Sippy Downs and Chancellor Park urban community and to the west of the Kawana Town Centre and the Sunshine Coast University Hospital.

The Structure Plan Area is approximately 926 hectares in area with boundaries generally defined by:

- Sippy Creek, Cavalry Road, Claymore Road, and Mooloolah River National Park in the north;
- the Mooloolah River in the east;
- the Palmview Conservation Park, Laxton Road, and the Mooloolah River in the south; and
- the Bruce Highway in the west (refer to **Figure 1**).



**Figure 1 Palmview Structure Plan Area and Surrounds**

The Structure Plan Area is characterised by gently undulating topography which reflects its location within and on the margins of the coastal plain. The Structure Plan Area generally slopes down from its western and central parts to Sippy Creek and the Mooloolah River.

Approximately 45% of the Structure Plan Area is subject to the defined flood event. Acid sulphate soils exist in low lying parts of the Structure Plan Area.

### 3.2 Master Planned Area declaration

The Palmview Master Planned Area (**Structure Plan Area**) was the subject of a master planned area declaration on 18 December 2009 under the *Sustainable Planning Act 2009* (**SPA**) by the then Minister for Infrastructure and Planning to ensure the future growth and planning of the Structure Plan Area occurred in a co-ordinated and efficient manner to meet the demand for the growth in population in South-east Queensland.

In early 2009, the Council commenced the preparation of the *Palmview Structure Plan* (**Palmview Structure Plan**) to identify the vision, strategic intent and planning framework for the future development and management of the Structure Plan Area. The premise of the structure planning exercise was to formulate a development outcome which provided certainty for the owners, in terms of the area of land suitable for development and the

infrastructure required to service that land, but which was balanced with the public interest, by avoiding development in areas of environmental significance or biophysical constraints and in areas subject to natural hazards and climate change impacts.

During the preparation of the Palmview Structure Plan, the Council consulted with officers from the then Department of Infrastructure and Planning (**DIP**) and the then Department of Environment and Resource Management (**DERM**) to ensure that areas of significant vegetation and ecologically important areas were protected from development of the Structure Plan Area.

The Palmview Structure Plan was by Council adopted on 1 October 2010 and amendments to the Palmview Structure Plan were adopted on 1 April 2016 (refer to **Figure 2** Map OPM P3 Palmview Master Planned Area Land Use Structure). As part of these amendments, the ecological targets were reviewed and areas external to the Structure Plan Area were removed resulting in the area of protected vegetation being reduced from 615 hectares to 483.4 hectares.

### 3.3 Palmview Structure Plan Infrastructure Agreement

The Palmview Structure Plan provides for an integrated land use and infrastructure framework for the Structure Plan Area to which an infrastructure agreement being the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No 2)* (**Palmview Infrastructure Agreement**) has been entered into by three Landowners, Unitywater and Council for land in the Structure Plan Area.

As part of the structure planning process, the land suitable for urban development was determined and shown in Map OPM P3 of the Structure Plan (refer to **Figure 2**). During the development of the infrastructure agreement, Landowners B and C negotiated a process for Council to consider further areas suitable for urban development on the basis that the landowners believed the Council's flooding and ecological studies to be inaccurate and the landowners could provide evidence that some areas were not flood prone or ecologically important (refer Special Condition clause 2.1 (b)(2)).

In accordance with Special Condition 2.3 (a), these landowners were to give to Council, within 12 months of the planning scheme amendment taking effect, a notice stating the results and the technical basis for the results of the Urban Development Investigation of Investigation Area B and Investigation Area C. This information was to provide evidence confirming or rejecting the ecological and flooding constraints on the sites. Landowner B and C made submissions to Council for consideration within the required timeframe.

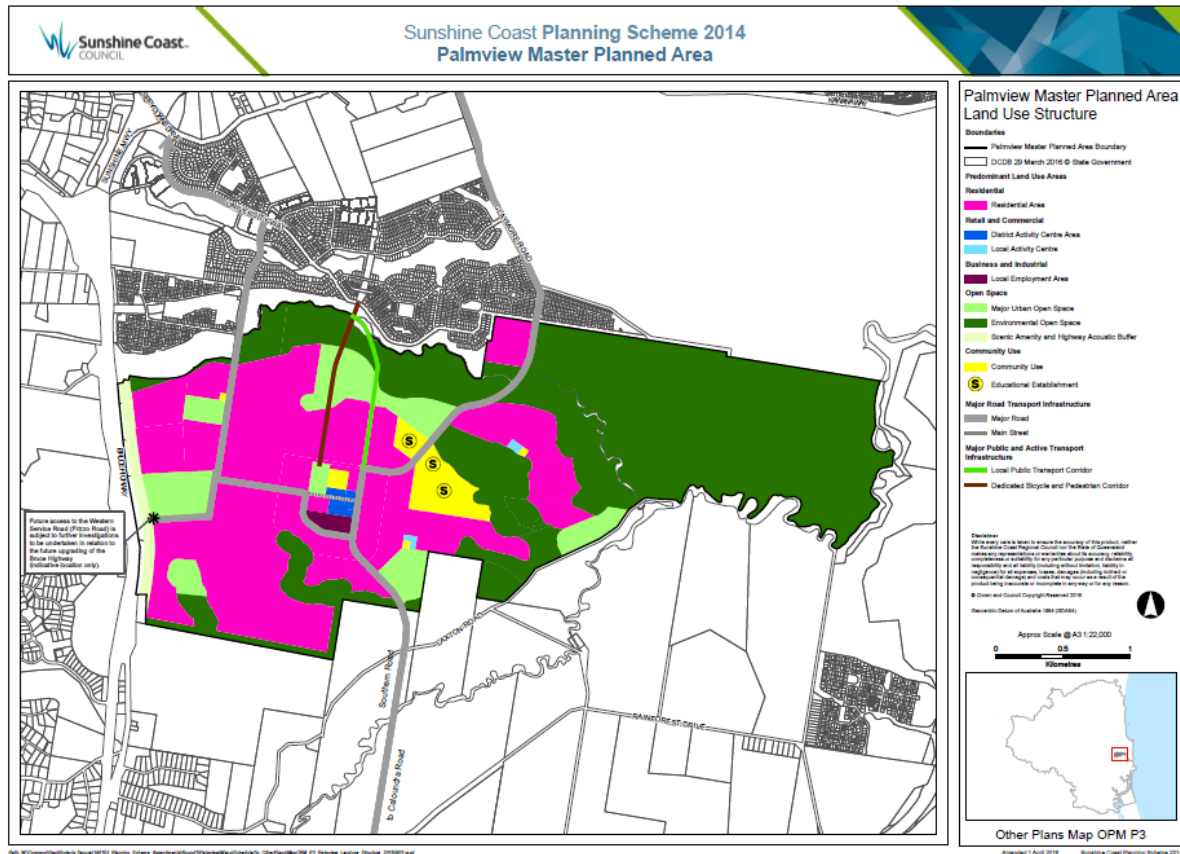


Figure 2 Map OPM P3 Palmview Master Planned Area Land Use Structure

### 3.4 Urban Development Investigation Areas

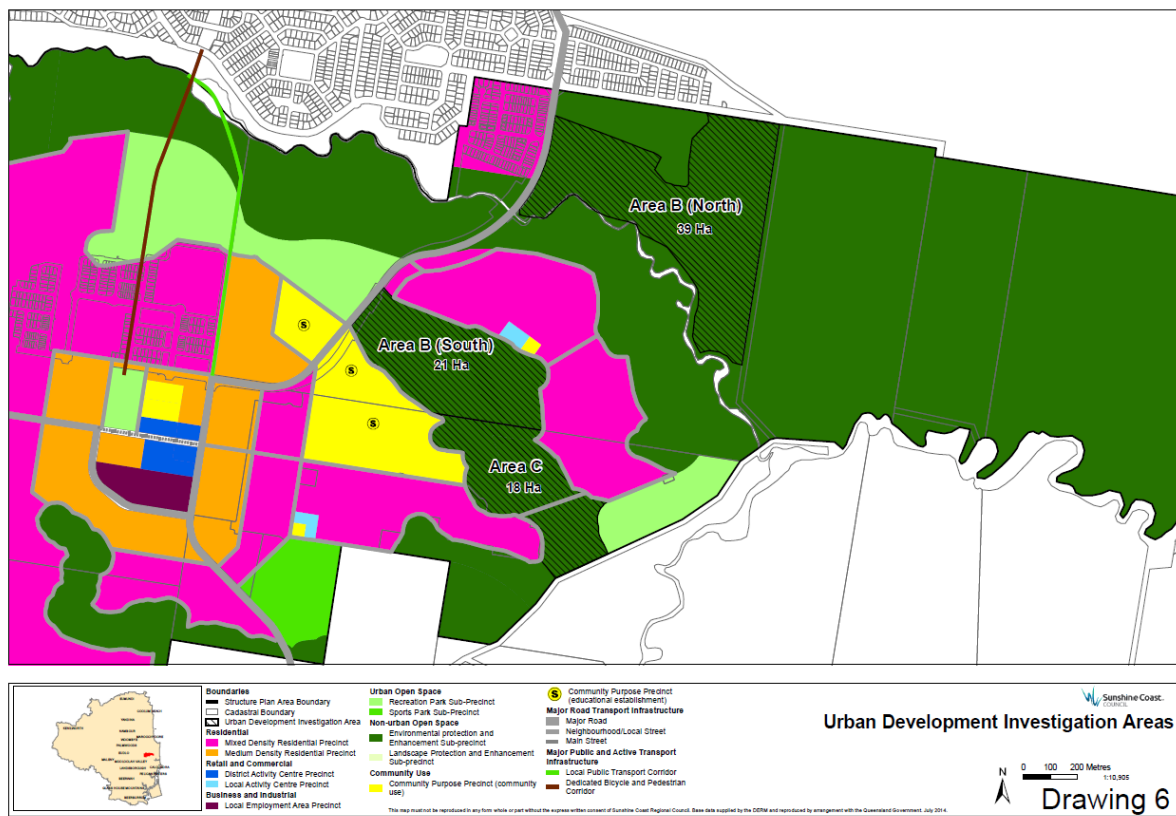
Landowner B considered the areas under urban investigation in two separate investigations:

- Area B North – Part of Lot 201 SP287474 is owned by Landowner B, is approximately 39 hectares in size and is the area in the north-east of the Palmview Structure Plan area, shown on **Figure 3**;
- Area B South – Part of Lot 347 SP287466 is owned by Landowner B, is approximately 21 hectares in size, and is the area adjoining the school site in the south-west of Landowner B’s land holdings.



Landowner C's Urban Investigation Area is part of Lot 346 SP287465, is 18 hectares in size, and is called Investigation Area C for the purposes of this report (refer to **Figure 3 – Urban Development Investigation Areas**).

The final investigation area (Part of Lot 347 SP287466 and Lot 346 SP287465) is not proposed by either of the landowners for further investigation. Hence, there is no technical report presented. This area is identified in the red circle on **Figure 4** as the “Area not subject to further investigation”.



**Figure 3 Urban Development Investigation Areas**

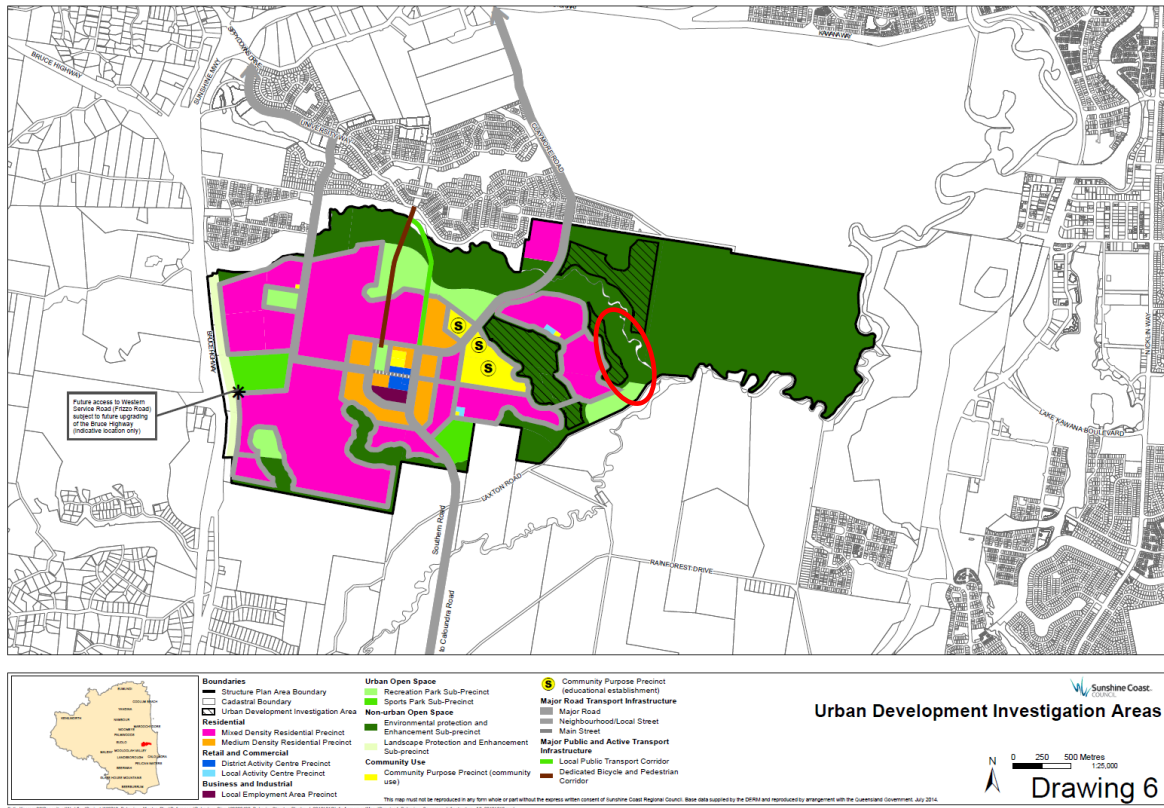


Figure 4 Area Not Subject to Further Investigation

## 4.0 Assessment of Urban Development Investigation Areas

### 4.1 Urban Development Investigation Areas under the Palmview Infrastructure Agreement

In accordance with Special Condition 2.3(c) (Urban Development Investigation) of the Palmview Infrastructure Agreement, Council is to determine whether it is satisfied that the Urban Development Investigation land is suitable for urban development, specifically in relation to 'Ecologically Important Areas' and flood hazard as defined in Special Condition 2.2.

#### "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."*

The maps referred to in the Special Condition are included in **Figures 5 and 6**.

It should be noted the SEQ Regional Plan considers the following do not establish an overriding need in the public interest:

- activities with relatively few locational requirements such as residential development and shopping centres; or
- interests in or options over the site; or
- the site's availability or ownership.

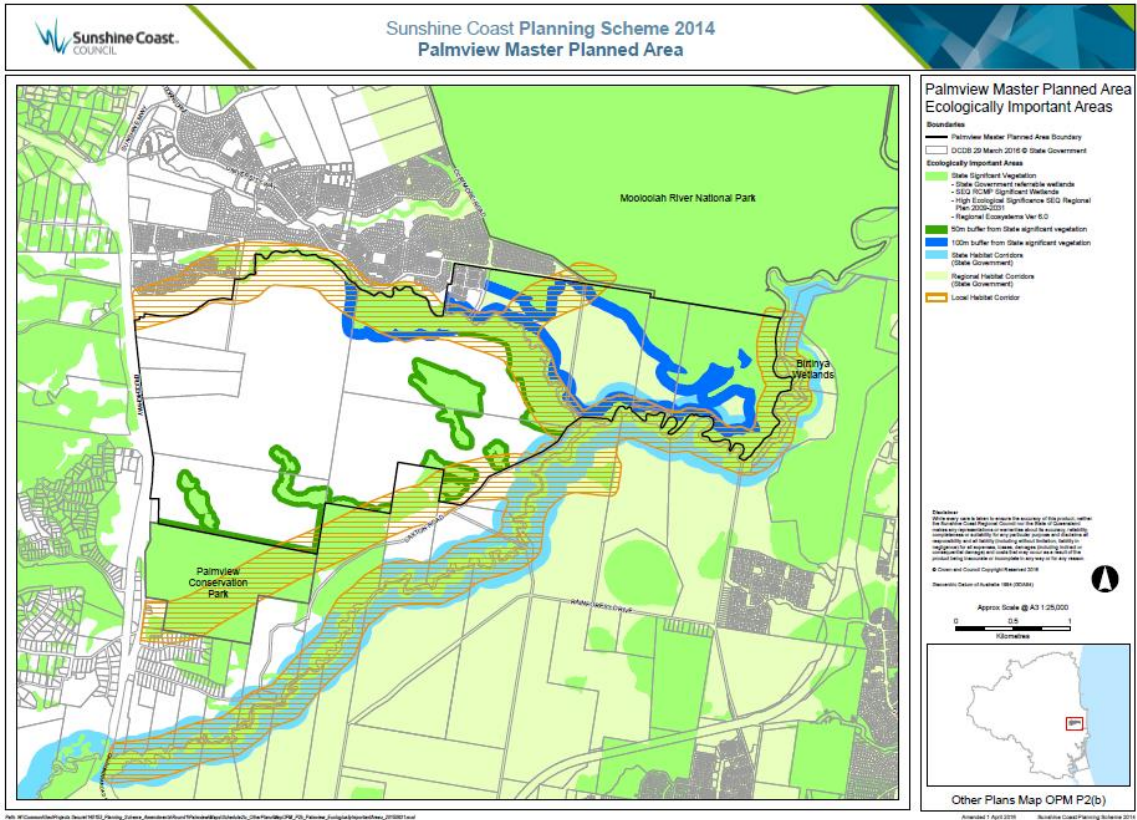


Figure 5 OPM Map2(b) Palmview Master Planned Area Ecologically Important Areas

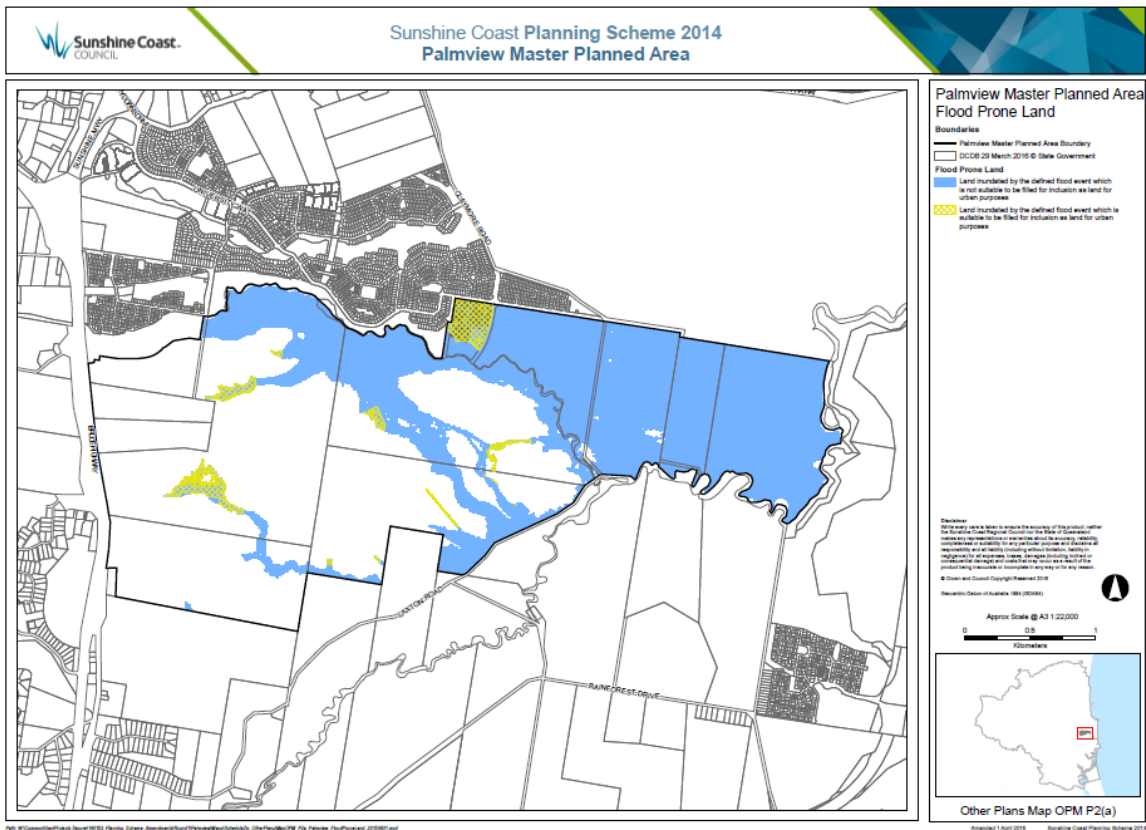


Figure 6 OPM Map P2(a) Palmview Master Planned Area Flood Prone Land

## 4.2 Consultation process

Council has undertaken a process to review the submissions of Urban Development Investigation Areas, which has been communicated to the Landowners (refer to the process flow diagram in Appendix 1).

