

Our Ref:  
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**Final Assessment Report – Urban Development  
Investigation under the *Palmview Structure Plan  
Area Infrastructure Agreement 2010 (Consolidation  
No. 2)***

**Sunshine Coast Regional Council**

**3 June 2019**

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## Part A Background

### 1. Executive Summary

Council undertook the master planning for Palmview in order to seek to achieve 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, 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 along with consideration of community needs and wider community benefits.

This master planning resulted in the Landowners receiving development entitlements over previously rural land and a requirement for them to deliver infrastructure obligations including the dedication of 615 hectares of land for environmental protection and rehabilitation (subsequently renegotiated to 483.4 hectares).

During the renegotiation of the *Palmview Structure Plan Area Infrastructure Agreement 2010* in 2015, Landowner B and Landowner 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 assessments/modelling to be inaccurate.

#### Process

The Urban Development Investigation Area Process (**Figure 1** Urban Development Investigation Area Process) required the Landowners to provide Council with evidence confirming or rejecting the ecological flooding constraints on the sites identified as the Urban Development Investigation Areas in the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No 2)* (**Palmview IA**).

#### 1.1. Final Determination

In making its Final Determination, Council has considered the relevant material listed in **Attachment 1**, but in particular:

- (a) Urban Development Investigation Material Results;
- (b) Further Information;
- (c) State government ecologically important areas assessment;
- (d) Draft Assessment Report and Draft Determination;
- (e) Submissions in respect of the Draft Determination;
- (f) Representations in respect of the Draft Determination;
- (g) Supplementary Information;
- (h) Peer Review Reports; and
- (i) Representations to Peer Review Reports

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The Final Determination requires the following questions to be answered:

- (a) **Is all or part of the relevant Investigation Area suitable for urban development in the Structure Plan Area?**

This question is to be answered by reference to Special Condition 2.2 of the Palmview IA (refer to section 6.9.2 of this report).

- (b) **What necessary infrastructure is required to be provided by the relevant Landowner to service the land for urban development?**

This question is to be answered by reference to the Palmview Structure Plan (refer to section 6.9.2 of this report).

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

### **1.2. Investigation Area B (North) Assessment**

#### **1.2.1. Land suitable for urban development for the Investigation Area B (North)**

- (a) In respect of whether Investigation Area B (North) is an ecologically important area under Special Condition 2.2(a) of the Palmview IA, Council considers the portion of Investigation Area B (North) west of the existing drainage channel shown as suitable for urban purposes on **Figure 26** (approximately 2.77 hectares) is land suitable for urban development subject to the following requirements:
- (i) provision of a 100m buffer to the remnant vegetation in the north-western corner of the site;
  - (ii) provision of a minimum 100m buffer along the full extent of Sippy Creek;
  - (iii) no conveyance channel is located within the 100m buffers;
  - (iv) all sediment and erosion control, bio-basins and similar infrastructure are to be provided within the area identified as suitable for urban purposes, including any diversion drains, temporary sediment basins and silt fences;
  - (v) buffering of the existing drainage channel in the middle of the site and the rehabilitation of all land to the east of the drainage channel;
  - (vi) development is limited such that there is no requirement for a road connection (emergency or other) through to Claymore Road on the eastern boundary.
  - (vii) any road does not go further east than the existing drainage channel and provides frontage to the State Significant Vegetation in the north-western corner of the site;
  - (viii) development should be limited to uses compatible recreation uses where consistent with the primary function of the ecologically important areas;
  - (ix) any lighting is designed to reduce light spillage into adjoining habitats.
- (b) In respect of whether Investigation Area B (North) is a flood hazard under Special Condition 2.2(b) of the Palmview IA, Investigation Area B (North) is flood prone land. Council has determined that it should not be incorporated in the land suitable for urban development as it does not satisfy the overriding need in the public interest as it would result in material adverse offsite impacts, it would not result in a significant overall benefit for a significant part of the community and any proposed benefit can otherwise be satisfied by other land that is suitable and reasonably available.

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

### **1.2.2. Necessary infrastructure to service the land for urban development for Investigation Area B (North)**

Council has assessed the necessary infrastructure to service the land for urban development, which is discussed in section 11 of this report. Such assessment is however irrelevant as Council has determined that no land in Investigation Area B (North) is suitable for urban development,

### **1.2.3. Council findings**

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

## **1.3. Investigation Area B (South)**

### **1.3.1. Land suitable for urban development for Investigation Area B (South)**

- (a) In respect of whether Investigation Area B (South) is an ecologically important area under Special Condition 2.2(a) of the Palmview IA, Council considers all of Investigation Area B (South) as identified in the Landowner Submission to be an ecologically important area and not suitable for urban development.
- (b) Council has considered the translocation proposal submitted by the Landowner even though it is not required to be considered under Special Condition 2 of the Palmview IA. Council officers have determined that it does not provide a superior ecological outcome and do not support the proposal.
- (c) Council has determined that Investigation Area B (South) is predominantly flood prone land and that the portion of the site that is not flood prone land is an ecologically important area.
- (d) Council therefore does not consider Investigation Area B (South) suitable for urban development.

### **1.3.2. Necessary infrastructure to service the land for urban development for Investigation Area B (South)**

Council has made no findings in respect of the provision of necessary infrastructure to service Investigation Area B (South) for urban development as Council has determined that it is not suitable for urban development.

### **1.3.3. Council findings for Investigation Area B (South)**

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

## **1.4. Investigation Area C**

### **1.4.1. Land suitable for urban development for Investigation Area C**

- (a) There is an area that is not identified as an ecologically important area and which is not identified as a flood hazard area and is therefore suitable for urban development under the Palmview IA.
- (b) This area will need to be modified to ensure that the flood impacts currently identified on the boundary of the site are eliminated and that any impacts associated with urban stormwater runoff are managed within the development footprint.

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**1.4.2. Necessary infrastructure to service the land for urban development Investigation Area  
C**

- (a) Council has assessed the necessary infrastructure to service the land for urban development.
- (b) Such assessment has determined that the necessary infrastructure that is particularly relevant to Investigation Area C includes the non-urban open space infrastructure as specified in section 23.3, and results in an area of approximately 0.49 hectares which could be considered for urban development (subject to the provision of other necessary infrastructure).