The notices and accompanying technical information submitted by the Landowners were distributed to the Department of Local Government Infrastructure and Planning and the Department of Environment and Heritage Protection (DEHP) for their consideration. The information was also provided to the Environment and Sustainability Policy Branch, Transport and Infrastructure Policy Branch and Environmental Operations Branch of Council for their consideration of the ecological values and flooding hazard and also for consideration of the overriding need in the public interest.

As part of the urban investigation process, Council can request further information on the proposals from a Landowner. On 23 October 2017, Council sent a notice to Landowner B and Landowner C to outline the additional information required to support the technical review of the proposals. In particular, Council requested detailed information about assumptions and underlying principles of the flood modelling (refer Appendix 2 for detailed information regarding the notice). The further information for Area B was supplied to Council via email on 22 December 2017. The further information for Area C was supplied to Council via email on 22 November 2017.

## 5.0 Investigation Area B North

Landowner B has carried out an investigation of part of Area B to determine whether Investigation Area B North is land suitable for urban development in the Structure Plan Area.

Landowner B gave to the Council a Notice on 1 April 2017 stating the results and the technical basis for the results of the Urban Development Investigation for Investigation Area B North (Attachment 1) in accordance with Special Condition 2.3(a) (Urban Development Investigation) of the Palmview Infrastructure Agreement, and provided further information on 22 December 2017.

Landowner B also presented their proposal for the future use of the land (Area B-North) at the Sippy Downs and District Community Association AGM on the 13 September 2017. The proposal includes:

- Emergency Services lot 6,220sqm
- Sporting fields - 2 playing fields – land – approx. 5 ha
- Community Facilities allotment/ building /clubhouse – 6,959 sqm
- Financial contribution of \$2.5m (to be paid progressively) for the construction of playing fields, the community building and community gardens.
- Community use precinct – 13.25 ha of land for school, retirement living, childcare, indoor and outdoor sports and recreation. Land in this zone is proposed to be revenue generating.
- Ecological corridor.

As part of the submission for Area B North, Landowner B included the following technical reports:

- *Ecological Assessment – Constraints and Opportunities Analysis in support of an urban investigation submission* (Lot 201 on SP287474 Calvary Road, Sippy Downs) prepared by JWA Ecological Consultants, March 2017
- *Palmview Area B – North Flood Hazard Mitigation Report* prepared by Cardno, 30 March 2017

Landowner B's submission for Area B North also referenced *Caloundra City Landscape Assessment Report* (Chenoweth EPLA, 2001) prepared for Caloundra City Council.

Additionally, the submission included a precinct concept, proposed zoning amendment maps, planning scheme controls and a personal testimonial. However, in accordance with Special Condition 2.2, these items have not formed part of the technical assessment of the land's suitability for urban development, with the exception of the precinct concept which was reviewed as part of the assessment for overriding need in the public interest.

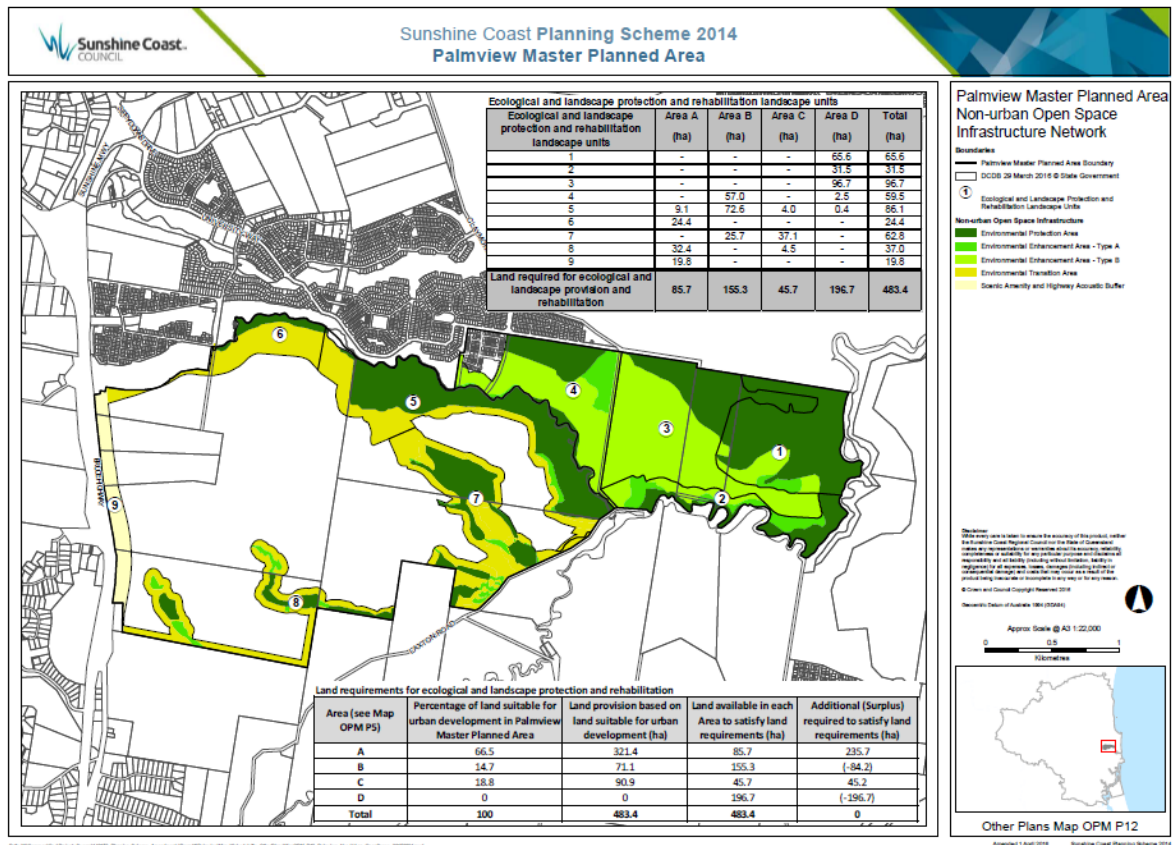
## 5.1 Palmview Structure Plan context

Investigation Area B North is identified on *Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas)* of the Palmview Structure Plan (refer **Figure 5**) as an Ecologically Important Area containing amongst other matters State Significant Vegetation, buffers to State Significant Vegetation, State Habitat Corridor (State government) and Regional Habitat Corridors (State government).

Investigation Area B North is identified on *Other Plans Map OPM P2(a) (Palmview Master Planned Area Flood Prone Land)* of the Palmview Structure Plan (refer **Figure 6**) as land

inundated by the defined flood event which is not suitable to be filled for inclusion as land for urban purposes.

Investigation Area B North is identified as part of the land requirement of 483.4 hectares for ecological and landscape protection and rehabilitation landscape as specified on *Other Plans Map OPM P12 Palmview Master Planned Area Non-urban Open Space infrastructure network* (refer **Figure 7**). Additional Structure Plan Context is provided in Appendix 3.



**Figure 7 OPM P12 Palmview Master Planned Area Non-urban Open Space Infrastructure Network**

## 5.2 State's determination of ecologically important area

Area B North contains values for rehabilitation and connectivity. This is because it is within proximity to large areas of conservation including Mooloolah River National Park and adjacent to Council's Lower Mooloolah River Environmental Reserve. It provides linkage to patches of remnant vegetation located to the north and south. Area B North is also within the *Shaping SEQ* Regional Biodiversity Corridor.

From observation of latest imagery, it appears that works have already begun to occur in the western section of Area B North. However, species are still recorded within this area and

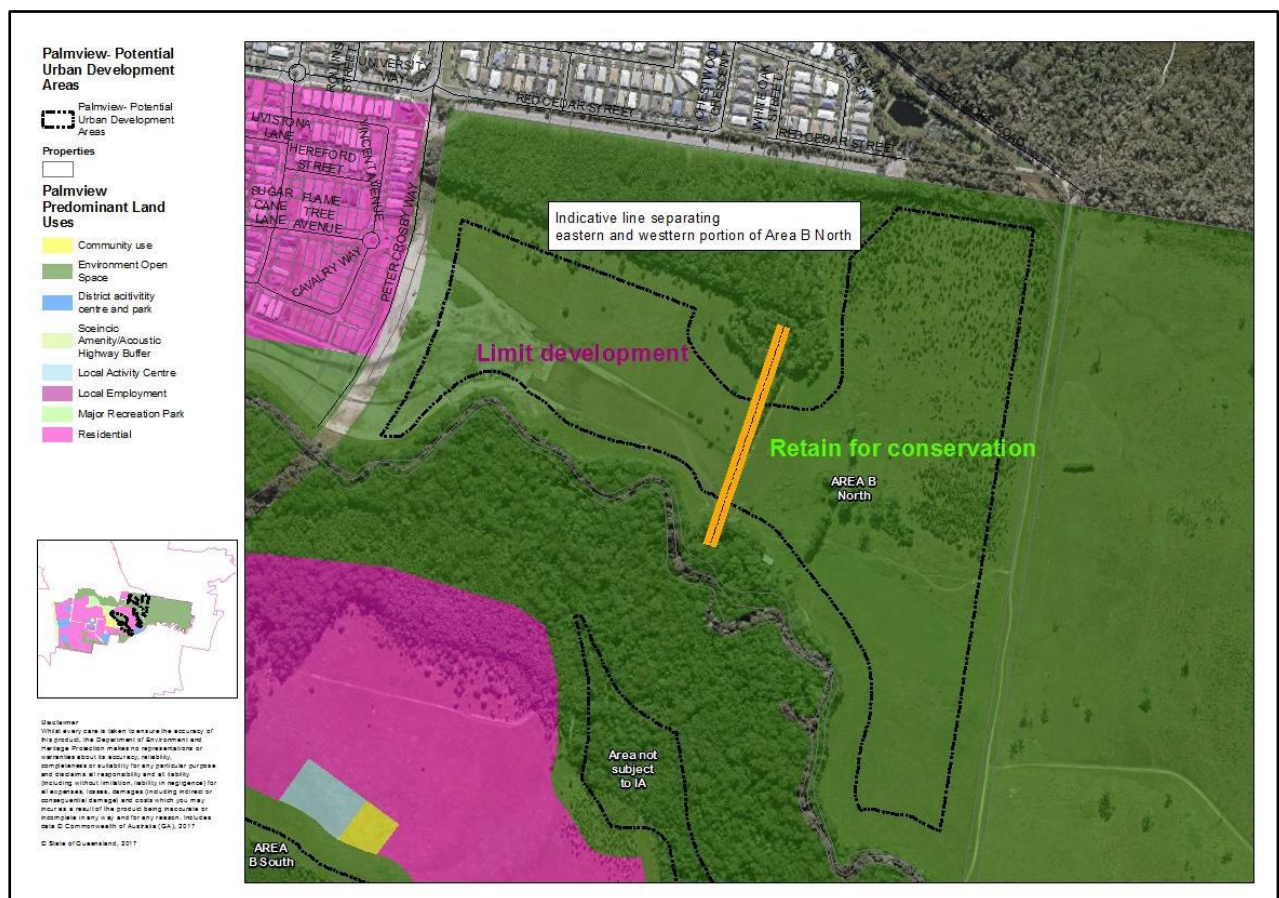


development should consider allowing for species movement. Appendix 4 contains the full DEHP report, identifying the species which exist in the area.

The DEHP report outlines State biodiversity values in this investigation area including:

- Potential to restore 'Woodland and open Forest' Preclear Regional ecosystems
- Within a Biodiversity Planning Assessment corridor (BAMM)-non-remnant
- Within SEQ Regional Biodiversity Corridors within urban footprint
- Matters of State Environmental Significance (MSES)
- Wildlife habitat (threatened and special least concern animal)
- Additional MSES under the Environmental Offsets Act 2014
- Flora survey trigger (high risk area)

Therefore, DEHP recommends that the eastern portion of Area B North (roughly indicated in **Figure 8** below) be retained as Environmental Open Space under the Palmview Structure Plan. Rehabilitation works should occur to restore linkages and support the adjacent areas of conservation. Development in the western portion of Area B North should be limited, especially within proximity to the remnant vegetation.



**Figure 8 DEHP Recommendation**

### 5.3 Council's determination of ecologically important area

The site is bound by Sippy Creek, Peter Crosby Way, Lower Mooloolah River Environmental Reserve purchased by Council for conservation purposes, and the Mooloolah River National Park.

Sippy Creek (and associated riparian vegetation) and the patch of remnant vegetation in the north-western portion of the site (Area B North) are areas recognised as representing 'Ecologically Important Areas' in accordance with the definitions within the Palmview Structure Plan and identified on OPM Map P2(b) (refer **Figure 5**).

The remnant vegetation in the north-west portion of the site in Area B North is strategically located between the Mooloolah River National Park and Sippy Creek (and associated riparian vegetation).

Area B North supports areas of naturally regenerating native vegetation described by Chenoweth (2005) as Areas of High Rehabilitation Potential, and areas of open grassland / sedgeland. Area B North provides the critical habitat and wildlife movement linkage between the patches of remnant vegetation located north and south and is therefore considered to be ecologically important.

#### *JWA Ecological Consultants report for Area B North*

The landowner submission included an ecological report prepared by JWA Ecological Consultants (JWA, 2017) to support development of the investigation area, and cited a former Caloundra City Council biodiversity enhancement strategy compiled by Chenoweth (2005).

The JWA Ecological Consultants report was prepared for Innovative Planning Solutions and states that the aim of this assessment was to "determine the appropriateness of the Environmental Open Space zoning over portions of the subject site with regards to ecological values present on ground, and to determine if areas of the site were appropriately identified as 'ecologically important areas' in accordance with the definitions within the Structure Plan and Palmview Infrastructure Agreement". The JWA report also states that "the main objective was to consider alternatives where applicable that may result in an overall better environmental outcome".

The overall aim and objectives of the JWA Report are not supported as the required purpose of the report in relation to Palmview Urban Development Investigation Area B North. The environmental assessment should have been directly focused on confirming or rejecting the current and potential ecological value of the area, and not focused on seeking to

demonstrate that an alternative approach may result in an overall better environmental outcome. Additionally, the JWA Report relies upon a methodology for site surveys that appears to be of limited scope, seasonality and duration.

The JWA report confirms that Sippy Creek (and associated riparian vegetation) and the patch of remnant vegetation in the north-western portion of the site contain the highest environmental values in Area B North, and that these areas of the site were considered to represent 'Ecologically Important Areas' in accordance with the definitions within the Palmview Structure Plan and Palmview Infrastructure Agreement (p8).

#### *Consideration of Lower Mooloolah River Environmental Reserve to provide ecological connectivity*

The JWA report incorrectly states that the land immediately to the east of Area B North has been acquired by the Sunshine Coast Regional Council as an Environmental Park (Environmental Offset Area) (p57). The site, formerly owned by the Juniper group (Lower Mooloolah River Environmental Reserve), was purchased by Council for environment purposes (part of the 483.4 hectares to be provided in accordance with the Palmview Infrastructure Agreement), with the land purchase value to be reimbursed to Council by the landowner's as the Palmview development progresses. This land purchase was to balance the community benefit with the development outcome, creating 483.4 hectares of environmental land, including the Lower Mooloolah River Environmental Reserve.

The JWA report further states that this area (Lower Mooloolah River Environmental Reserve) would provide a far superior connection between the Mooloolah River National Park and Sippy Creek. "This corridor would provide suitable movement opportunities for a range of wildlife and it is therefore considered that an additional corridor on the subject site [Area B North] would not be necessary" (p57).

This statement is made repeatedly throughout the JWA report without any demonstrated scientific or technical evidence to support the statements. More specifically, the JWA report does not demonstrate in any way that the reliance on the Lower Mooloolah River Environmental Reserve to provide ecological connectivity between Area B North and the Mooloolah River National Park would satisfy the ecological connectivity and functionality required to support the identified flora and fauna species on site.