# Final Assessment Report – Urban Development Investigation under the Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2)

## Consideration of an Urban Development Investigation

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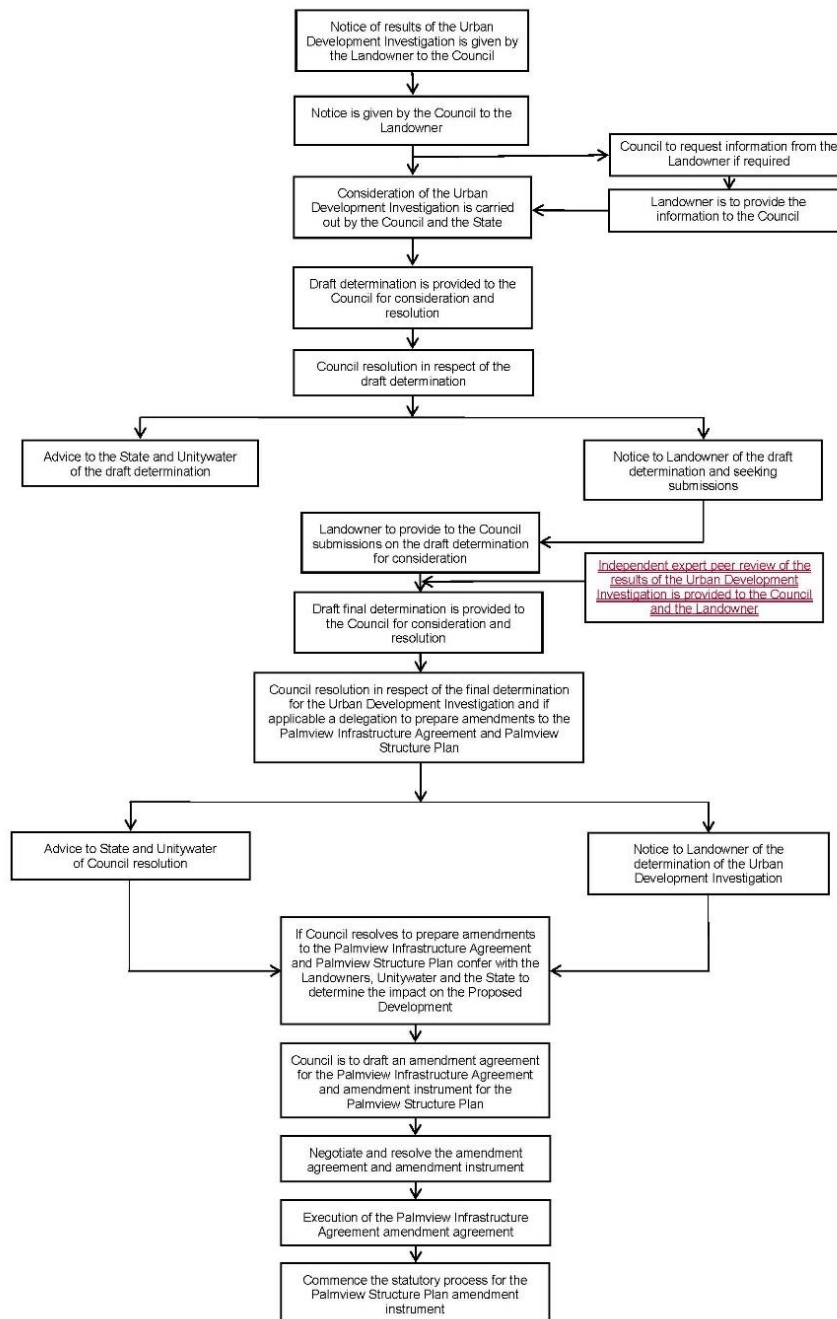


Figure 1 Urban Development Investigation Area Process

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## **2. Purpose**

The purpose of this Final Assessment Report is to provide a reason for Council's determination under Special Condition 2.3(c)(i) of the Palmview IA, as required under Special Condition 2.3(c)(ii) of the Palmview IA.

## **3. Palmview Structure Plan**

### **3.1. Structure Plan Area**

The Palmview Structure Plan Area was declared a master planned area on 18 December 2009.

### **3.2. Relationship to Planning Scheme**

- (a) The Palmview Structure Plan is a structure plan for the Palmview Structure Plan Area which was incorporated into the *Sunshine Coast Planning Scheme* under section 761 of the now repealed *Sustainable Planning Act 2009 (SPA)*
- (b) The provisions of the Palmview Structure Plan prevail over the other provisions of the *Sunshine Coast Planning Scheme* to the extent of any inconsistency.

## **4. Palmview Infrastructure Agreement**

### **4.1. Parties**

The relevant parties to the Palmview IA are as follows:

- (a) Council;
- (b) Northern SEQ Distributor-Retailer Authority, trading as Unitywater;
- (c) Avid Residential Group Pty Ltd (Landowner A), being the owner of land being Lot 1 to 3 on RP165741, Lot 345 on CG5011, Lot 5 on SP222989 and Lot 801 on SP230635 (Area A);
- (d) LCA Palmview Pty Ltd (Landowner B), being the owner of land being Lot 201 on SP287474 and Lot 347 on SP287466 (Area B); and
- (e) Gerard Joseph McCafferty (Landowner C), being the owner of land being part of Lot 2 on SP288657 (Area C).

### **4.2. Recitals**

The Recitals in the Palmview IA relevantly state as follows:

*"This document has been entered into for the following purposes:*

- (a) *The Council is the Local Government under the Local Government Act for the Planning Scheme Area under the Planning Act, which has made Local Planning Instruments for its Planning Scheme Area that include the following:*
  - (i) *the Structure Plan and Structure Plan Planning Scheme Policy which apply to the Structure Plan Area that relevantly provides for the Development Entitlements for the Structure Plan Area and each Landowner's Area;*
  - (ii) *an Infrastructure Planning Instrument which relevantly provides that the Council as an Infrastructure Authority has not planned to provide development infrastructure to service the Development Entitlements for the Structure Plan Area;*