The proposed augmentation of the Sippy Creek Corridor will not provide for the habitat and wildlife movement connectivity required between Sippy Creek and the patch of remnant vegetation in the north-western portion of the site (Area B North) recognised as representing an Ecologically Important Area. Without connectivity, the patch in the north-west corner of



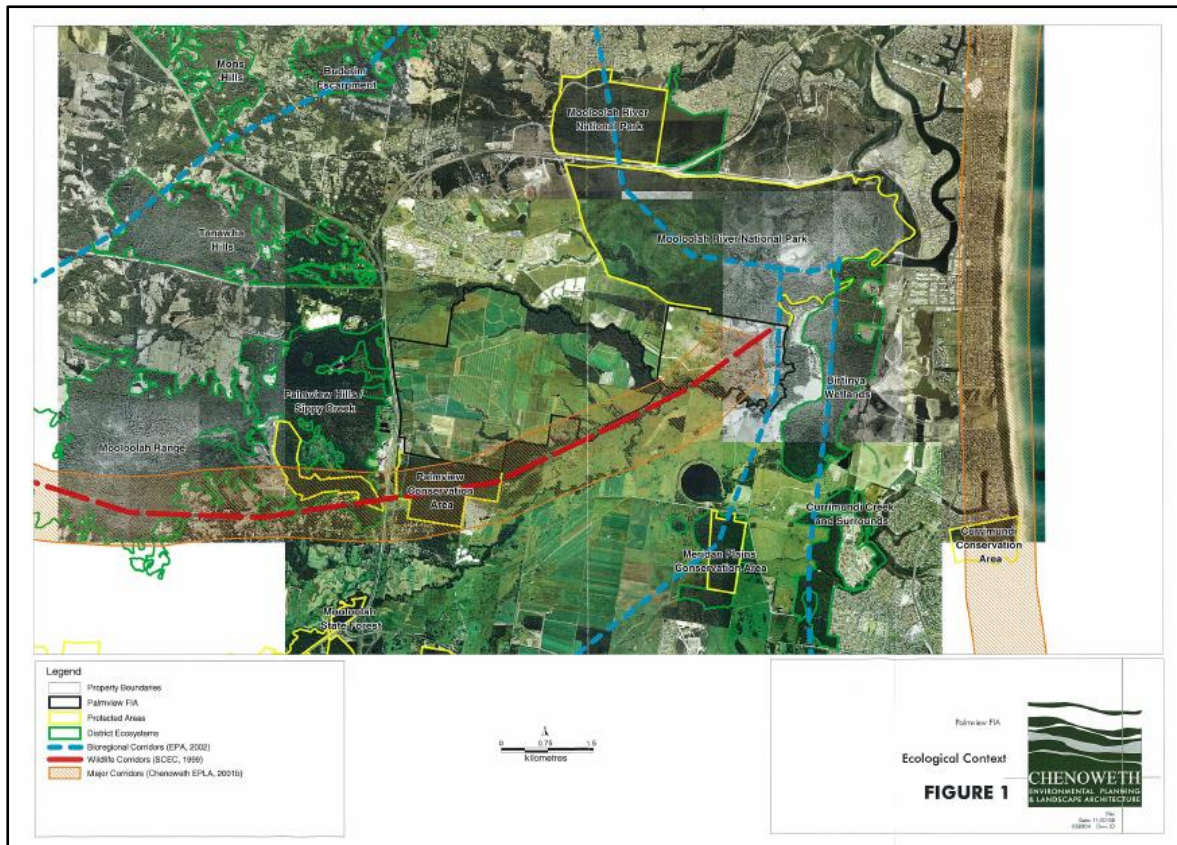
Area B North would become isolated and at significant risk of degradation over time defeating the purpose of retaining it.

The Sippy Creek Corridor also will not provide for the habitat and wildlife movement connectivity required between Sippy Creek and Mooloolah River National Park as the Sippy Creek Corridor does not contain the habitat characteristics to support habitat functionality and wildlife movement connectivity between Sippy Creek and the Mooloolah River National Park. That is, the habitat type along Sippy Creek is predominantly Regional Ecosystem 12.3.1 (Riparian Forest). Regional Ecosystem types 12.3.5 (Melaleuca Forest) and 12.3.13 (Heath) would provide the greatest level of habitat functionality to deliver an effective connection between the Palmview Development Land and Mooloolah River National Park.

In the absence of an effectively functioning habitat corridor consisting of appropriate vegetation (Regional Ecosystem) types, the movement of wildlife species between the Mooloolah River National Park and Ecologically Important Areas in the Palmview development are likely to be significantly impacted.

In their consideration of previous corridor and connectivity assessments, the JWA report singles out the Chenoweth EPLA 2001 report as “not identifying any corridors on the subject site” (p56).

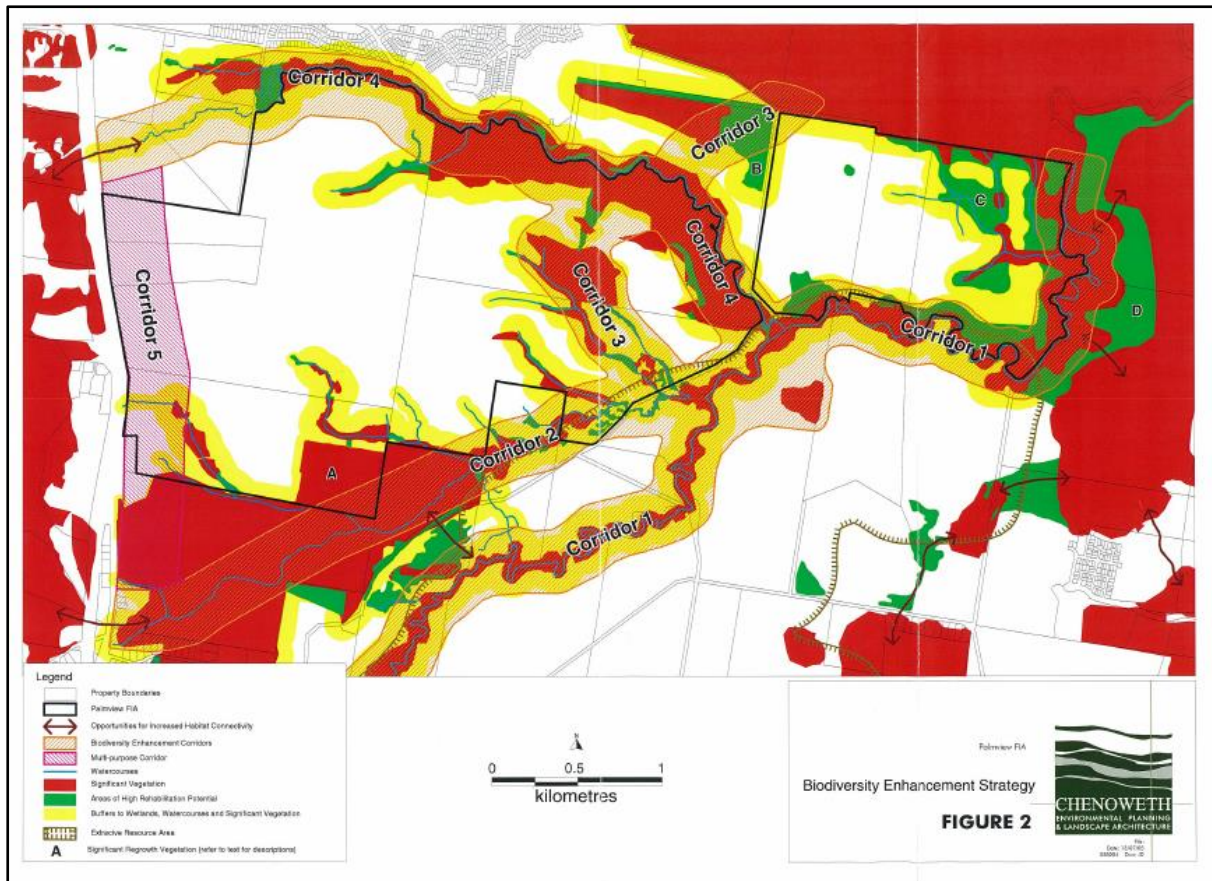
The Chenoweth EPLA report 2001 identifies Major [ecological] Corridors at a landscape [regional] scale which clearly and appropriately identifies the Mooloolah River as a Major Corridor connecting the Mooloolah Range, Palmview Conservation Area, and the Mooloolah River National Park. (Refer to **Figure 9**)



**Figure 9** Chenoweth Report - Fig 1 Ecological Context

It is acknowledged in the JWA report that the Mooloolah River provides an important ecological linkage between the Palmview Conservation Area and the Mooloolah River National Park, and similarly provides an important linkage between the conservation areas within the Palmview development and the Mooloolah River National Park.

The JWA report fails to recognise Figure 2 of the Chenoweth 2005 report (refer to **Figure 10**) which identifies Biodiversity Enhancement Corridors at a sub-regional scale. Figure 2 of the Chenoweth 2005 report identifies two Biodiversity Enhancement Corridors relevant to Area B North. Corridor 4 which runs the length of Sippy Creek connecting to the Mooloolah River, and Corridor 3, which connects Sippy Creek (Corridor 4) with the Mooloolah River National Park, in doing so providing ecological connectivity to the patch of remnant vegetation in the north-western portion of Area B North which the JWA report considers representing an Ecologically Important Area, as does Council.



**Figure 10 Chenoweth Report Fig 2 Biodiversity Enhancement Strategy**

The JWA report (p59) also makes a series of assumptions of the ‘likely’ habitat type, quality, and diversity to be delivered on the Lower Mooloolah River Environmental Reserve without providing the reports prepared to inform revegetation activities on the Lower Mooloolah River Environmental Reserve.

The Vegetation Management Plan (Revegetation and Rehabilitation) for the Lower Mooloolah River Environmental Reserve prepared for Council by Stringybark Consulting, June 2012 proposes the vegetation types and locations to be revegetated.

The report proposes revegetation activities appropriate for the soil types and habitat connectivity required between the Mooloolah River and Mooloolah River National Park, a mixture of Riparian Forest, Melaleuca Forest and open grassland and sedglands.

The habitat [vegetation] types and arrangement propose a large area of open grassland / sedgeland located in the western portion of the Lower Mooloolah River Environmental Reserve. The proposed revegetation plan would result in the retention of an area of open grassland/sedgeland of approximately 1 kilometre in width between Sippy Creek and

proposed revegetated areas in the north of the Lower Mooloolah River Environmental Reserve.

Given the proposed approximately 1 kilometre width open grassland/sedgeland between Sippy Creek and proposed revegetated areas in the north of the Lower Mooloolah River Environmental Reserve, habitat connectivity between Sippy Creek in Area B North to the Mooloolah River National Park would be via an approximately 3 kilometre alignment following the Mooloolah River.

The JWA report provides no demonstrated evidence that a habitat linkage following the vegetated alignment of Mooloolah River would satisfy the habitat connectivity requirements between Sippy Creek and Mooloolah River National Park for the flora and fauna species present on Area B North.

#### *Consideration of Area B North development proposal*

The development proposal for Area B North as prepared by Innovative Planning Solutions, March 2017, proposes an approximately 100 metre width Ecological Open Space linkage between Sippy Creek and Mooloolah National Park, narrowing to approx. 50m in width adjoining the proposed southern sporting field. This is well short of the 350m corridor width (250m biodiversity corridor plus 50m fully vegetated buffer on either side) as recommended by Chenoweth (2005). The JWA report fails to demonstrate that the 100 metre (maximum) width corridor will successfully facilitate the necessary fauna movement between Sippy Creek and Mooloolah River National Park. Area B North can deliver effective and species appropriate habitat connectivity between Sippy Creek and Mooloolah River National Park at a distance of 200 metres (minimum) or 600m (maximum).

Natural regeneration of native vegetation in Area B North exists with patches of scattered eucalypt/melaleuca regrowth in the north-east of the site to approx. 6-8m in height, reducing to 3-4m in height and becoming increasingly open moving south, which are areas described by Chenoweth (2005) as “Areas of High Rehabilitation Potential”.

The proposal for Area B North as prepared by Innovative Planning Solutions, March 2017, fails to show the location of access roads and infrastructure that may sever the environmental open space between the two areas of proposed sporting fields.

The proposed ecological links between the remnant vegetation in the north-west corner of Area B North and the Mooloolah River National Park are not supported as Buffer/Transition Area and needs to be Environmental Open Space. This area is described in Chenoweth (2005) as “Areas of High Rehabilitation Potential”.



The Cardno flood report for Landowner B proposes the construction of a conveyance channel and bund running north to south along the eastern boundary of Lot 201 SP287474. Construction of such a channel and bund is highly likely to concentrate flood waters on the western side of the bund potentially impacting on vegetation condition. Varying the topography in this location is also highly likely to impact on hydrology and vegetation habitat restoration activities and vegetation community health on the Lower Mooloolah River Environmental Reserve to the east.

It is recommended that the entire area of the proposed Area B North ecological corridor be retained to:

- deliver habitat connectivity and wildlife movement (Corridor 3 - Figure 2, Chenoweth 2005) connecting Sippy Creek to the patch of remnant vegetation in the north-western portion of the site (Area B North), described as 'Ecologically Important Areas' in accordance with the definitions within the Structure Plan and Palmview Infrastructure Agreement
- deliver habitat and wildlife connectivity between the Mooloolah River National Park and Ecologically Important Areas in the Palmview development through the enhancement and reinstatement of Regional Ecosystem types 12.3.5 (Melaleuca Forest) and 12.3.13 (Heath) which would provide the greatest level of habitat functionality appropriate for local fauna and flora species, and
- protect and enhance the areas of natural regeneration described by Chenoweth (2005) as Areas of High Rehabilitation Potential.

In accordance with the assessment process, further investigations are not required, however for completeness, the flood hazard has also been assessed.

## 5.4 Council's determination of flood prone land

The land in Area B North is identified as flood prone land on OPM Map P2(a) (refer **Figure 6**).

### *Initial Area B North submission*

The flood assessment for this urban investigation area has been prepared by Cardno (March, 2017) on behalf of Landowner B.

The land in Figure A1.5 of the Cardno report (**Figure 11** below) shows the 1% AEP Flood Event peak depth in a base case scenario. It indicates the entire investigation area is flood prone in an undeveloped condition. The Cardno report does not provide flood mapping for

the Defined Flood Event (1% AEP 2100 Climate) but does provide 1% AEP current climate flood mapping, which shows the site as flood prone, in the lesser flood condition. Therefore, the investigation area does not comply with the requirements of the Special Condition in the IA 2.2(b)(i), where only land in the urban investigation area that is not inundated by the defined flood event (without any modification) is suitable for urban development.

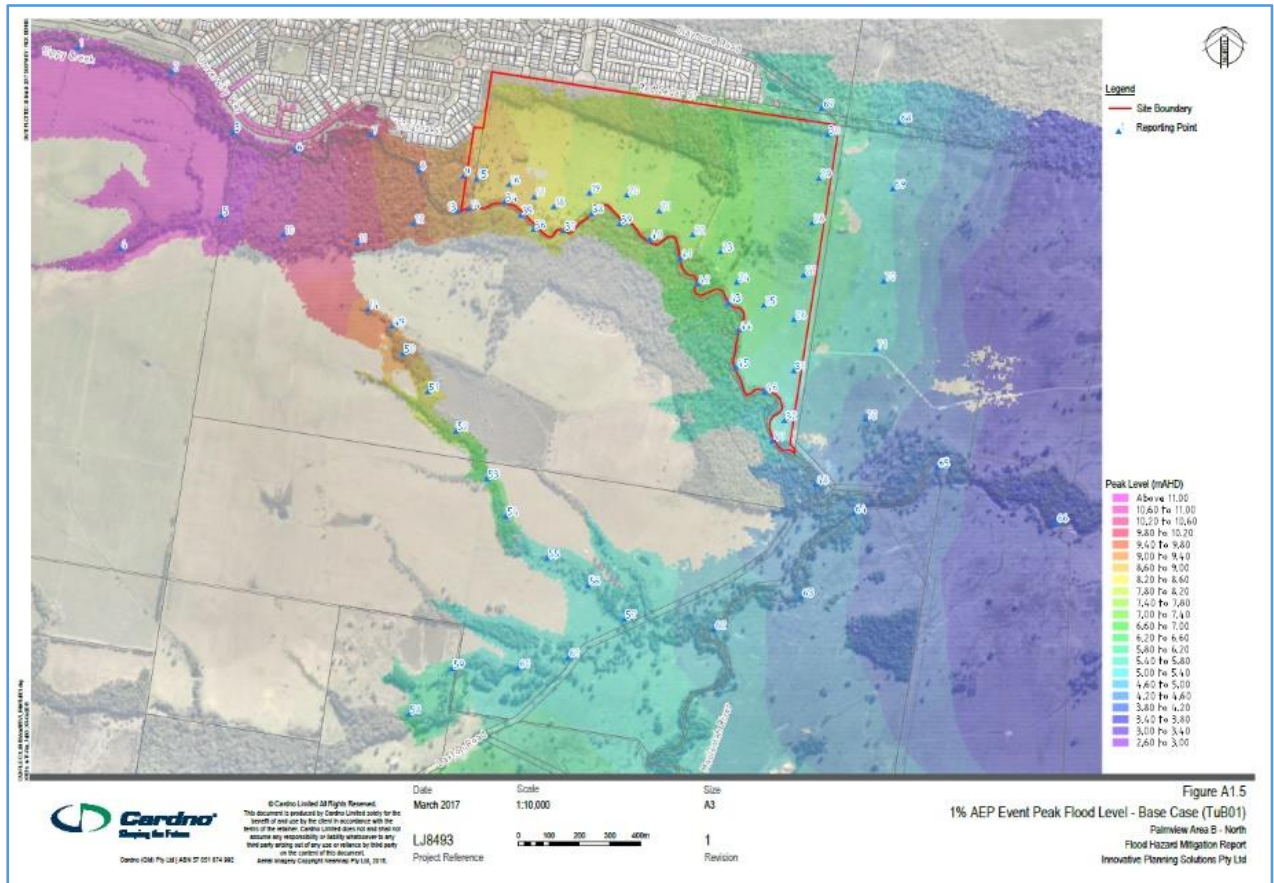
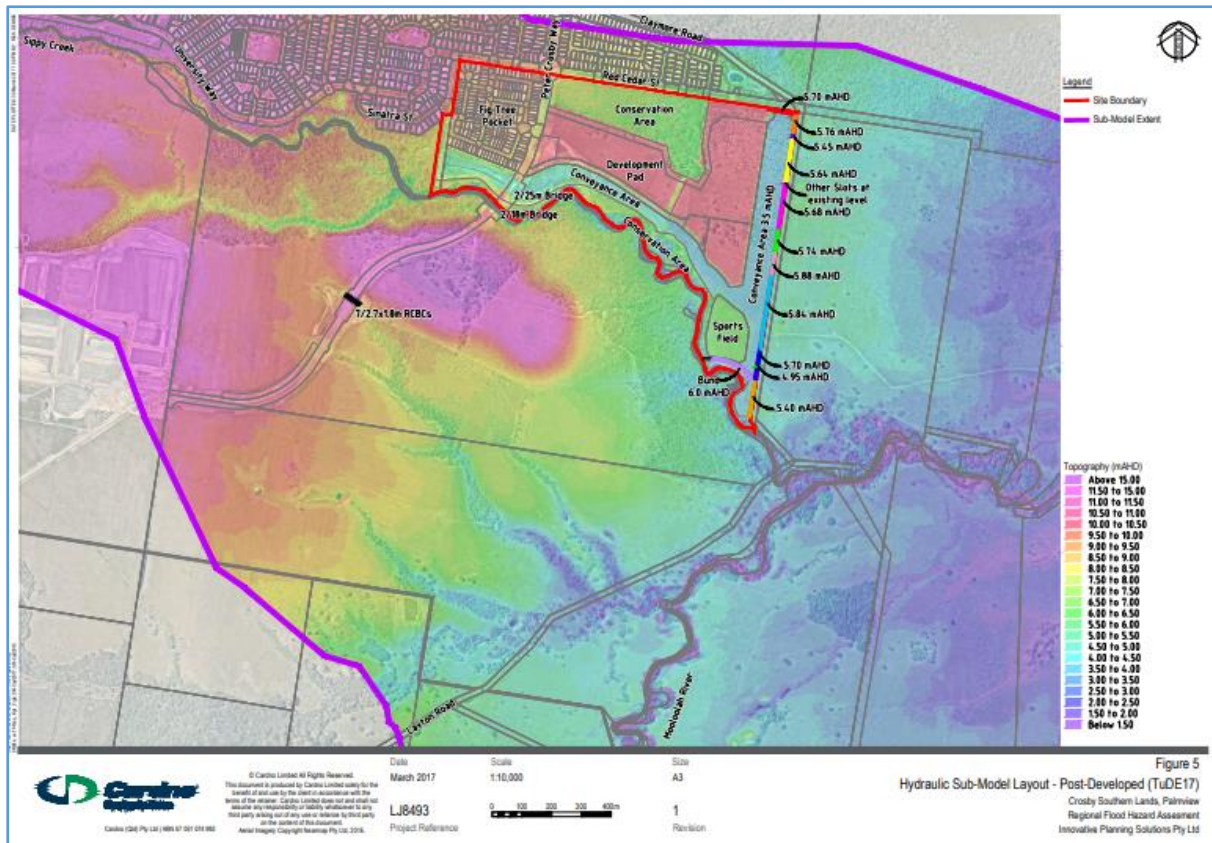


Figure 11 1%AEP Flood Level (Current Climate)

The Cardno report states the relevant provisions contained within Special Condition 2 of the Palmview Infrastructure Agreement are complied with (as relevant for flooding matters), however the report does not demonstrate this. Conversely, the report presents an engineered solution (refer to **Figure 12**) to create an area which is not flooded in the 1% AEP (current climate), presumably with cut and fill, and retaining flood waters by constructing a significant conveyance channel (at 3.5m AHD), creating a bund in the Mooloolah flood plain along the extent of eastern boundary of the investigation area.