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- (iii) *an Infrastructure Charging Instrument which relevantly provides for the levying of an Infrastructure Charge for development infrastructure;*
- (b) *Unitywater is the distributor-retailer for its geographic area under the SEQ Water Act which has made a Netserv Plan for its geographic area that relevantly provides that Unitywater as an Infrastructure Authority has not planned to provide Water Infrastructure to service the Development Entitlements for the Structure Plan Area;*
- (c) *the Landowners are the owners of their respective Areas of the Development Land which is situated in the Structure Plan Area of the Planning Scheme Area of the Council and the geographic area of Unitywater;*
- (d) *the Landowners propose that their respective Areas of the Development Land be Developed in accordance with the Development Entitlements and have provide the Council and Unitywater with their Proposed Development of the Development Land and their Area to enable the Council and Unitywater to determine the Development Infrastructure and Water Infrastructure respectively which is required to service the Proposed Development of the Development Land and their Area;*
- (e) *the Council acting in the overall public interest of its Local Government Area and Unitywater acting in the public interest of its geographic area, are concerned to ensure that the Landowners provide the Development Infrastructure and Water Infrastructure required to service the Proposed Development of the Development Land and their Area;*
- (f) *the Council has amended the Structure Plan and Structure Plan Planning Scheme Policy to identify the Development Infrastructure and Water Infrastructure required to service the Proposed Development of the Development Land and each Landowner's Area;*
- (g) *the Landowners have agreed under this document to perform and fulfil Development Obligations for the Proposed Development of the Development Land and their Area;*
- (h) *the Development Obligations require infrastructure to be provided before or as part of the Proposed Development of the Development Land and their Area;*
- (i) *the Development Obligations are intended to correlate with the Proposed Development of the Development Land and their Area."*

### **4.3. Relationship to Structure Plan**

- (a) The Palmview IA is an applicable infrastructure arrangement for the purposes of the Palmview Structure Plan.
- (b) The Palmview IA prevails if a Development Obligation, being an obligation to be performed and fulfilled by a Landowner, is inconsistent with, relevantly, the Palmview Structure Plan.

### **4.4. Development Obligations and Development Entitlements**

- (a) The Palmview IA states Development Obligations.
- (b) Development Obligations are the obligations to be performed and fulfilled by a Landowner.
- (c) The Palmview Structure Plan states Development Entitlements.
- (d) Development Entitlements are the entitlements for Development, which has the meaning under the SPA being the relevant Act at the time the Palmview IA commenced, under the Palmview Structure Plan.

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### **4.5. Infrastructure Contribution Schedule**

- (a) The Palmview IA contains an Infrastructure Contribution Schedule.
- (b) The Infrastructure Contribution Schedule is a schedule of contributions for infrastructure to be provided by the parties to the Palmview IA when the Palmview Structure Plan takes effect, being either a financial contribution, land contribution, work contribution or a mixed contribution, in relation to the Palmview Structure Plan Area.
- (c) The Infrastructure Contribution Schedule states the following:
  - (i) the Infrastructure Contribution to be provided;
  - (ii) any relevant specification of the Infrastructure Contribution;
  - (iii) the timing of the Infrastructure Contribution;
  - (iv) the party responsible for the Infrastructure Contribution;
  - (v) any other requirements.

### **4.6. Special Conditions**

- (a) The Palmview IA contains Special Conditions.
- (b) The parties to the Palmview IA are to comply with the Special Conditions when the Palmview Structure Plan takes effect.

### **4.7. Relevant Special Conditions**

- (a) Special Condition 2 is in respect of the Urban Development Investigation.
- (b) Special Condition 2 states the requirements for an investigation for parts of Area B (**Investigation Area B**) and Area C (**Investigation Area C**) specified on Drawing 6 (Urban Development Investigation Area) of the Palmview IA (**Investigation Areas**).
- (c) Special Condition 2.1 relevantly states as follows:

#### **"2.1 Urban Development Investigation Areas**

- (A) *Landowner B and Landowner C propose to carry out separate or combined investigations for parts of Area B (**Investigation Area B**) and Area C (**Investigation Area C**) respectively, in the Structure Plan Area specified on Drawing 6 (**Urban Development Investigation Area**), to determine whether the relevant investigation area is land suitable for urban development in the Structure Plan Area (**Urban Development Investigation**).*

- (d) Special Condition 2.3 relevantly states as follows:

#### **"2.3 Urban Development Investigation**

- (A) *Landowner B and Landowner C are to, within 12 months of the Proposed Planning Scheme Amendment taking effect, each give to the Council 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.*
- (B) ...

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- (C) *If Landowner B or Landowner C complies with paragraph (a), the Council is to:*
  - (i) *determine as soon as reasonably practicable whether it is satisfied that all or part of the relevant Urban Development Investigation Area is land suitable for urban development in the Structure Plan Area subject to the provision by the relevant Landowner of necessary infrastructure to service the land for urban development at no cost to the Infrastructure Authorities; and*
  - (ii) *provide a reason for its determination."*
- (e) Special Condition 2.1 and Special Condition 2.3 therefore relevantly require the following:
  - (i) Landowner B and Landowner C carry out separate or combined investigations of Investigation Area B and Investigation Area C to determine whether the relevant investigation area is land suitable for urban development in the Structure Plan Area (see Special Condition 2.1(a));
  - (ii) Landowner B and Landowner C are to each give to Council 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 within the stated time frame (see Special Condition 2.3(a));
  - (iii) after Landowner B and Landowner C give to Council a Notice under Special Condition 2.3(a), Council is required to make the determination under Special Condition 2.3(c)(i) (**Final Determination**).

The requirements for the Final Determination are discussed in more detail in section 6.9 of this Final Assessment Report.

### **5. Urban Development Investigation Areas**

#### **5.1. Context**

- (a) During the renegotiation of the *Palmview Structure Plan Infrastructure Agreement 2010* in 2015, Landowner B and Landowner 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 assessments/modelling to be inaccurate.

This was despite the Landowners acknowledging (Special Condition 2.1(b)(ii) of the Palmview IA) that based on previous investigations, Council considered the Urban Development Investigation Areas not to be suitable for urban development.
- (b) Under the Palmview Structure Plan, the three Investigation Areas (being Investigation Area B (North), Investigation Area B (South) and Investigation Area C (**Figure 2 & Figure 3**)) are intended to be dedicated to Council for protection and enhancement of ecological and landscape values. These areas are to provide for the protection, rehabilitation, buffering and reconnection of native remnant and regrowth vegetation, wetlands, waterways and other ecologically important areas in nature conservation or other protective tenure.
- (c) Under the Palmview Structure Plan it is intended that a limited range of environmentally compatible uses and activities could occur where compatible with the primary function in these areas including recreation trails and associated amenities.

# Final Assessment Report – Urban Development Investigation under the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2)*

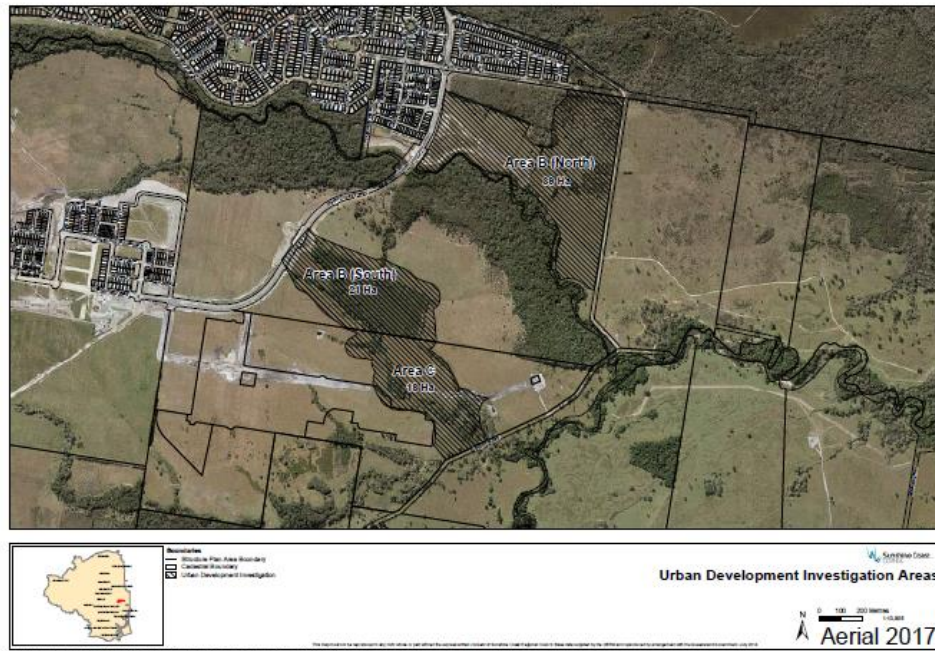


Figure 2 Palmview Structure Plan Urban Development Investigation Areas

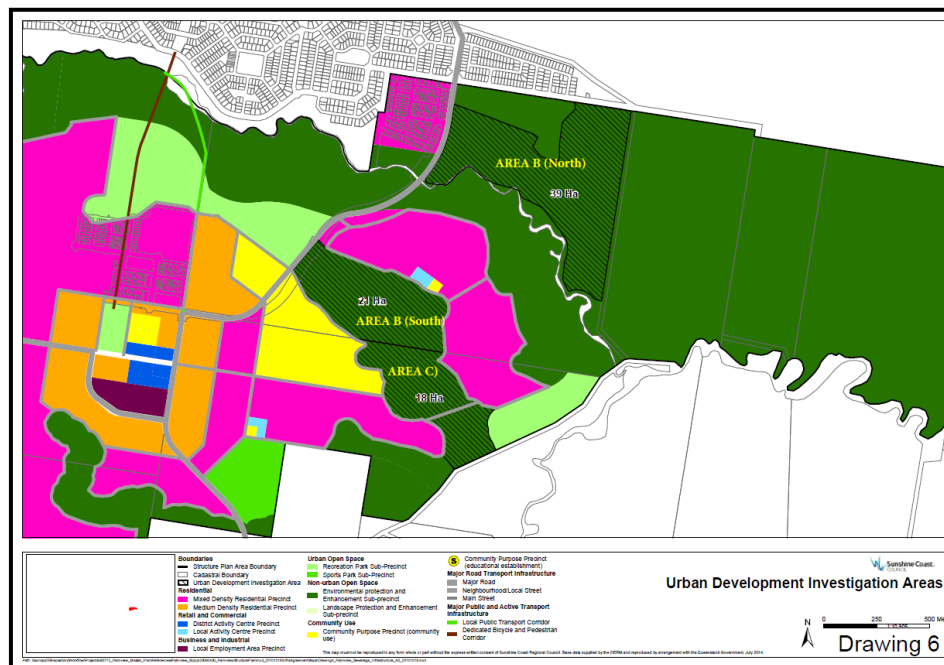


Figure 3 Palmview Structure Plan Area & Urban Development Investigation Areas

## 5.2. Investigation Area B (North)

- (a) Investigation Area B (North) is located on part of Lot 201 on SP287474, Cavalry Road, Sippy Downs and covers a total area of 39.6 hectares (**Figure 4**). Investigation Area B (North) is bordered by remnant native vegetation to the north and south, and the Lower Mooloolah Environmental Reserve to the east. The Peter Crosby Way borders the western end and Mooloolah River National Park borders the north-eastern corner boundary.



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Figure 4 Investigation Area B (North)

- (b) The total area of Investigation Area B (North) is 39.6 hectares. The Landowner submits that 13 hectares of the land is suitable for urban development, or 28.8 hectares if the proposed flood conveyance channel is included.
- (c) Other Plans Map OPM P2(a) of the Palmview Structure Plan maps (**Figure 5**) identifies all of Investigation Area B (North) as being an area inundated by the Defined Flood Event (DFE). This definition does not include land inundated in the Probable Maximum Flood (PMF).