**Figure 12 Engineered Solution proposed**

This detention area appears to create an increased depth of approximately 779mm (Figure 5 and E5 of the Cardno report), although little detail of the constructed channel and bund is provided, nor how flood waters are to exit the detention area to Sippy Creek (5.888m AHD in base case scenario at Reporting Point 45), which appears to have an AHD height greater than the conveyance channel (3.5m AHD).

Additionally, Table 2-7 of the Cardno report shows an increase of levels in Sippy Creek of greater than 225mm at the exit point from Area B North (reporting point 47).

It is unclear how this meets the requirements of the urban development investigation to demonstrate how the land is not flood prone, or if the land is flood prone, how these works would be in the public interest or create no adverse impacts. Additionally, flooding the environmental areas is likely to have a further adverse impact on the vegetation in the environmental corridors. The report shows a reduced flood level upstream of the flood detention area but does not demonstrate how this is achieved.

#### *Assessment of further information*

The Cardno TUFLOW hydraulic model was based on an extract from Council’s Regional Mooloolah River TUFLOW model (developed by Cardno in 2015). The development Digital

Elevation Model (DEM) for Area B North was first run in Council's Regional model and it was observed that the impacts were different to that claimed in Cardno 2017. The 2017 model extraction was then reviewed and re-run by Council to validate results and ascertain the reasons for differences with the Regional Model.

It was considered that the roughness assumptions applied in the hydraulic model extraction were appropriate. It was considered that the boundary conditions applied in the hydraulic model extraction were generally appropriate but it was noted that the application of local inflows (through the use of SA polygons) differed between the base case and developed cases. Whilst this is technically incorrect, it was considered to be of little consequence.

It was determined that the most significant causal factor which explains the differences between the results of Cardno 2017 and the regional model analysis was a difference in the DEM for the base case conditions. The Cardno 2017 model base case did not reflect existing conditions which include the Flame Tree Pocket development. This is briefly acknowledged in Cardno 2017 without being explicitly stated, with the following statement "*It is noted that the flood mitigation of Area B South and North was based on a holistic approach including the Flame Tree Pocket and associated creek floodplain works.*"

Works within the Flame Tree Pocket footprint commenced around three years ago and were the subject of a completely different and independent approval. It is considered that the base case must reflect existing conditions/approved development.

Council has investigated the impacts associated with the proposed development through the following scenarios:

- Cardno Base Case corrected to reflect 2017 land uses (Existing Case) (TuB02); and
- Cardno Palmview UIA B (Developed Case) (TuDE18\_SA01).

The SA01 suffix in the developed case model reflects an adjustment in local inflow locations to match those in the existing case in the Sippy-Mooloolah breakthrough channel. As stated previously, flood levels did not vary significantly due to this modification.

Analysis was limited to investigation of the current climate 1% and 39% Annual Exceedance Probability (AEP) flood events. The consideration to analyse the 1% AEP event in preference to the 1% AEP climate change event (the Council prescribed Defined Flood Event (DFE)) was to enable comparison with the results of Cardno 2017, which did not present impact assessment results for the DFE.



The following figures have been prepared to communicate results of the Council's analysis.

- Figure 13: Impact of the Area B North in the 1% AEP Flood Event;
- Figure 14: Impact of the Area B North in the 39% AEP Flood Event.

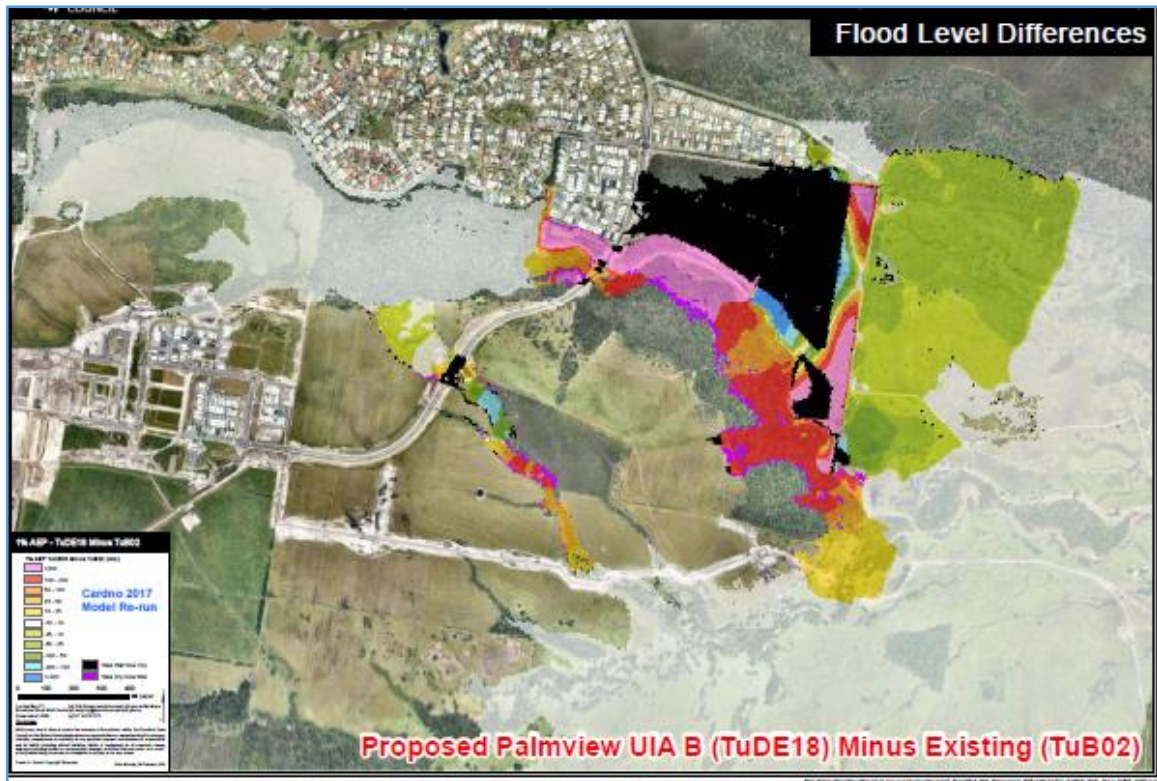


Figure 13 Impact of the Area B North in the 1% AEP Flood Event

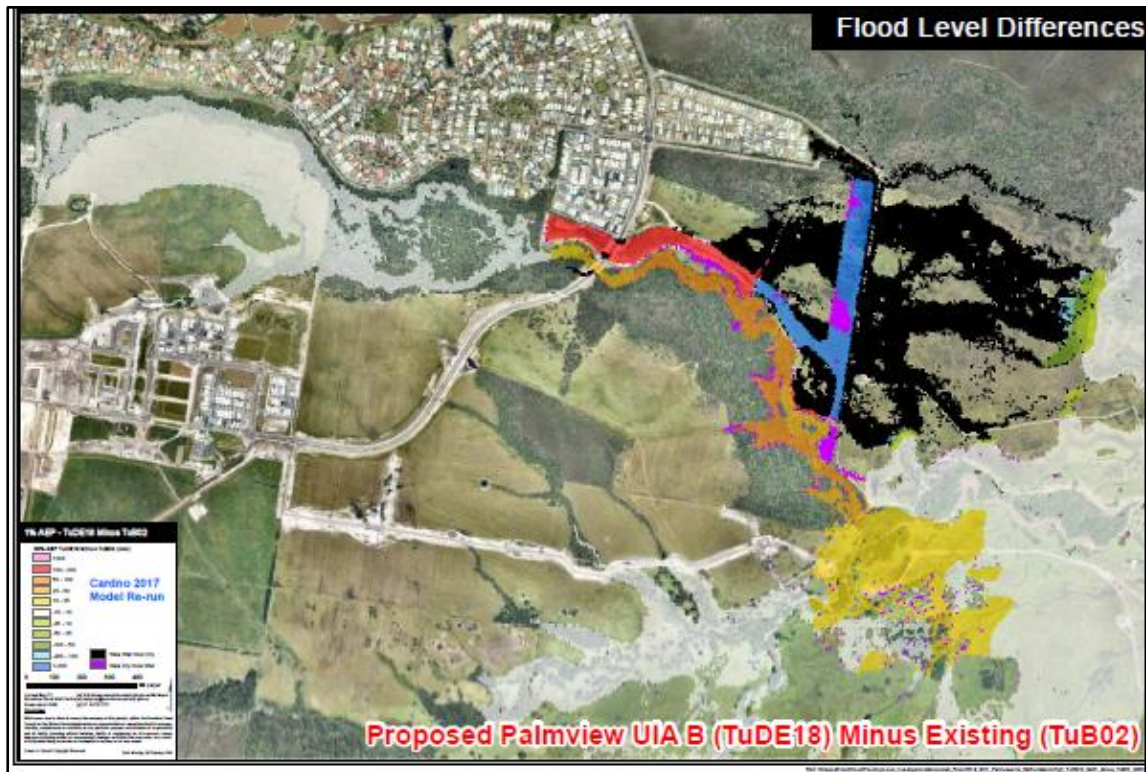


Figure 14 Impact of the Area B North in the 39% AEP Flood Event

The above figures consider impacts in terms of changes in peak flood level.

**Figure 13** and **Figure 14** demonstrate that incorporating the proposed Area B North development results in increases along the Flame Tree channel and Sippy Creek for both the 1% and 39% AEP flood events. These impacts extend from the western end of Flame Tree Pocket to the confluence with the Mooloolah River.

The proposed development results in a material adverse impact with flood levels for the 1% AEP flood level increasing by up to 300 mm adjacent to Flame Tree Pocket, and the corresponding 39% AEP flood levels increasing by 150 mm.

Frequency flow analysis has been limited to the consideration of the 39% AEP flood event. This event has historically commonly been referred to as the 2-year flood event.

Hydrographs have not been extracted to demonstrate changes in flow characteristics as it is considered that the changes in peak flood level infer a change that is so dramatic that this extra level of analysis is not necessary.

**Figure 14** demonstrates changes in peak flood levels for a small frequent flood event (39% AEP). It is evident that the channel on the eastern side of the proposed development, which provides initial conveyance and then flood storage later in an event, significantly changes the way water will flow across the site and onto adjacent Lower Mooloolah River Environmental Reserve land. The proposed development results in a material adverse impact as it represents a substantial diversion of the natural flow paths, significantly altering the hydrologic regime of the Environmental Reserve. During extended dry periods, the Environmental Reserve may not receive any flow from Sippy Creek for a number of years with this development proposal (only flows from local rainfall).

The flood modelling indicated that the proposed Area B North development would result in a loss of around 45,000 m<sup>3</sup> of flood storage. This loss of flood storage in isolation results in material adverse impacts, which if it established a precedence for allowing loss of flood plain storage, would be exacerbated with a cumulative loss of flood plain storage with future development in other locations in the region.

In addition, the analysis has not considered the influence of the groundwater table or impacts of the development on the groundwater table. It is possible that the proposed channels may drain the groundwater table and, combined with the proposed bund on the south eastern side of Area B North proposed development, the potential flood storage of the proposal may be compromised by groundwater that is expressed to the channel. This may

not be the case if the proposed bund is provided with a low flow outlet, however this detail is not clearly evident in the Cardno report.

As stated previously, it is considered that Area B North does not comply with the requirements of the Structure Plan Special Condition 2.2(b)(i) due to the flood prone nature of the land.

In addition to the assessment relating to the flooding requirements of the Structure Plan, Area B North was also considered in relation to the Flood Hazard Overlay Code requirements of the *Sunshine Coast Planning Scheme 2014* and the policy positions of the *Environment and Liveability Strategy 2017*.

Performance Outcome 9 (Flood Impacts for assessable development) of the *Sunshine Planning Scheme 2014* requires that development does not directly, or indirectly or cumulatively alter the flooding characteristics external to the development site for all flood events up to the DFE/DSTE. The associated acceptable outcome also seeks to ensure no reduction of flood storage capacity on the site.

The loss of flood storage demonstrates that the proposed Area B North development cannot meet Performance Outcome 9.

The *Environment and Liveability Strategy* Flooding and Stormwater Theme has the following policy positions:

*6.3 Flooding and stormwater management protects the natural and built environment:*

- a. Flood plains are protected for their intrinsic environmental, social and economic values.*
- b. Development in the flood storage preservation area is avoided unless an overriding need in the public interest is demonstrated with acceptable associated impacts and minimal alteration to the floodplain.*
- g. Natural waterways are not diverted.*

It is considered that the Area B North proposal is in conflict with the above policy positions, in that it does not protect flood plain storage and that it diverts the natural frequent flows away from the adjacent Environmental Park. As a result, it does not protect the intrinsic environmental, social and economic values of the flood plain.

In conclusion, analysis completed by the Council indicates that the proposed Palmview Urban Investigation Area B North development does not comply with the relevant Council Planning Scheme and Strategy provisions, including the Palmview Structure Plan Infrastructure Agreement, due to:

- the development being almost exclusively over flood prone land;
- generating adverse material impacts, including:
  - flood level increases (up to 300 mm);
  - diversion of frequent flows away from the Lower Mooloolah River Environmental Reserve; and
  - loss of flood storage (45,000 m<sup>3</sup>).

## 5.5 Determination

The assessment of the environmental areas indicates the severing of the environmental corridors would be detrimental to habitat connectivity and wildlife movement. The corridor connects Sippy Creek with the patch of remnant vegetation in the north-western portion of the site (Area B North), described as 'Ecologically Important Areas' in accordance with the definitions within the Palmview Structure Plan, the areas of natural regeneration described by Chenoweth (2005) as Areas of High Rehabilitation Potential, and the Mooloolah River National Park.

While the State is not opposed on ecological grounds to limited development within the western portion of the Investigation Area B North, Council environment officers have determined there is significant value in maintaining the corridor which connects Sippy Creek with the patch of remnant vegetation within the site, and through to the Mooloolah River National Park. In addition, Area B North is flood prone land and modelling indicates that the development of this land would create serious adverse impacts.

## 5.6 Officer Recommendation – Investigation Area B North

It is recommended that Investigation Area B North be retained to deliver habitat connectivity and wildlife movement (Refer to **Figure 10** Corridor 3 - Figure 2, Chenoweth 2005) and maintain flood storage for the Mooloolah River flood plain.

## 6.0 Investigation Area B South

Landowner B has carried out an investigation of part of Area B South to determine whether Investigation Area B South is land suitable for urban development in the Structure Plan Area.

In accordance with Special Condition 2.3(a) (Urban Development Investigation) of the Palmview Infrastructure Agreement, Landowner B on 1 April 2017 gave to the Council a Notice stating the results and the technical basis for the results of the Urban Development Investigation for Investigation Area B South (Attachment 2), and provided further information on 22 November, 2017.

As part of the submission, Landowner B included the following technical reports:

- *Ecological Assessment – Constraints and Opportunities Analysis in support of an urban investigation submission* (Lot 347 on SP287466 Laxton Road, Sippy Downs) prepared by JWA Ecological Consultants, March 2017
- *Palmview Area B – South Flood Hazard Assessment Report* prepared by Cardno, 31 March 2017

Landowner B's submission for Area B South also referenced Caloundra City Landscape Assessment Report (Chenoweth EPLA, 2001) prepared for Caloundra City Council.

Additionally, the submission included proposed zoning amendment maps, transition plan and translocation map options. However, in accordance with Special Condition 2.2, these items have not formed part of the technical assessment of the land's suitability for urban development, with the exception of the proposed translocation plan which was reviewed as part of the ecological assessment.

## 6.1 Palmview Structure Plan context

Investigation Area B South is identified on *Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas)* of the Palmview Structure Plan (refer **Figure 5**) as an Ecologically Important Area containing amongst other matters State Significant Vegetation, buffers to State Significant Vegetation, State Habitat Corridor (State government) and Regional Habitat Corridors (State government).

Investigation Area B South is identified on *Other Plans Map OPM P2(a) (Palmview Master Planned Area Flood Prone Land)* of the Palmview Structure Plan (refer **Figure 6**) as land partly inundated by the defined flood event which is not suitable to be filled for inclusion as land for urban purposes.

Investigation Area B South is identified as part of the land requirement of 483.4 hectares for ecological and landscape protection and rehabilitation landscape as specified on *Other*



*Plans Map OPM P12 Palmview Master Planned Area Non-urban Open Space infrastructure network (Refer **Figure 7**).*

## 6.2 State's determination of ecologically important area

Investigation Area B contains over 90% of intact remnant regional ecosystems, including a large portion of heath community. It has a diverse number of threatened species and many Matters of State Environment significance (MSES) values. The intactness of Area B South allows for local species to thrive and to connect between similar habitats.

The DEHP report outlines Matters of State Environment significance in this investigation area including:

- Wildlife habitat (threatened and special least concern animal)
- High ecological significance wetlands
- Regulated vegetation (essential habitat)
- Regulated vegetation (100m from wetland).

Also, additional MSES were identified under the Environmental Offsets Act 2014:

- Koala bushland habitat (SPRP area)
- Flora survey trigger (high risk area)
- Remnant Regional ecosystems
- Woodland and open forests (12.3.5)
- Heaths (12.3.13)
- Supports contiguous 14-hectare patch
- BAMB BPA high values:
- Contains Special Biodiversity Values (CRITERIA I)
- contains Core Habitat for Priority Taxa (CRITERIA H)

The following AquaBAMB ACA high values are identified:

- Wetland naturalness
- Wetland species diversity and richness
- Threatened and Priority species

A number of special features were identified:

- Gallery rainforest riverine
- Coastal wetland
- Connectivity

- SEQ Regional Biodiversity Values within Urban Areas (remnant or regrowth):
- Species diversity and richness
- Climate areas
- Unique ecosystems

DEHP does not support the development option proposal to offset the intact heath vegetation using a translocation method (Area B submission). The existing heath is already a source habitat for endangered or vulnerable species. Heath vegetation is naturally nutrient poor and translocation methods do not seem capable to maintain a functioning ecosystem.

Therefore, DEHP does not support further development within Area B South. Additionally, for Area B South to remain ecologically viable, the adjoining Area C should also be retained to connect Area B South to larger regional habitats via the creek.