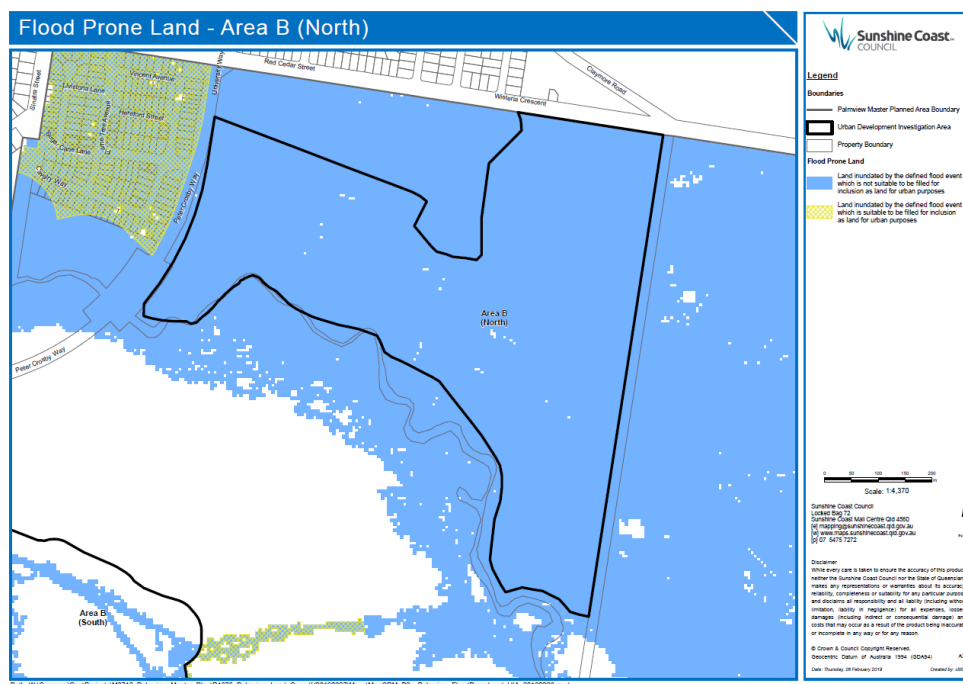
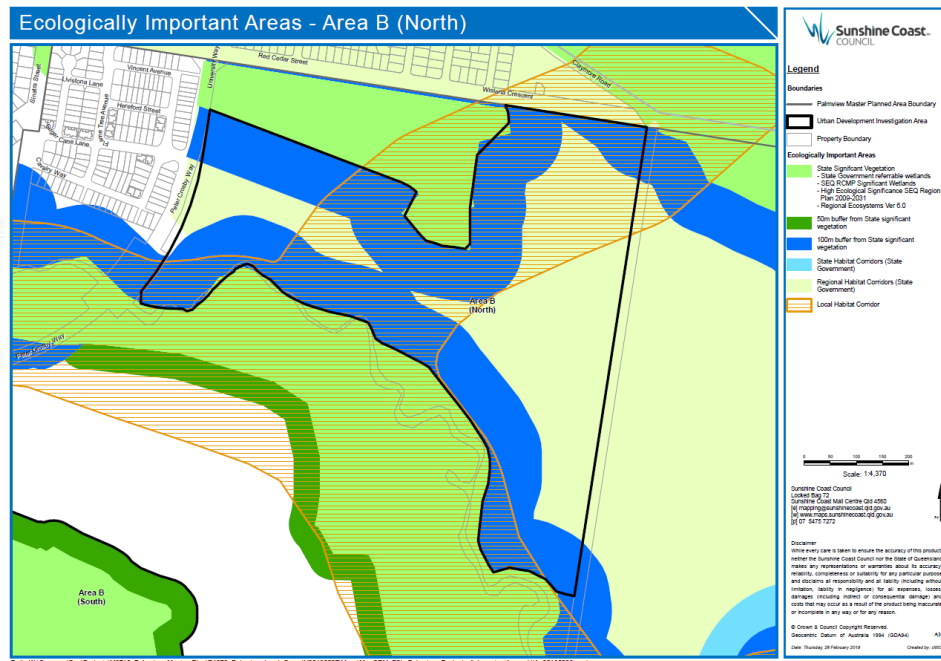


Figure 5 OPM Map 2(a) Flood Prone Land Investigation Area B (North)

## Final Assessment Report – Urban Development Investigation under the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2)*

- (d) Other Plans Map OPM P2(b) of the Palmview Structure Plan maps all of Investigation Area B (North) as being an ecologically important area, being mapped as either State Significant Vegetation, Regional Habitat Corridors (State Government), a Local Habitat Corridor or a 100m buffer from State Significant Vegetation (**Figure 6**).



**Figure 6 OPM Map 2(b) Ecologically Important Areas Investigation Area B (North)**

- (e) Landowner B's current concept plan (revised from the original proposal) for the proposed development of Investigation Area B (North) is shown below in **Figure 7**. The proposal includes land for the following:
- a single sporting field with an area of 1.8 hectares;
  - 1.3 hectares of land for Community Facilities including a building/clubhouse (1600 sqm covered and 400sqm building), dog off-leash area (1,372sqm), car parking (2,150sqm) and community square (1,170sqm);
  - a financial contribution of \$2.5 million for the construction of playing fields, the community building and community gardens or an offer for the Landowner to construct the playing fields, building and gardens;
  - a community use precinct, being 8.3 hectares of land for school or retirement living, which is proposed to be revenue generating;
  - an ecological corridor, being 100m wide along the eastern boundary;
  - a flood conveyance channel covering an area of 15.8 hectares and up to 4m deep in some parts and located entirely within the environmental buffer; and
  - an access road (1.6 hectares).



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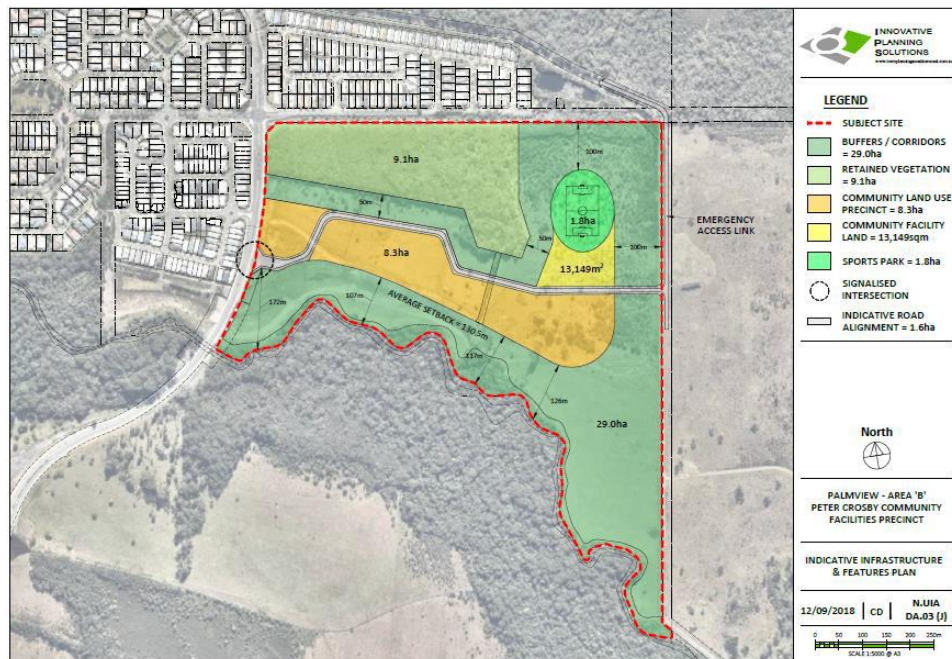


Figure 7 Investigation Area B (North) Development Proposal

## 5.3. Investigation Area B (South)

- (a) Investigation Area B (South) is located on part of Lot 347 on SP287466, Laxton Road, Palmview and covers a total area of 21.4 hectares (**Figure 8**). Investigation Area B (South) is generally flat land with small waterways or drainage lines, and contains heathland vegetation. Investigation Area B (South) is currently bordered by grazing and vegetated areas, but in future will be bound by Mixed Density Residential development to the east, Environmental Protection and Enhancement to the west and Peter Crosby Way adjoining the north-western portion. Investigation Area C is immediately to the south.

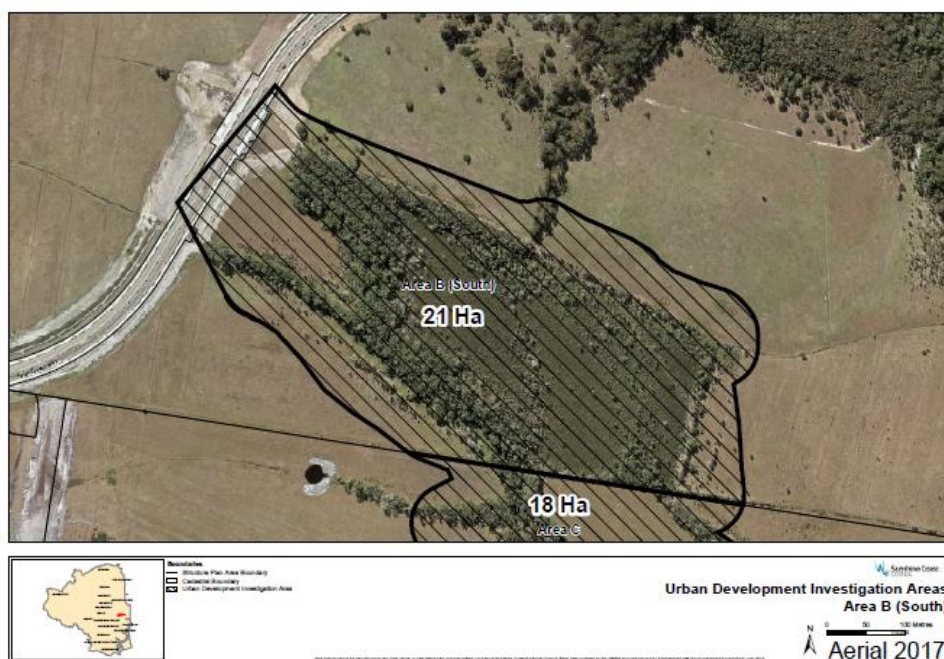
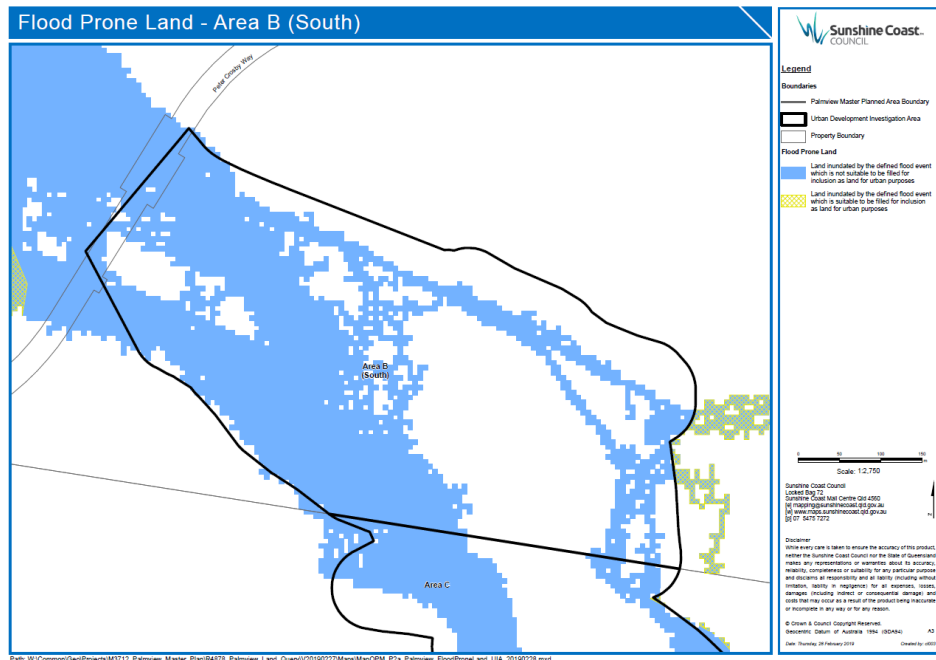


Figure 8 Investigation Area B (South)

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- (b) The total area of Investigation Area B (South) is 21.4 hectares. The Landowner submits that 11.7 hectares of the land is suitable for urban development.
- (c) Other Plans Map OPM P2(a) of the Palmview Structure Plan maps part of Investigation Area B (South) as being an area inundated by the Defined Flood Event (DFE)(**Figure 9**). This definition does not include land inundated in the Probable Maximum Flood (PMF).



**Figure 9 OPM Map 2(a) Flood Prone Land Investigation Area B (South)**

- (d) Other Plans Map OPM P2(b) of the Palmview Structure Plan maps part of Investigation Area B (South) as being an ecologically important area, being mapped as State Significant Vegetation, a 50m buffer from State Significant Vegetation, or a Local Habitat Corridor (**Figure 10**).

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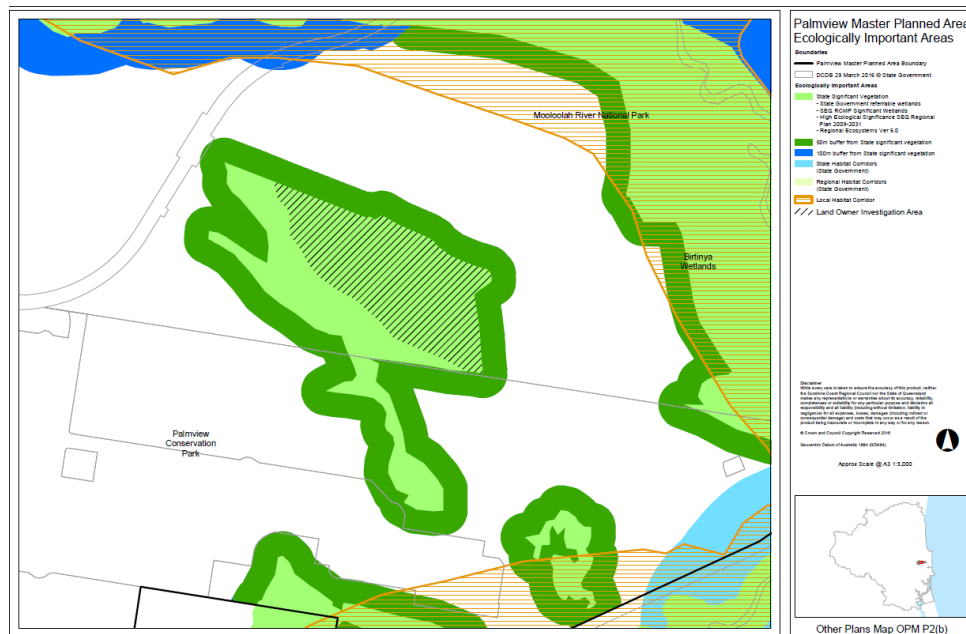


Figure 10 OPM Map 2(b) Ecologically Important Areas Investigation Area B (South)

- (e) Landowner B’s current concept plan (revised from the original proposal) for the proposed development of Investigation Area B (South) is shown as the pink hatched area in **Figure 11** and forms only part of the area identified as Investigation Area B (South). The proposal includes 11.7 hectares of land for residential purposes with an estimated development yield of 200 dwellings and the translocation of up to 10 hectares of State Significant Vegetation.