### 6.3 Council's determination of ecologically important area *JWA Report for Area B South*

The JWA report prepared for Innovative Planning Solutions states that the aim of this assessment was to “determine the appropriateness of the Environmental Open Space zoning over portions of the subject site with regards to ecological values present on ground, and to determine if areas of the site were appropriately identified as ‘ecologically important areas’ in accordance with the definitions within the Structure Plan and Palmview Infrastructure Agreement”.

The JWA report also states that “the main objective was to consider alternatives where applicable that may result in an overall better environmental outcome”.

Area B South is an area of approximately 10 hectares of remnant heath vegetation and is recognised as representing ‘Ecologically Important Areas’ in accordance with the definitions within the Structure Plan and Palmview Infrastructure Agreement. The JWA report (p37-41) identifies all vegetation communities identified on site as being in either good or excellent condition. Area B South is sufficiently large enough, is in a good to excellent condition, and with Area C connectivity in place, can continue to effectively function as an intact remnant regional ecosystem.

Similar to the comments in the Area B North recommendations, the overall aim and objectives of the JWA Report are not supported as the required purpose of the report in relation to Palmview Urban Development Investigation Area B South. The environmental assessment

should have been directly focused on confirming or rejecting the current and potential ecological value of the area, and not focused on seeking to demonstrate that an alternative approach may result in an overall better environmental outcome.

#### *Assessment of ecologically important areas*

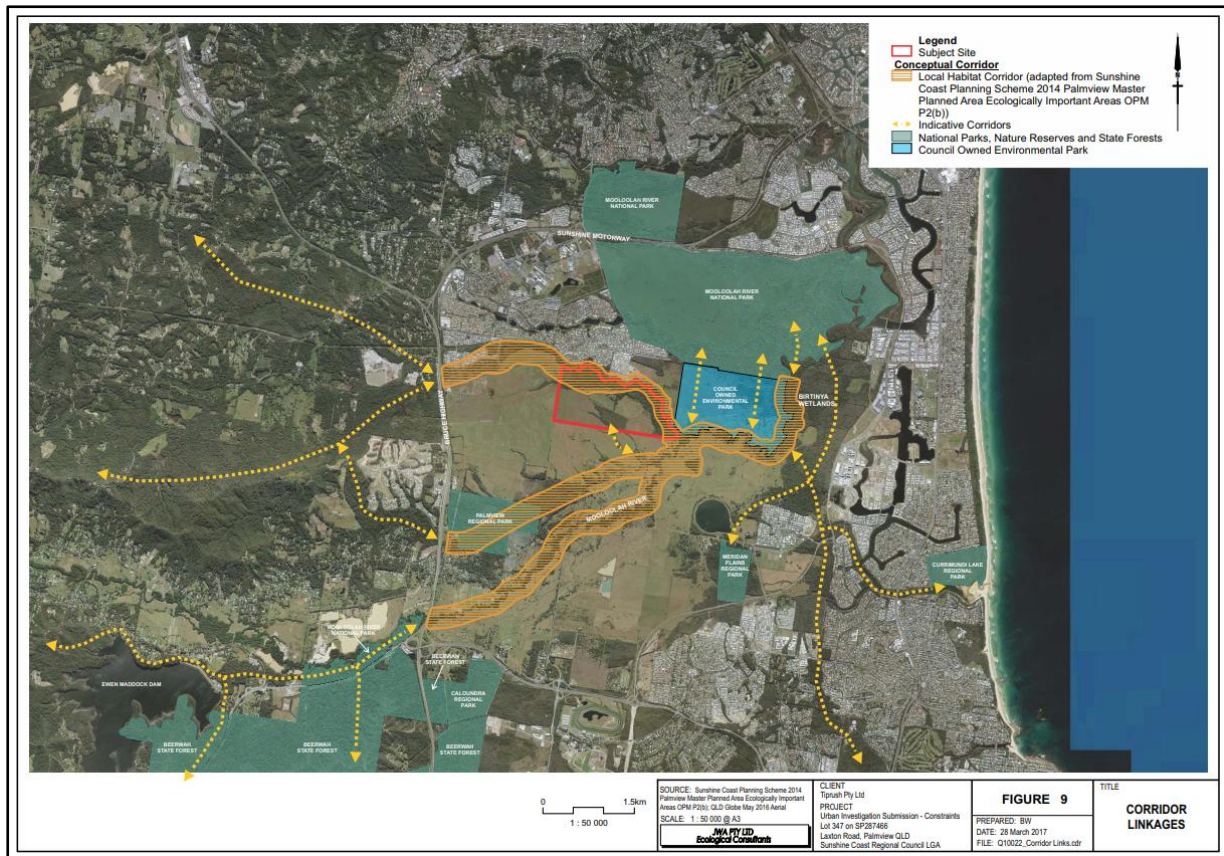
The JWA Report outlines a methodology for site surveys that appears to be of limited scope, seasonality, and duration. As per the JWA report Appendix 2 – Site Assessment (p34), two site inspections of 4 hours each both occurred at times when the climatic conditions were described as being hot and dry, providing no seasonal variation to maximise the effectiveness of species identification.

The JWA report identifies “Sippy Creek (and associated remnant vegetation) and the patch of remnant vegetation in the southern portion of the site as containing the highest environmental values relative to the open paddock areas across the remainder of the site. These areas were considered to represent ‘Ecologically Important Areas’ in accordance with the definitions within the Structure Plan and Palmview Infrastructure Agreement”. The JWA report (p37-41) identifies all vegetation communities identified on site as being in either good or excellent condition.

The JWA report corridor assessment (p9) references conceptual corridors shown in **Figure 15** that will provide suitable movement opportunities for a range of wildlife. **Figure 15** identifies Local Habitat Corridors that align with Sippy Creek, Un-named Creek, and Mooloolah River.

**Figure 15** further identifies a number of indicative corridors including two that traverse the Lower Mooloolah River Environmental Reserve purchased by Council for environmental purposes, and a short Indicative Corridor connecting the 10ha parcel of heath and un-named Creek to the south.





**Figure 15 JWA Report Conceptual Corridor Linkages**

The JWA report fails to recognise Figure 2 of the Chenoweth 2005 report (refer **Figure 10**) which identifies Biodiversity Enhancement Corridors at a sub-regional scale. Figure 2 of the Chenoweth 2005 report (refer **Figure 10**) identifies three Biodiversity Enhancement Corridors relevant to Investigation Area B South. Corridor 4 which runs the length of Sippy Creek connecting to the Mooloolah River, Corridor 3 [south], which connects the approx. 10ha of heath vegetation south via Area C to un-named Creek, and Corridor 2 which aligns with un-named Creek connecting with the Mooloolah River.

The JWA report (p13) recognises “remnant vegetation in the southern portion of the site is a relatively isolated patch of remnant heathland (RE 12.3.13, approximately 10ha in size)”. In making this statement, JWA fail to acknowledge that Area C is to be maintained and rehabilitated to provide ecological connectivity from the 10ha patch south to the un-named Creek and on to the Mooloolah River.

*Proposal for the translocation of ecologically important area*

The JWA report (p14) proposes Options 1 and 2 that seek to translocate areas of heathland to receiving sites on both the Lower Mooloolah River Environmental Reserve and University of Sunshine Coast land. The proposal assumes that available land area exists on the Lower

Mooloolah River Environmental Reserve to act as a receiving site for translocated heathland. There is no evidence of discussion with Council to explore the availability of land area or the suitability of the land as a vegetation receiving site for this proposal.

The Vegetation Management Plan (Revegetation and Rehabilitation) for the Lower Mooloolah River Environmental Reserve prepared for Council by Stringybark Consulting, June 2012 proposes the vegetation types and locations to be revegetated.

The report proposes revegetation activities appropriate for the soil types and habitat connectivity required between the Mooloolah River and Mooloolah River National Park, with a mixture of Riparian Forest, Melaleuca Forest and open grassland and sedgelands. There is no proposal to include heathland RE 12.3.13 in the mix of communities to be restored. The location proposed by JWA as a heathland translocation site (**Figure 16**) is directly adjoining RE: 12.3.5, Melaleuca forest, and there is no documented evidence provided by JWA to indicate that the soil type or hydrology is suitable or that the likelihood of successful translocation is sufficiently high to warrant considering the proposal.

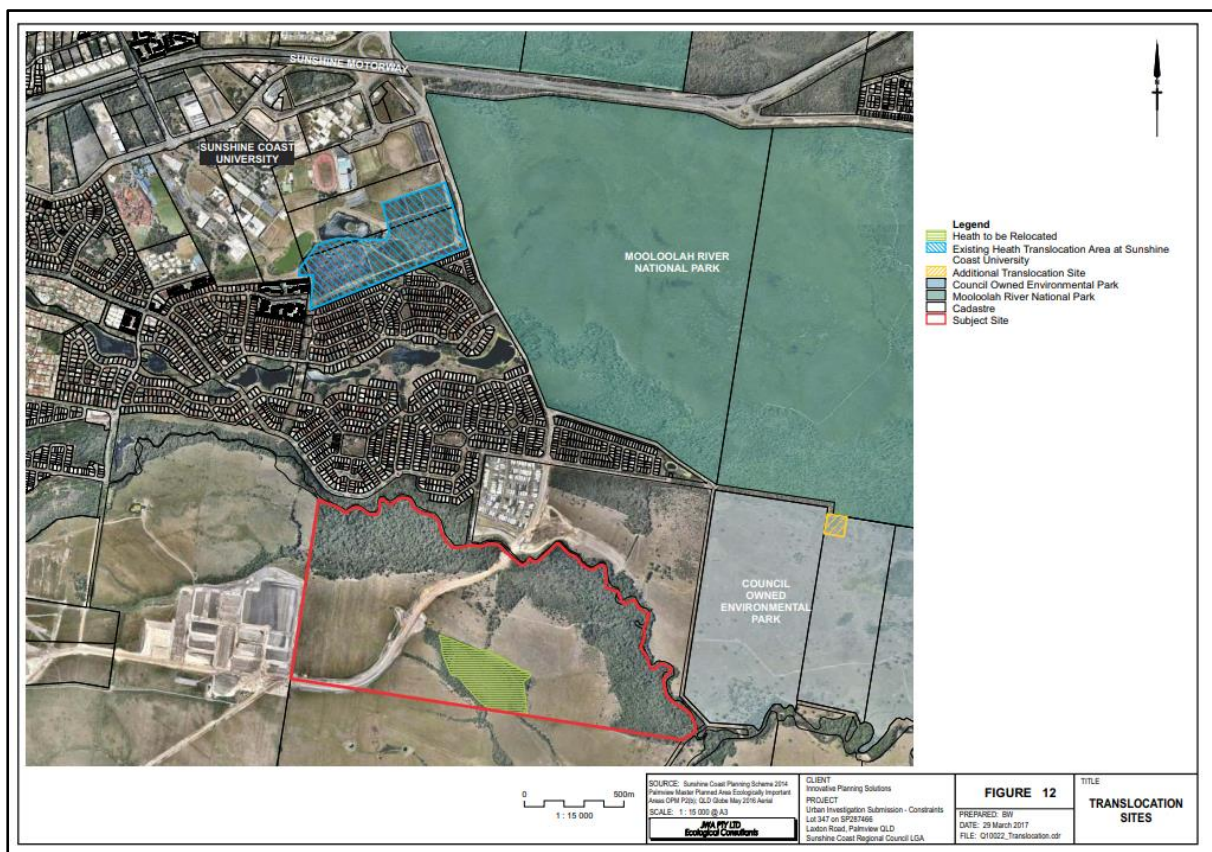


Figure 16 JWA Proposed Heathland Translocation Site

Translocation of habitats including heath is inherently high risk and susceptible to high rates of failure. The Lower Mooloolah River Environmental Reserve was purchased by Council to

provide the land for the environment to balance the development of the Palmview Structure Plan Area. The total land area of the Lower Mooloolah River Environmental Reserve has been utilised for the environmental offsets in the preparation of the Structure Plan, leaving no additional land for use as a translocation locality. Use of the Lower Mooloolah River Environmental Reserve for translocation would be double counting the land area, creating a “double-dipping” scenario. On the basis of the above, Council would not support translocation of vegetation to the Lower Mooloolah River Environmental Reserve, especially given the heath is recognised as State significant vegetation and the State has not supported the translocation.

#### *Proposal for vegetation offsets*

The JWA report (p15) explores vegetation offsets should the translocation of heath not be successful. Interestingly JWA have nominated two options for areas on the Lower Mooloolah River Environmental Reserve as potential vegetation offset areas (Option 1 - 40ha or Option 2 - 16ha respectively). These proposals also fail to recognise that available land area does not exist for these purposes and that the areas identified as vegetation offset areas are to be retained as open grassland or sedgeland in accordance with the Vegetation Management Plan (Revegetation and Rehabilitation) for the Lower Mooloolah River Environmental Reserve. These areas are already counted in the environmental area of 483.4 hectares in the Palmview Structure Plan requirements, and therefore would be double dipping to be counted again as translocation areas.

The JWA report (p15) recommends that “the location, extent and type of buffers should be the subject of a detailed analysis at the detailed design stage”. This recommendation is not supported. The Chenoweth 2005 report recommends both the location and size of buffers required to deliver habitat connectivity and wildlife movement. The determination of environmental buffers is a critical element of defining the development footprint, and any proposal to deal with buffers at a later point will likely result in development commencing and inadequate buffers being provided for. It would therefore, be beneficial to retain the area for habitat connectivity.

It should be noted that in consultation with DERM, during negotiation of the infrastructure agreement and finalisation of the Palmview Structure Plan, buffers to some areas in Area B and Area C were reduced from 100 metres to 50 metres to be consistent with the State’s previous direction on the Area A landholdings. The basis for Council and DERM agreeing to the reduction of buffers was that there was certainty about the buffers, a road edge would be maintained along these areas and based on the totality of environmental outcomes to be



achieved across the Structure Plan Area, namely the securing of 615 hectares of land (now 483.4 hectares) for ecological protection purposes and the rehabilitation of this land where necessary through the infrastructure agreement.

In accordance with the assessment process, further investigations are not required, however for completeness, the flood hazard has also been assessed.

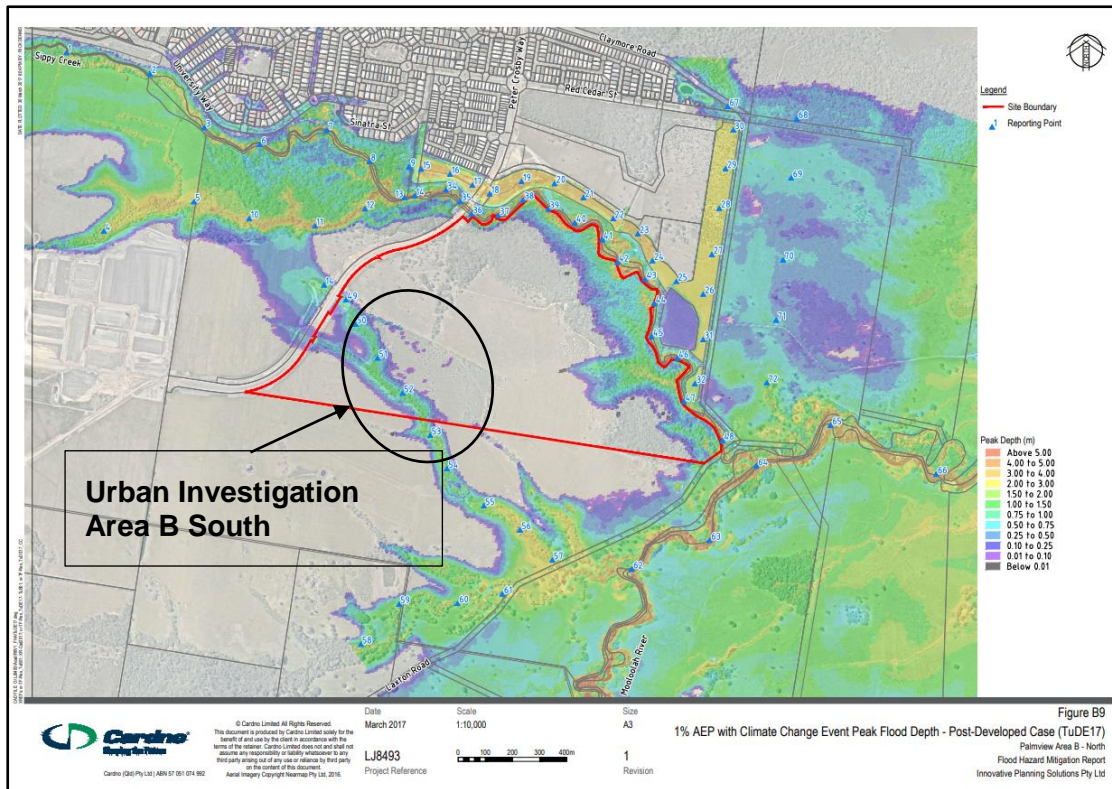
#### 6.4 Council's determination of flood prone land

Parts of the land in Area B South are identified as flood prone land on OPM Map P2(a) (refer **Figure 6**).

##### *Initial Area B South submission*

The flood assessment for this urban investigation has been prepared by Cardno on behalf of Landowner B. The report considers the flood event of 1% AEP with consideration for climate change.

Figure A9 of the Cardo report shows the peak level compared with the topography (m AHD) while Figure B9 of the report (refer to **Figure 17** below) shows the peak depth of water in the flood event. **Figure 17** shows a significant area of the Urban Investigation Area of Area B South is inundated by floodwaters, up to two metres depth. This waterway also flows through to Area C.