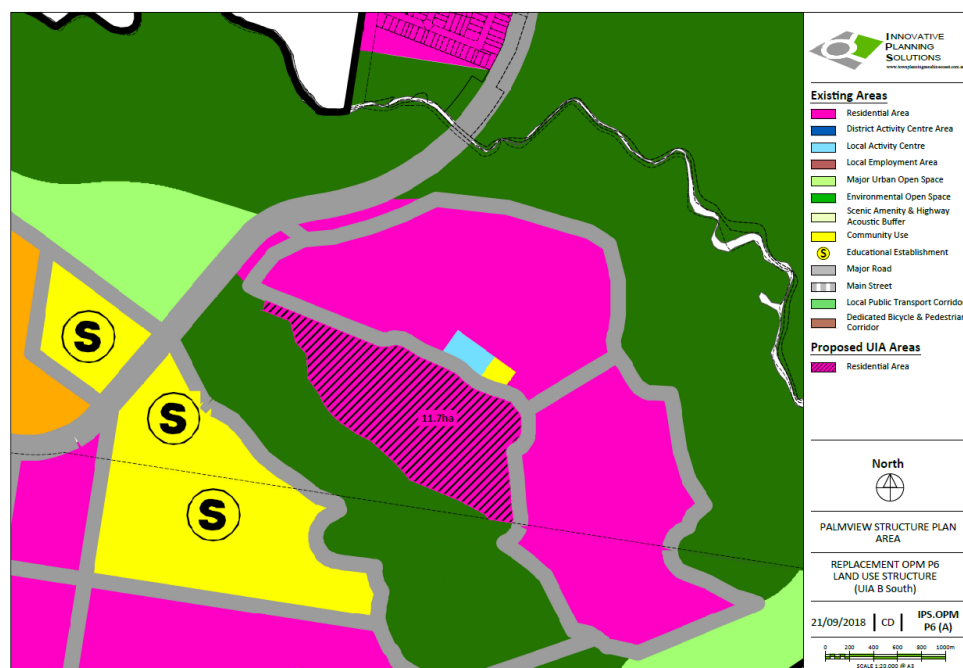


Figure 11 Investigation Area B (South) Proposed Development Area

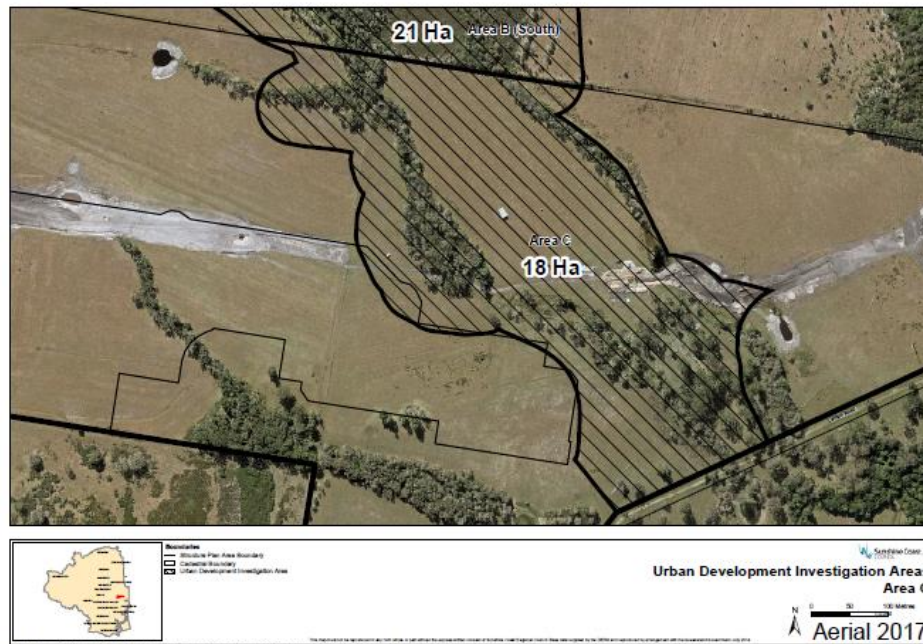
## 5.4. Investigation Area C

- (a) Investigation Area C is located on part of Lot 2 on SP288657, Cavalry Road, Sippy Downs and covers a total area of 18 hectares (**Figure 12**). Investigation Area C is predominantly flat with vegetation primarily along the two flowpaths draining to the Mooloolah River.



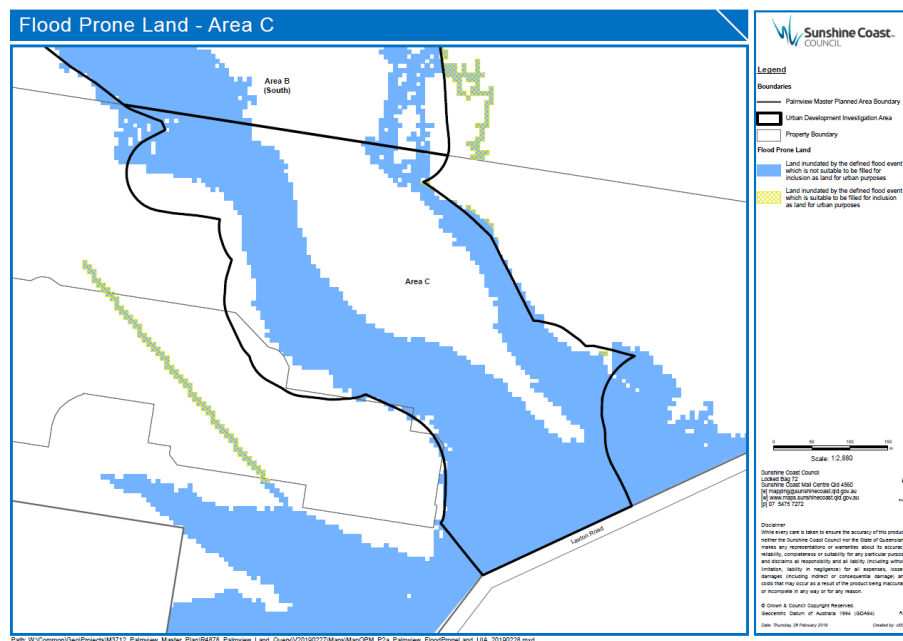
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Investigation Area C is currently bordered by grazing and vegetated areas but in future will be bound by Mixed Density Residential development to the east and Community Purposes Precinct (school) adjoining the majority of the western portion. Investigation Area B (South) is immediately to the north.