**Figure 17 1% AEP Climate Change Event Peak Flood Depth**

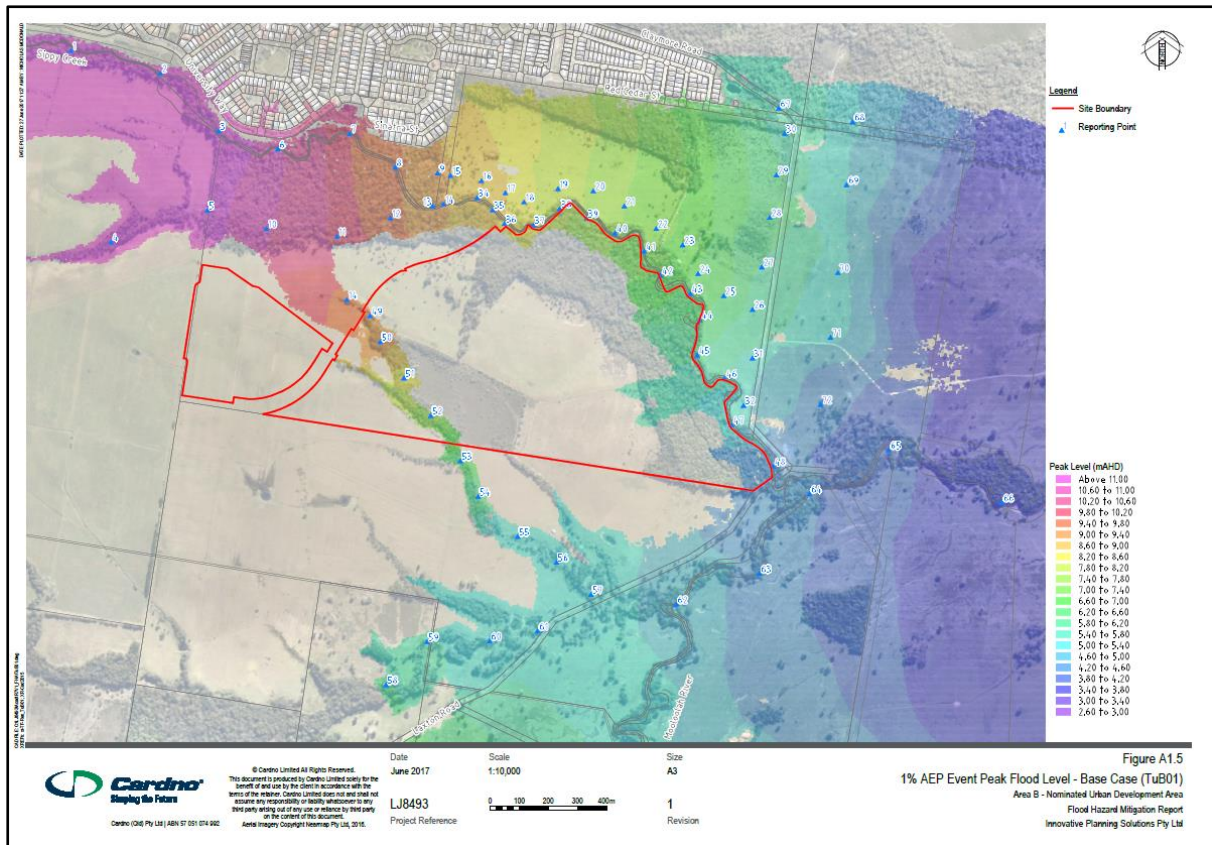
The Cardno report indicates that some parts of Area B South will comply with the requirements of the Palmview IA 2.2(b)(i) – ie, “not flood prone land”. That is, without any modification of the waterways that convey floodwaters, there is a portion of the urban investigation area that is not inundated by the defined flood event and therefore not precluded from for urban development on those grounds.

However, the Cardno flood report was not clear in whether it was presenting a pre-development case for Area B South. The report references Post-Developed a TuDE17 scenario, and the flood mapping in the appendices of this report also reference Post-Developed Case (TuDE17) in the context of Palmview Area B North. Further information was requested to clarify this.

*Assessment of further information*

Further information was provided by Landowner B for Urban Development Investigation Area B North and South (18 December 2017). Figure A1.5 of that report showed base case (pre development of Area B North and South) (refer **Figure 18**). This confirmed that there is a portion of Urban Investigation Area B South that is not flood affected in the Defined Flood Event and would not be precluded from urban development by flooding issues.





**Figure 18 1% AEP Event Peak Flood Level - Base Case**

## 6.5 Determination

Assessment of Investigation Area B South determined that while there are areas of Investigation Area B South which are not considered flood prone, the area is considered to have ecological importance by both the State and Council, therefore the land is not considered suitable for urban development.

## 6.6 Officer Recommendation – Investigation Area B South

It is recommended that the entire area of the proposed Investigation Area B South be retained to preserve the remnant vegetation which is identified as Ecologically Important and to deliver habitat connectivity and wildlife movement.

## 7.0 Investigation Area C

Landowner C has carried out an investigation of part of Area C to determine whether Investigation Area C is land suitable for urban development in the Structure Plan Area.

In accordance with Special Condition 2.3(a) (Urban Development Investigation) of the Palmview Infrastructure Agreement, Landowner C gave to the Council a Notice stating the results and the technical basis for the results of the Urban Development Investigation for Investigation Area C (Attachment 3) on 1 April 2017, and provided further information on 22 November, 2017.

As part of the submission, Landowner C included the following technical reports:

- Environmental Constraints Investigation (Saunders Havill Group, 24 March 2017)
- Flood Assessment of Urban Investigation Area for Peet Palmview Development (Water Technology, 20 March 2017)

The report by Saunders Havill commissioned by Landowner C, states that “established that the ‘central’ area of Investigation Area C (an area of wholly cleared farmland) could be developed for urban purposes (subject to the implementation of appropriate environmental buffers) without unreasonably compromising the ecological values of these ecologically important areas as defined by the PSP”.

Landowner C’s submission for Investigation Area C referenced *Caloundra City Landscape Assessment Report* (Chenoweth EPLA, 2001) prepared for Caloundra City Council.

Additionally, the submission included proposed replacement zoning, transition plan, engineering plans and development opportunities plan, however in accordance with Special Condition 2.2, these items have not formed part of the technical assessment of the land’s suitability for urban development but comment has been made on the potential impacts of the proposed development opportunity on habitat connectivity functions.

### 7.1 Palmview Structure Plan context

Investigation Area C is identified on *Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas)* of the Palmview Structure Plan (refer **Figure 5**) as an ‘Ecologically Important Area’ containing amongst other matters State Significant Vegetation, buffers to State Significant Vegetation, State Habitat Corridor (State government) and Regional Habitat Corridors (State government).

Investigation Area C is identified on *Other Plans Map OPM P2(a) (Palmview Master Planned Area Flood Prone Land)* of the Palmview Structure Plan (refer **Figure 6**) as land inundated by the defined flood event which is not suitable to be filled for inclusion as land for urban purposes.

Investigation Area C is identified as part of the land requirement of 483.4 hectares for ecological and landscape protection and rehabilitation landscape as specified on *Other Plans Map OPM P12 Palmview Master Planned Area Non-urban Open Space infrastructure network* (refer **Figure 7**).

## 7.2 State's determination of ecologically important area

Investigation Area C contains mixed land uses under the Palmview Structure Plan for both conservation and recreational purposes. The remnant vegetation in Investigation Area C provides an important link providing connectivity from Area B South to the adjoining habitat along the creek in the south. Investigation Area C also contains many MSES values in Regulated Vegetation and significant wetlands.

The DEHP report outlines matters of State Environment significance (MSES) in this investigation area including:

- Wildlife habitat (threatened and special least concern animal)
- High ecological significance wetlands
- Regulated vegetation (essential habitat)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (defined watercourse)

Also, the report identifies additional MSES under the Environmental Offsets Act 2014:

- Koala bushland habitat (SPRP area)
- Flora survey trigger (high risk area)
- Fish waterways for barrier works (stream)
- Remnant Regional ecosystems
- Woodland and open forests (12.3.5)
- Supports contiguous 14-hectare patch

These BAMB BPA high values were identified:

- contains Core Habitat for Priority Taxa (CRITERIA H)
- forms part of a bioregional corridor (CRITERIA J)

Additionally, AquaBAMB ACA high values were identified:

- Wetland naturalness
- Wetland species diversity and richness
- Threatened and Priority species
- Special features:

- Gallery rainforest riverine
- Coastal wetland
- Connectivity
- Wetland representativeness

Also, SEQ Regional Biodiversity Values within Urban Areas (remnant or regrowth) exist:

- Species diversity and richness
- Climate areas
- Unique ecosystems
- Terrestrial connectivity

DEHP does not support further development within Investigation Area C, but supports the existing mixed recreational and environmental uses within the area. DEHP recommend the current zoned land uses under the Palmview Structure Plan be retained.

### 7.3 Council's determination of ecologically important area

Saunders Havill were engaged by Landowner C to carry out a detailed ecological assessment of the Urban Investigation Area within Area C at Laxton Road, Palmview (Lot 3 RP136884). Saunders Havill prepared a Technical memo – environmental constraints associated with the urban investigation area within Area C of the Palmview Master Planned Area.

The technical report prepared by Saunders Havill appears to have been based on a more thorough desk-top and site inspection regime than was delivered by JWA for Areas B North and B South.

Investigation Area C contains areas of State High Ecological Significance wetlands identified over the western creek line and vegetation in the south of Area C. Two areas of [state] Least Concern remnant vegetation (RE 12.3.5 Melaleuca open forest) are also located in the west and south of Area C.

The ecological importance of Investigation Area C is ensuring a functional habitat that provides effective habitat connectivity and wildlife movement to Investigation Area B South which is recognised as an Ecologically Important Area and has a strong reliance of the connectivity provided by Investigation Area C.

#### *Ecological connectivity with Investigation Area B South*

The area is mapped within a 'Biodiversity Enhancement Corridor' identified as Corridor 3 in the Chenoweth 2005 report, a corridor that is intended to provide habitat connectivity

between Area B South, Investigation Area C, Un-named Creek (Corridor 2, Chenoweth 2005) and the Mooloolah River (refer **Figure 10**).

While the assessment recognises the Biodiversity Enhancement Corridor (Corridor 3) as proposed by Chenoweth 2005, the Saunders Havill assessment fails to be adequately completed in the context of the importance of Investigation Area C to the viability and effective ecological functioning of Investigation Area B South.

The Saunders Havill report (p12) makes a short statement that “No corridors will be impacted by the additional urban footprint,” suggesting that a 50-metre buffer from the western drainage line and a 40m buffer from the eastern drainage line is considered ample.

The buffers proposed by Saunders Havill are less than those recommended by Chenoweth 2005, and no further justification is provided to indicate why a lesser buffer is considered ample either for the effective function of vegetation and wetland assets contained in Investigation Area C, or for the habitat connectivity required to be provided to Area B South.

Reducing the vegetation buffers from the buffer widths recommended by Chenoweth 2005 has the potential to significantly impact on the functionality of habitat connectivity with Area B South, and provide buffers that are narrow and highly susceptible to edge effects including encroachment and weed invasion potentially resulting in a much narrower and likely ineffective habitat corridor connecting Area B South.

Saunders Havill report further suggests that the [already reduced] buffers could accommodate compatible uses including stormwater infrastructure, pedestrian and cycle paths, and other amenities typically associated with recreation parks and open space.

Pedestrian and cycle paths, and other amenities typically associated with recreation parks and open space should be located in adjoining linear recreation parks or similar buffer/transition areas so as not to negatively impact on the ecological values of the area.

It is assumed that additional access (road networks) will be required to service the additional approximately 50 dwellings estimated in the Innovative Planning Solutions proposal. There appears to be no discussion as to the potential impacts on the habitat connectivity functions to be provided by Investigation Area C from the construction of additional roads.

Given that one of the primary functions of Investigation Area B North and Investigation Area C was to provide habitat connectivity, all three ecological assessments (Area B North, Area B South, and Investigation Area C) should have been completed as independent but integrated ecological assessments. This has not been the case.



Maintaining connectivity through Investigation Area C to the Mooloolah River is considered critical by both the State and Council to ensure ongoing habitat viability of Area B South (remnant heath vegetation).

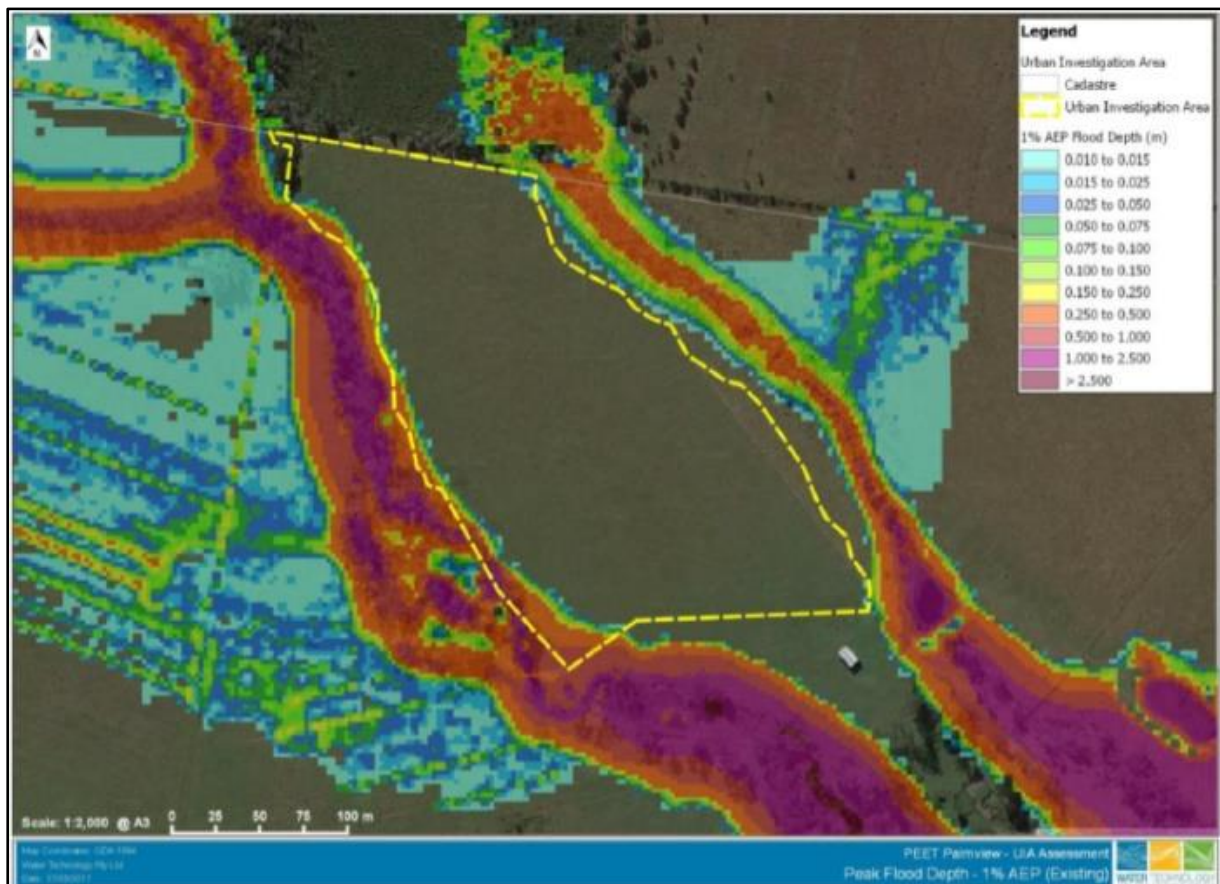
#### 7.4 Council's determination of flood prone land

In accordance with the assessment process, further investigations are not required, however for completeness, the flood hazard has also been assessed.

##### *Initial Area C submission*

The flood assessment for this Urban Development Investigation Area was prepared by Water Technology (March 2017) on behalf of Landowner C. The assessment considers the extent of flooding during the 1% AEP with an allowance for climate change.

In summary, Figure 3-1 of the Water Technology report (refer **Figure 19**) indicates the south-western corner of the Urban Development Investigation Area is inundated, by up to 750mm. There is some minor flooding along the western edge of the Urban Development Investigation Area. Similarly, there is minor flooding on the north-east corner.



**Figure 19 - 1% AEP Existing Flood Depth (2100 Climate Change)**

Outside of these areas, the assessment indicates that much of the Investigation Area C can comply with the requirements of the Special Condition 2.2(b)(i) of the Palmview IA, that is, without any modification of the waterways that convey floodwaters for the majority of the urban investigation area is land suitable for urban development because the defined flood event does not inundate it.

The flood report goes on to outline a scenario where the areas inundated in the base case are filled and details the impacts on waterway depths as a result of this filling. Figure 4-1 of the report shows this change in water level, with a small area which has an increase of 200-500mm and a significant area along the length of the major tributary adjacent to the UIA western boundary which has increased water levels.

#### *Assessment of further information*

The original report had not assessed any impacts external to Area C's land to demonstrate that there were no adverse impacts. This further information provided indicated that impacts could be limited to the site and adjacent waterways, and that impacts to the tributary on the western boundary would not result in a fundamental change to the existing flood behaviour. The assessment of this further information confirms Council's initial assessment that there are areas of Area C which are considered to not be flood prone.

### 7.5 Determination

Although there are areas of Investigation Area C which are not considered flood prone, and therefore may be eligible for urban development, the urban investigation area is considered to have ecological importance by both the State and Council.

### 7.6 Officer Recommendation – Investigation Area C

It is recommended that the entire area of the Investigation Area C be retained to deliver habitat connectivity and wildlife movement.

### 8.0 Other Considerations for Investigation Area B North

Special Condition 2.3(c) of the Palmview Infrastructure Agreement outlines a scenario where Council can, in its absolute discretion, incorporate flood prone land in land suitable for urban development if the land satisfies an overriding need in the public interest.

Based on the assessments outlined above, parts of Investigation Area B South and Investigation Area C contain areas which are not considered flood prone. However, these areas are considered to be ecologically important. In addition, the proposals are for further residential development and therefore do not satisfy the criteria for an assessment of the overriding need in the public interest.

However, given the proposal for Investigation Area B North includes a mix of community, education and residential uses, an assessment of an overriding need in the public interest (refer to **Section 4.1**) is included for completeness, and includes consideration of adverse impacts as well as the social, economic and environmental considerations.

### 8.1 Adverse impacts

Council's policy on filling in the flood plain is clearly articulated in the Flood Hazard Overlay Code of the *Sunshine Coast Planning Scheme 2014*, which states that for areas determined as being subject to the defined flood event "any development involving physical alteration of the land does not occur".

Investigation Area B North is considered flood prone and filling is required to produce a flood free development platform. Filling in the flood plain of the defined flood event is contrary to Council's policy position. The proposed construction of the bund or excavation of a drainage channel will concentrate flood waters, further impacting vegetation and wetlands, as well as the hydrology of the Lower Mooloolah River Environmental Reserve. The fauna corridors proposed in the landowners submission do not leave adequate width to facilitate fauna movements.

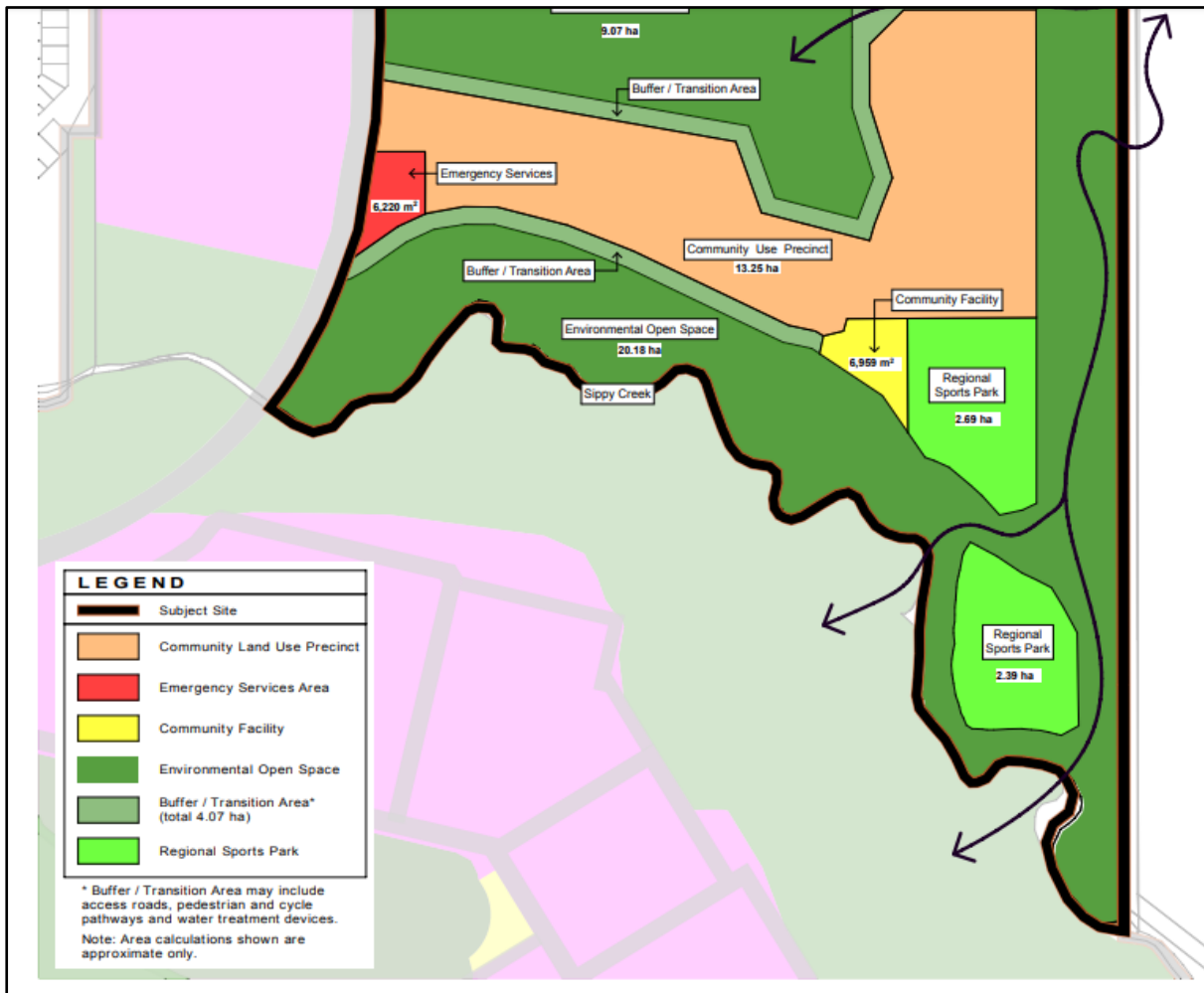
### 8.2 Social, economic and environmental considerations

As outlined above, the Area B North has been the subject of a detailed assessment of flooding implications and ecological impacts which have determined that the area is not suitable for urban development (refer to Section 5). The community need or demand is a secondary consideration only to be assessed if the site is deemed suitable for urban development, but has been undertaken for completeness.

The proposal has been assessed against Council's adopted policy position, the *Environment and Liveability Strategy 2017* to determine if there is a benefit to the wider community. The *Environment and Liveability Strategy* sets Council's policy direction, desired standards of service and network blueprint of open space and social infrastructure to inform the network for the next 20 years.

The landowner proposal (refer **Figure 20**) is to develop Area B North to incorporate:

- Emergency Services lot 6,220sqm
- Sporting fields - 2 playing fields – land – approx. 5 ha
- Community Facilities allotment/ building /clubhouse – 6,959 sqm
- Financial contribution of \$2.5m (to be paid progressively) for the construction of playing fields, the community building and community gardens.
- Community use precinct – 13.25 ha of land for school, retirement living, childcare, indoor and outdoor sports and recreation. Land in this zone is proposed to be revenue generating.
- Ecological corridor.



**Figure 20 Proposed Community Facilities Precinct**

*Council's endorsed policy position, desired standards of service and network blueprint for Open Space (sports grounds)*

The *Environment and Liveability Strategy* sets the strategic directions and guidelines for open spaces and seeks the following Desired Standard of Service for a District Sports Ground:

- Suitable land – land which lies above the 5%AEP (1 in 20) flood level
- Buildings are to be sited above the 1% AEP (1 in 100) flood level
- Is developable under environment related restrictions such as the *Vegetation Management Act 1999*
- Site supports the intended use in terms of its location, size, micro climate, topography etc
- Public safety, passive surveillance and security of assets are maximised – ie. It meets CPTED principles

The strategic direction of Council is to develop larger, centrally located sports grounds capable of hosting events, functions, and social gatherings, with existing smaller sports grounds to be transitioned into recreation parks.

The proposal to develop 2 standalone sports grounds does not meet the Desired Standard of Service for a District Sports Ground or support Council's strategic direction.

The proposal does not meet the minimum size requirement of 15 hectares or the larger, does not comply with the centralisation approach of sports grounds, nor are the proposed fields regular in shape with a minimum of 50% road frontage. The site does not deliver the required flood immunity and would not meet the standard without significant fill. The environmental values of the area proposed for development are identified as significant ecological values and therefore vegetation removal would not be supported. The proposed fields are located in an isolated and hidden location which would be inconsistent with the desired outcome for surveillance and road frontage. Additionally, there is a potential health concern due to the proximity to water for biting insect issues.

In conclusion, the proposed establishment of two sports fields in an isolated, flood affected area is not supported by Council policy and does not meet the Open Space Desired Standards of Service for a District Sports Ground.

*Council's endorsed policy position, desired standards of service and network blueprint for Social Infrastructure*

The *Environment and Liveability Strategy* sets the following Desired Standard of Service for community meeting spaces and venues:

- District Community Venue: is to service a catchment of 30,000-50,000 and is to have a minimum land area of 10,000sqm and ideally provided within major activity centres.
- Local Community Venues: is to service a catchment of 5,000-10,000 people and is to have a land area of approximately 5,000sqm land. Additionally, the Council policy requires land to be:



- Highly visible and centrally located within close proximity to activity centres and have synergies with surrounding land uses
- Land and buildings are to have a Flood Immunity above the 1% AEP (1 in 100)
- Sites are to be in locations which encourage the reduction of private vehicle travel – walking and cycle distance

Land for community facilities is allocated in both the existing Sippy Downs and the Palmview IA, as outlined in Table 1 below.

*Table 1: Sippy Downs and Palmview social infrastructure network*

Location	Facility	Land
Sippy Downs	Library and Local Community Centre	1,500sqm
Palmview	District Community Centre	10,000sqm
Palmview	Multipurpose Aquatic Facility	10,000sqm
Palmview	Local Community Facility	3,000sqm
Palmview	Local Community Facility	3,000sqm
Palmview	Local Community Facility	3,000sqm

The delivery or facilitation of facilities on these land contributions is identified in the Environment and Liveability Strategy, Social Infrastructure Network Blueprint. The proposed facilities on these land contributions fulfil the Desired Standards of Service for social infrastructure to cater for the needs of the forecast populations of Sippy Downs and Palmview communities and no further land requirements are identified. Enhanced access to community facilities is to be facilitated through communication with other sectors, including education.

#### Current Network Planning

In accordance with Council policy, the establishment of District level facilities is a priority.

Within Sippy Downs an investigation into the delivery of a community meeting place /library is requested in the 18/19 budget process – capital funding will be needed by general revenue, partnerships or grants.

Within Palmview the commencement of planning for the District Community Centre is requested in the forward Capital Works Program for 25/26.

In accordance with the Infrastructure Agreement for Palmview, the Developers are to contribute approximately \$10 million (indexed) over the life of the project into the Palmview Community Facilities Account (Cash Reserve) for the construction of community facilities on land contributed for community facilities purposes or land contributed for urban open space infrastructure (refer Schedule 2, Clause 1.2).

In conclusion, standalone buildings in isolated areas are not supported for general access unless the proposed use has a synergy or specific purpose such as an environmental education centre or use related to the nearby natural areas. In addition, network planning indicates there is no further land required for community facilities within Sippy Downs or Palmview.

### 8.3 Economic considerations

A conservative estimated cost (LGIP standard) for the provision of a District Sports Ground is \$6.3 million for land and a further \$6.9 million for embellishment, which are considered to be conservative preliminary estimates without knowledge of earthworks requirements, access requirements or factors such as flood susceptibility.

An estimated cost for the delivery of a local community venue with a minimum 300sqm GFA is approximately \$1,500,000.

The proposal offers a contribution of \$2.5 million plus which is well short of the estimated cost for a District Sports Ground.

Council would be required to invest a significant amount of additional funds to the proposed development of sports grounds and community venue. Neither of these costs are scheduled in Council's endorsed Network Blueprints nor the Capital Works Program (10 year) and would displace other funding requests and would not be based on identified need.

In conclusion, the funding being offered is insufficient to develop 2 sports grounds, an access driveway and carparking, plus a community venue and will therefore cost Council significant additional funds. The proposal is not considered to be a good investment for Council or the community due to the limitations, duplication and potential misdirection of funds.

Investment from Council would be better directed to the District Sports Ground being delivered in Area A in Palmview (a total of 16.7 ha, made up of 8.35 ha in stage 1 and 8.35 ha in stage 2). Land dedication and the embellishment of stage 1 is to be funded by the developer to the value of \$2,668,943 and to the value of \$2,668,943 for stage 2, leaving a shortfall of at least \$1.5 million, of the total cost of \$6.9 million.

Council funds would be more appropriately directed to deliver stage 2 if additional sports grounds are required in the short term. This early delivery of stage 2 would be a more cost-effective approach with road access and carparking being shared with stage 1. In the longer term there would be greater savings with the economies of scale in relation to management and maintenance rather than two standalone fields and separate sports grounds.

Delivery of stage 1 of the Palmview District Sports Grounds in Area A is envisaged within the next year.

The timing of the proposal for Area B North is unclear however it would seem to be a longer-term outcome and thereby not providing an outcome for the Chancellor Park community in the short term as is proposed.

#### 8.4 Other considerations

The submission relating to Area B North outlines a precinct which includes community facilities, sporting fields and emergency services. The uses proposed in the precinct include a private school, retirement village or aged care use. These uses would be high traffic generators and the impact of this factor has not been considered as part of the submission. If the western portion of Area B North was supported for some form of development, there is likely to be a need for two access points which would be from Peter Crosby Way and via Claymore Road to the north.

If access was to be established from Claymore Road, it would likely cut through the eastern portion of Area B North directly impacting on the environmental values and connectivity values it is being set aside to provide.

The retirement village option is considered to be residential development and would therefore not meet the tests for overriding need in the public interest. Additionally, it is possible the retirement village option would not eventuate and further traditional residential product would be the subject of a development application.

The whole area of Area B North is identified in the Structure plan as part of the 483.4 hectares required to offset the impacts of development and was one of the main preconditions to allowing development of the Structure Plan Area to occur.

All of the proposed uses can occur within the Structure Plan area, and to some extent are already included within the planning for the urban development envisaged in the Structure Plan and infrastructure agreement. The inclusion of these uses in Area B North could have the effect of relocating uses from within the structure plan area resulting in additional

residential land within the structure plan area rather than additional open space and social infrastructure, thereby not providing any additional community benefit.

In conclusion, the result of the assessment of the proposal indicates it is not consistent with Council's current policy direction and network planning. The proposal would deliver below standard facilities and would duplicate and compete for funding with planned projects. It is not considered a good financial offer for Council and will require a substantial investment by Council.

The submissions do not therefore demonstrate an overriding public need in relation to this definition or the requirements of the Palmview Infrastructure Agreement.

Area B North has flood prone land which, if developed has significant impacts on the flows through Sippy Creek and the Mooloolah River flood plain. Although the submission indicates the area would provide a community precinct, which would be to the benefit for the community, these facilities are currently planned within the Structure Plan area, within land that is suitable and readily available.

Area B South and Investigation Area C contain some areas of flood prone land, and some flood free land, but the overriding environmental constraints would prevent consideration of an overriding public need.

## 9.0 Preliminary outcome of investigation

The three Urban Development Investigation Areas contain many high biodiversity and conservation values that are considered ecologically important at a State and Council level.

While the State is not opposed on ecological grounds to limited development within the western portion of the Investigation Area B North, Council environment officers consider this area provides important habitat connectivity and should, along with the eastern portion, be retained for environmental purposes.

Urban Development Investigation Area B North is also flood prone land and the overriding need in the public interest to develop this flood prone land has not been demonstrated. In addition, the engineered drainage solution that has been proposed has not been proven as suitable.

Urban Development Investigation Areas B South and Area C, whilst containing areas that are not flood prone, should remain for conservation purposes under the Structure Plan, as the biodiversity value of each area is significant.

It is recommended that the entire area of the proposed Area B North be retained to:

- deliver habitat connectivity and wildlife movement (Corridor 3 - Figure 2, Chenoweth 2005) connecting Sippy Creek to the patch of remnant vegetation in the north-western portion of the site (Area B North), described as 'Ecologically Important Areas' in accordance with the definitions within the Structure Plan and Palmview Infrastructure Agreement
- deliver habitat and wildlife connectivity between the Mooloolah River National Park and 'Ecologically Important Areas' in the Palmview development through the enhancement and reinstatement of Regional Ecosystem types 12.3.5 (Melaleuca Forest) and 12.3.13 (Heath) which would provide the greatest level of habitat functionality appropriate for local fauna and flora species,
- protect and enhance the areas of natural regeneration described by Chenoweth (2005) as Areas of High Rehabilitation Potential;
- protect flood storage;
- prevent the diversion of flows away from the Lower Mooloolah River Environmental Reserve; and
- prevent flood level increases.

It is recommended that the whole of Investigation Area B South be retained to preserve the remnant vegetation which is identified as 'Ecologically Important' in order to maintain habitat connectivity and wildlife movement to the north (Sippy Creek and Mooloolah River National Park) and the south (through Area C to Mooloolah River)

It is recommended that the whole of Investigation C be retained in order to maintain habitat connectivity and wildlife movement from Investigation Area B South to the Mooloolah River.

## 10.0 Next steps

Following Council making a draft determination for each of the Urban Development Investigation Areas, the draft determination will be provided to each of the landowners and the State government for consideration. The landowners will be given 2 months in which to make a submission with respect to the draft determination.

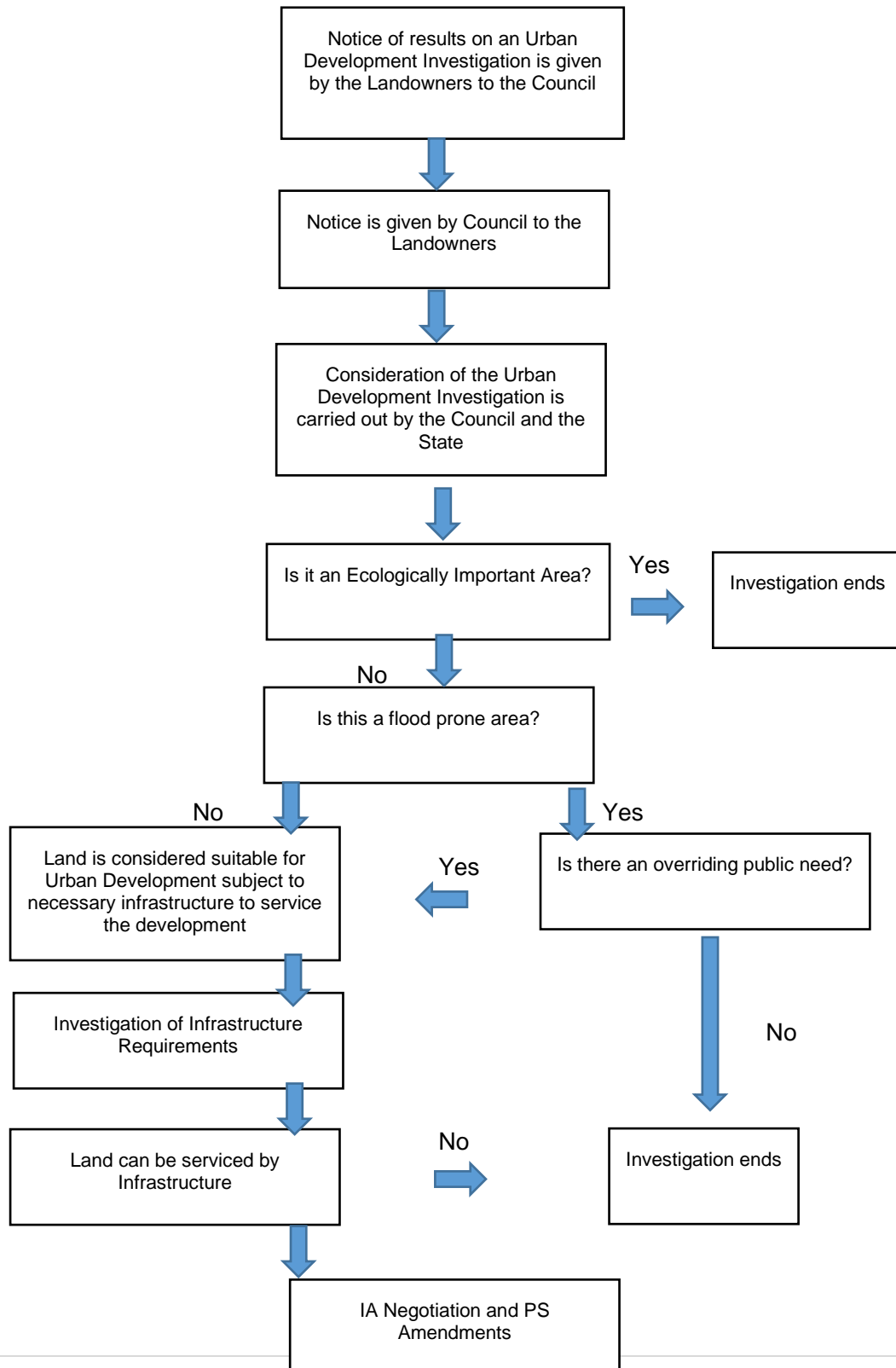


Council, in consultation with the State government, will then consider these submissions and a final report will be presented to Council to make a final determination. This process is outlined in flow diagram in Appendix 1.

If the Council determines that all or part of Investigation Area B North, Area B South or Investigation Area C is suitable for urban development in the Structure Plan Area, under Special Condition 2.3(d) (Urban Development Investigation) of the Palmview Infrastructure Agreement the Council, amongst other matters, is to give consideration to whether a change to the Palmview Structure Plan is required to give effect to the Council's determination of Investigation Area B North, Area B South or Investigation Area C. As part of this consideration, an assessment of the infrastructure required to support any such development will also be considered. Any change to the Structure Plan will also require changes to the Palmview Infrastructure Agreement to crystallise the development entitlements and associated development obligations.

## Appendix 1 – Review Process Flow Diagram

The process to be followed for the review of the submissions for Urban Development Investigation Areas is shown in the diagram below.



## Appendix 2 – Further information notices

23 October 2017

Officer: Leah Bancroft  
Direct Telephone: 07 5420 8933  
Our Reference: UIA17/0002.b

The personal representatives of the  
Estate of Peter Vincent Crosby  
Attn: Benjamin John Jude Crosby  
PO Box 499  
Nambour Qld 4560

Dear Sir/Madam

**Notice of Prescribed Notification**  
*Palmview Structure Plan Area Infrastructure Agreement 2010*  
*(Consolidation No. 2)*

The Council as the Issuing Party gives to the Notified Party a Notice of the Prescribed Notification under the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2) (Palmview IA)*.

A capitalised word in this Notice, unless the context or subject matter otherwise indicates, has the meaning in this Notice or if a meaning is not given in this Notice has the meaning in the Palmview IA.

**1. PARTY DETAILS**

<b>Issuing Party</b>	Name:	Sunshine Coast Regional Council
	Address:	Locked Bag 72, Sunshine Coast Mail Centre QLD 4560
	Electronic mail address:	mail@sunshinecoast.qld.gov.au
<b>Notified Party</b>	Name:	The personal representatives of the Estate of Peter Vincent Crosby
	Attention:	Benjamin John Jude Crosby
	Address:	PO Box 499 Nambour Qld 4560
	Facsimile: Electronic mail address:	Not Applicable bencrosby@bamser.com.au

**2. NOTICE DETAILS**

Notice no:	UIA17/0002.b
Notice date:	23 October 2017
Relevant matter:	Urban Development Investigation of Investigation Area B and Investigation Area C
Relevant clause:	Special Condition 2 (Urban Development Investigation)

### 3. PRESCRIBED NOTIFICATION DETAILS

The Issuing Party requests the provision of the following information on the flood assessments submitted for Area B (North) and Area B (South) in order to complete the assessment of Urban Investigation Areas within Landowner B's land as follows:

Area B (North):

- (a) The TUFLOW sub-model prepared by Cardno (March 2017) for both pre and post development cases is to be submitted to Council for further analysis.
- (b) The FHM report should be supplemented with commentary on all input parameters and assumptions made in the TUFLOW sub-model including how the flood solution complies with the strategic intent of the Planning Scheme in relation to flooding. In addition, further details must be provided on topography (including a topographic difference map between base and developed cases), hydraulic roughness, blockages and sensitivity analysis that support the variable performance under real world conditions consistent with a maintenance regime of minimal intervention.
- (c) The construction of levee banks to protect new developments was a particular focus of the recommendations of the Qld flood commission inquiry finalised in March 2012. Council's current planning scheme recognises these recommendations and the inherent flood risks to new communities when levee banks are not continually maintained and as a result stipulates that the flood solutions for new developments must not be reliant on levee banks. It is requested that further commentary be provided on how the proposed flood solution satisfies the recommendations of the Qld flood commission inquiry outcomes with respect to levee banks being constructed to protect new developments.

Area B (South):

- (d) The TUFLOW sub-model prepared by Cardno (March 2017) for both pre and post development cases is to be submitted to Council for further analysis.
- (e) The FHM report should be supplemented with commentary on all input parameters and assumptions made in the TUFLOW sub-model including details of the "base case" and a comparison of the "base case" against "post development" results and how any adverse impacts are to be mitigated including impacts on the Sippy Creek riparian corridor. Output TUFLOW maps should also be submitted which detail the sub-model layout for the "post development case", the base case and maps providing a comparison of food levels and velocity differences.

### 4. AUTHORISATION

This Notice is signed by a duly authorised representative of the Issuing Party.



**Leah Bancroft**  
A/Manager Major Urban Developments

23 October 2017

Officer: Leah Bancroft  
Direct Telephone: 07 5420 8933  
Our Reference: UIA17/0002.c

Gerard Joseph McCafferty  
C/- John McCafferty  
24 Tristania Drive  
Bardon QLD 4065

Dear Sir/Madam

**Notice of Prescribed Notification**  
***Palmview Structure Plan Area Infrastructure Agreement 2010***  
***(Consolidation No. 2)***

The Council as the Issuing Party gives to the Notified Party a Notice of the Prescribed Notification under the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2) (Palmview IA)*.

A capitalised word in this Notice, unless the context or subject matter otherwise indicates, has the meaning in this Notice or if a meaning is not given in this Notice has the meaning in the Palmview IA.

**1. PARTY DETAILS**

<b>Issuing Party</b>	Name:	Sunshine Coast Regional Council
	Address:	Locked Bag 72, Sunshine Coast Mail Centre QLD 4560
	Electronic mail address:	mail@sunshinecoast.qld.gov.au
<b>Notified Party</b>	Name:	Gerard Joseph McCafferty
	Attention:	Gerard Joseph McCafferty
	Address:	24 Tristania Drive Bardon QLD 4065
	Facsimile:	Not Applicable
	Electronic mail address:	John.McCafferty@paynter.com.au

**2. NOTICE DETAILS**

Notice no:	UIA17/0002.c
Notice date:	23 October 2017
Relevant matter:	Urban Development Investigation of Investigation Area B and Investigation Area C
Relevant clause:	Special Condition 2 (Urban Development Investigation)



### 3. PRESCRIBED NOTIFICATION DETAILS

The Issuing Party requests the provision of the following information on the flood assessments submitted for Area C in order to complete the assessment of Urban Investigation Areas within Landowner C's land as follows:

- (a) The XP\_RAFTS and TUFLOW model prepared by Water Technology (March 2017) including all input parameters and data files are to be submitted to Council for further analysis.
- (b) The flood assessment report should be updated to include commentary on all input parameters and assumptions made in the model as well as maps on the changes in velocity as a result of the development including how any off site impacts will be appropriately addressed.

### 4. AUTHORISATION

This Notice is signed by a duly authorised representative of the Issuing Party.



**Leah Bancroft**  
A/Manager Major Urban Developments

## Appendix 3 - Background to Structure Plan Area

### **Palmview Structure Plan**

Strategic Intent for the Master Planned Area specifies that, amongst other things, development in the Master Planned Area should: -

- provide for the protection and enhancement of waterways, wetlands, bushland, and the Mooloolah River floodplain such that climate resilience is enhanced and a network of green open space is established that defines the boundary of urban development and provides an attractive setting for neighbourhoods.
- provide for the protection, rehabilitation, buffering and reconnection of native remnant and regrowth vegetation, wetlands, waterways, and other ecologically important areas and that the Environmental Open Space Area is intended to be included in nature conservation or other protective public tenure and is not intended to be developed for urban purposes.

More specifically, the strategic intent for Open Space indicates that development in the Master Planned Area provides for the establishment of an integrated non-urban open space infrastructure network which: -

- (a) frames the edges of and separates urban areas within the Master Planned Area from other urban communities;
- (b) provides for the protection, enhancement, buffering and reconnection of ecologically important areas including the Mooloolah River National Park, the Palmview Conservation Park, the Birtinya Wetlands and the Mooloolah River and Sippy Creek riparian corridors;
- (c) builds ecosystem condition, resilience and capacity to evolve and adapt to environmental change including climate change and to absorb impacts resulting from development;
- (d) provides for large areas of un-fragmented land to be set aside for ecological protection and enhancement to sustain plant and animal populations, biological processes and ecosystem viability;
- (e) provides for the protection of protected and threatened communities and species and enhances their habitat, including wildlife corridors and connectivity to improve species recovery;

- (f) protects water quality (including surface water and ground water) within the Mooloolah River and its tributaries and accommodates elements of stormwater conveyance and treatment that are appropriate within an ecological setting;
- (g) provides for the management of threatening processes including impacts from development, climate change, invasive species and edge effects;
- (h) provides for the protection of important landscape and scenic amenity values;
- (i) provides the community with a range of low impact environmental recreation and educational opportunities and outdoor experiences compatible with the protection of ecological values; and
- (j) effectively integrates with the urban open space infrastructure network.

The Palmview Structure Plan identifies parts of the Investigation Area B North, B South, and Area C as Ecologically Important Areas on *Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas)* of the Palmview Structure Plan which is included in the Environmental protection and Enhancement Sub-precinct of the Non-urban Open Space precinct on *Other Plans Map OPM P6 (Palmview Master Planned Area Precincts and Sub-precincts)* of the Palmview Structure Plan.

Parts of Investigation Area B North, B South and Investigation Area C are identified on *Other Plans Map OPM P2(a) (Palmview Master Planned Area Flood Prone Land)* of the Palmview Structure Plan as land inundated by the defined flood event which is not suitable to be filled for inclusion as land for urban purposes.

Investigation Area B North, B South and Area C are identified as part of the land requirement of 483.4 hectares for ecological and landscape protection and rehabilitation landscape as specified on *Other Plans Map OPM P12 (Palmview Master Planned Area Non-urban Open Space infrastructure network)*.

The Palmview Structure Plan identifies the following uses (not exhaustive) as consistent uses requiring Code Assessment within the Mixed Density, Medium Density, or District Activity Centre Precincts: -

- Mixed Density Precinct – Community Use, Emergency Services, Retirement Village
- Medium Density Precinct - Community Use, Emergency Services, Retirement Village
- District Activity Centre precinct – Educational Facility

## Appendix 4 – DEHP report

# Palmview Infrastructure Agreement – potential Urban Development Areas

EHP comments on ecosystem values.

## Contents

Overall summary.....	2
Area B North .....	2
EHP Comment.....	2
State Biodiversity Values .....	2
Species within proximity of area .....	3
Area B South.....	4
EHP Comment.....	4
State Biodiversity Values .....	4
Species within proximity of area .....	4
Area C.....	5
EHP Comment.....	5
State Biodiversity Values .....	5
Species within proximity of area .....	6
Area not subject to IA .....	7
EHP Comment.....	7
State Biodiversity Values .....	7
Species within proximity of area .....	7

## Overall summary

The three potential development areas contain many high biodiversity and conservation values that are considered important at a State level.

However, of the three potential development areas, EHP supports limited development within the western portion of Area B North. However, the eastern portion should remain zoned for Environment Open Space for bolstering the connections between remnant patches and larger areas of conservation.

All other potential development areas (Area B South, Area C) should remain for conservation purposes under the Structure Plan, as the biodiversity value of each area is too high.

## Area B North

### EHP Comment

Area B North contains values for rehabilitation and connectivity. This is because it is within proximity large areas of conservation including Mooloolah River National Park and adjacent to SCC Environmental Park. It provides linkage to patches of remnant vegetation located north and south. Area B North is also within the draft Shaping SEQ Regional Corridors.

From observation of latest imagery, it appears that works have already begun to occur in the western section of Area B North. However, species are still recorded within this area and development should consider allowing for species movement.

EHP recommends that the eastern portion of Area B North (roughly indicated below) be retained as Environmental Open Space under the Palmview Structure Plan. Rehabilitation works should occur to restore linkages and support the adjacent areas of conservation. Development in the western portion of Area B North should be limited, especially within proximity to the remnant vegetation.



## State Biodiversity Values

- Potential to restore 'Woodland and open Forest' Preclear Regional ecosystems
- Within a Biodiversity Planning Assessment corridor (BAMM)-non-remnant
- Within SEQ Regional Corridors within urban footprints



Matters of State Environmental significance (MSES):

Wildlife habitat (threatened and special least concern animal)

Additional MSES under the Environmental Offsets Act 2014:

Flora survey trigger (high risk area)

**Species within proximity of area**

Scientific	Common	Class	Order	Family	NCA_ST AT	EPBC _STAT
<b>Acacia attenuata</b>		Rosopsida	Fabales	Mimosaceae	V	V
<b>Acacia baueri subsp. baueri</b>	tiny wattle	Rosopsida	Fabales	Mimosaceae	V	
<b>Adelotus brevis</b>	tusked frog	Amphibia	Anura	Limnodynastidae	V	
<b>Blandfordia grandiflora</b>	christmas bells	Liliopsida	Liliales	Blandfordiaceae	E	
<b>Eucalyptus conglomerata</b>	swamp stringybark	Rosopsida	Myrtales	Myrtaceae	E	E
<b>Rhipidura rufifrons</b>	rufous fantail	Aves	Passeriformes	Rhipiduridae	SL	
<b>Monarcha melanopsis</b>	black-faced monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Symposiarchus trivirgatus</b>	spectacled monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Pandion cristatus</b>	eastern osprey	Aves	Falconiformes	Accipitridae	SL	
<b>Cuculus optatus</b>	oriental cuckoo	Aves	Cuculiformes	Cuculidae	SL	
<b>Gallinago hardwickii</b>	Latham's snipe	Aves	Charadriiformes	Scolopacidae	SL	
<b>Hirundapus caudacutus</b>	white-throated needletail	Aves	Apodiformes	Apodidae	SL	

## Area B South

### EHP Comment

Area B contains over 90% of intact remnant regional ecosystems, including a large portion of heath community. It has a diverse number of threatened species and many MSES values. The intactness of Area B South allows for local species to thrive and to connect between similar habitats.

EHP does not support the development option proposal to offset the intact Heath vegetation using a translocation method (Area B submission). The existing heath is already a source habitat for endangered or vulnerable species. Heath vegetation is naturally nutrient poor and translocation methods do not seem capable to maintain a functioning ecosystem.

EHP does not support further development within Area B South. Additionally, for Area B South to remain ecologically viable, the adjoining Area C should also be retained to connect Area B South to larger regional habitats via the creek.

### State Biodiversity Values

- Matters of Ste Environmental significance (MSES):
- Wildlife habitat (threatened and special least concern animal)
- High ecological significance wetlands
- Regulated vegetation (essential habitat)
- Regulated vegetation (100m from wetland)
- Additional MSES under the Environmental Offsets Act 2014:
- Koala bushland habitat (SPRP area)
- Flora survey trigger (high risk area)
- Remnant Regional ecosystems
- Woodland and open forests (12.3.5)
- Heaths (12.3.13)
- Supports contiguous 14 hectare patch
- BAMM BPA high values:
- Contains Special Biodiversity Values (CRITERIA I)
- contains Core Habitat for Priority Taxa (CRITERIA H)
- AquaBAMM ACA high values:
- Wetland naturalness
- Wetland species diversity and richness
- Threatened and Priority species
- Special features:
- Gallery rainforest riverine
- Coastal wetland
- Connectivity
- SEQ Regional Biodiversity Values within Urban Areas (remnant or regrowth):
- Species diversity and richness
- Climate areas
- Unique ecosystems

### Species within proximity of area

Scientific	Common	Class	Order	Family	NCA_ST AT	EPBC_ST AT
<b>Acacia attenuata</b>		Rosopsi da	Fabales	Mimosaceae	V	V

<b>Adelotus brevis</b>	tusked frog	Amphibia	Anura	Limnodynastidae	V	
<b>Blandfordia grandiflora</b>	christmas bells	Liliopsida	Liliales	Blandfordiaceae	E	
<b>Rhipidura rufifrons</b>	rufous fantail	Aves	Passeriformes	Rhipiduridae	SL	
<b>Monarcha melanopsis</b>	black-faced monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Symposiachrus trivirgatus</b>	spectacled monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Cuculus optatus</b>	oriental cuckoo	Aves	Cuculiformes	Cuculidae	SL	
<b>Hirundapus caudacutus</b>	white-throated needletail	Aves	Apodiformes	Apodidae	SL	

## Area C

### EHP Comment

Area C contains mixed land uses under the Palmview Structure Plan for both conservation and recreational purposes. The remnant vegetation in Area C provides an important link providing connectivity from Area B South to the adjoining habitat along the creek in the south. Area C also contains many MSES values in Regulated Vegetation and significant wetlands

EHP does not support further development within Area C, but support the existing mixed recreation use within the area. EHP recommend the current zoned land uses under the Palmview Structure Plan are retained.

### State Biodiversity Values

Matters of State Environmental significance (MSES):  
 Wildlife habitat (threatened and special least concern animal)  
 High ecological significance wetlands  
 Regulated vegetation (essential habitat)  
 Regulated vegetation (100m from wetland)  
 Regulated vegetation (defined watercourse)  
 Additional MSES under the Environmental Offsets Act 2014:  
 Koala bushland habitat (SPRP area)  
 Flora survey trigger (high risk area)  
 Fish waterways for barrier works (stream)  
 Remnant Regional ecosystems  
 Woodland and open forests (12.3.5)  
 Supports contiguous 14 hectare patch  
 BAMB BPA high values:  
 contains Core Habitat for Priority Taxa (CRITERIA H)  
 forms part of a bioregional corridor (CRITERIA J)  
 AquaBAMB ACA high values:  
 Wetland naturalness  
 Wetland species diversity and richness  
 Threatened and Priority species  
 Special features:

Gallery rainforest riverine  
 Coastal wetland  
 Connectivity  
 Wetland representativeness  
 SEQ Regional Biodiversity Values within Urban Areas (remnant or regrowth):  
 Species diversity and richness  
 Climate areas  
 Unique ecosystems  
 Terrestrial connectivity

**Species within proximity of area**

Scientific	Common	Class	Order	Family	NCA_ST AT	EPBC_ST AT
<b>Acacia attenuata</b>		Rosopsida	Fabales	Mimosaceae	V	V
<b>Adelotus brevis</b>	tusked frog	Amphibia	Anura	Limnodynastidae	V	
<b>Blandfordia grandiflora</b>	christmas bells	Liliopsida	Liliales	Blandfordiaceae	E	
<b>Rhipidura rufifrons</b>	rufous fantail	Aves	Passeriformes	Rhipiduridae	SL	
<b>Monarcha melanopsis</b>	black-faced monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Symposiachrus trivirgatus</b>	spectacled monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Cuculus optatus</b>	oriental cuckoo	Aves	Cuculiformes	Cuculidae	SL	
<b>Hirundapus caudacutus</b>	white-throated needletail	Aves	Apodiformes	Apodidae	SL	

## Area not subject to IA

### EHP Comment

Whilst this Infrastructure Agreement area is not considered with the above, EHP stresses its importance and for its continuation as conservation.

The area connects to a very large remnant patch of 940 hectares, which links all the way to Mooloolah River National Park.

The Area contains numerous very high biodiversity values which add to habitat and ecosystem function. This ecological function of this area would be supported if parts of Area B North are also retained for conservation land use.

### State Biodiversity Values

Matters of Ste Environmental significance (MSES):

Wildlife habitat (threatened and special least concern animal)

High ecological significance wetlands

Regulated vegetation (essential habitat)

Regulated vegetation (100m from wetland)

Regulated vegetation (defined watercourse)

Additional MSES under the Environmental Offsets Act 2014:

Koala bushland habitat (SPRP area)

Flora survey trigger (high risk area)

Fish waterways for barrier works (stream)

Remnant Regional ecosystems

Woodland and open forests (12.9-10.14, 12.3.5)

Heaths (12.3.13)

Supports contiguous 940 hectare patch

BAMM BPA high values:

contains Core Habitat for Priority Taxa (CRITERIA H)

forms part of a bioregional corridor (CRITERIA J)

contains at least 1 Endangered or 2 Vulnerable or Near Threatened species (A)

AquaBAMM ACA high values:

Wetland naturalness

Wetland species diversity and richness

Threatened and Priority species

Special features:

Gallery rainforest riverine

Coastal wetland

Connectivity

Wetland representativeness

SEQ Regional Biodiversity Values within Urban Areas (remnant or regrowth):

Aquatic connectivity

### Species within proximity of area

Scientific	Common	Class	Order	Family	NCA_ST AT	EPBC_ST AT
<b>Acacia attenuata</b>		Rosopsida	Fabales	Mimosaceae	V	V

<b>Adelotus brevis</b>	tusked frog	Amphibia	Anura	Limnodynastidae	V	
<b>Blandfordia grandiflora</b>	christmas bells	Liliopsida	Liliales	Blandfordiaceae	E	
<b>Rhipidura rufifrons</b>	rufous fantail	Aves	Passeriformes	Rhipiduridae	SL	
<b>Monarcha melanopsis</b>	black-faced monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Symposiachrus trivirgatus</b>	spectacled monarch	Aves	Passeriformes	Monarchidae	SL	
<b>Pandion cristatus</b>	eastern osprey	Aves	Falconiformes	Accipitridae	SL	
<b>Cuculus optatus</b>	oriental cuckoo	Aves	Cuculiformes	Cuculidae	SL	
<b>Hirundapus caudacutus</b>	white-throated needletail	Aves	Apodiformes	Apodidae	SL	