**Figure 12 Investigation Area C**

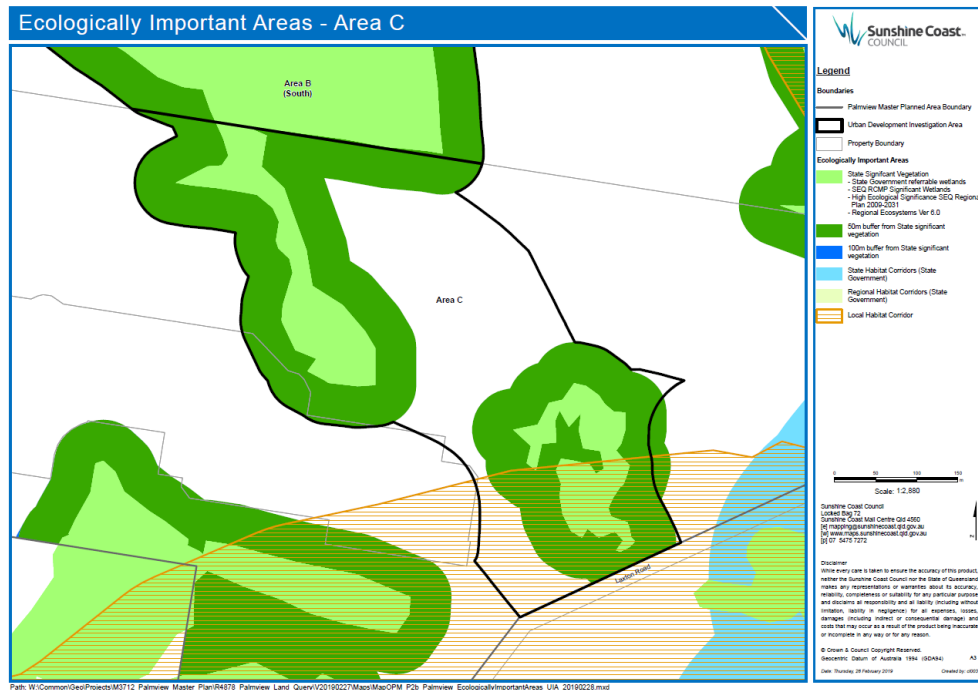
- (b) The total area of Investigation Area C is 18 hectares. The Landowner submits that 2.9 hectares of the land is suitable for urban development.
- (c) Other Plans Map OPM P2(a) of the Palmview Structure Plan maps part of Investigation Area C as being an area inundated by the DFE (Figure 13). This definition does not include land inundated in the PMF.



**Figure 13 OPM Map 2(a) Flood Prone Land Investigation Area C**

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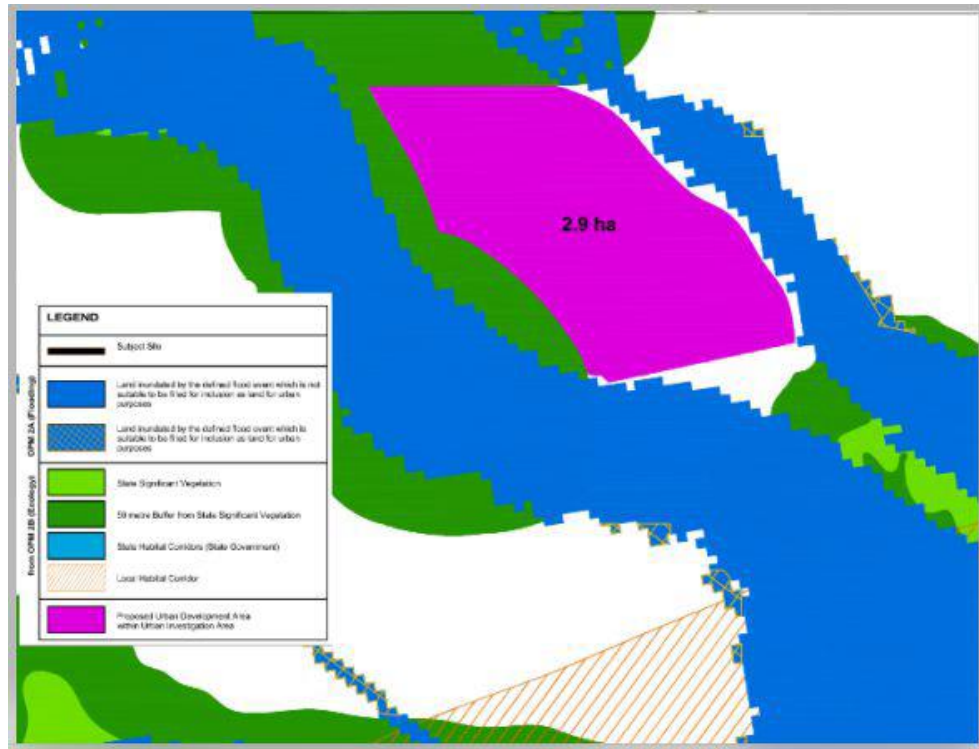
- (d) Other Plans Map OPM P2(b) of the Palmview Structure Plan maps part of Investigation Area C as being an ecologically important area, being identified as either a either State Significant Vegetation, a 50m buffer from State Significant Vegetation, or a Local Habitat Corridor (**Figure 14**).



**Figure 14 OPM Map 2(b) Ecologically Important Areas Investigation Area C**

- (e) Landowner C’s current concept plan (revised from the original proposal) for the proposed development of Investigation Area C is shown below in **Figure 15** and forms only part of the area identified as Investigation Area C. The proposal includes 2.9 hectares of land for residential purposes only, with an estimated development yield of 50-87 dwellings.

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**Figure 15 Investigation Area C Proposed Development Area**

## **6. Urban Development Investigation**

### **6.1. Process**

- (a) Landowner B, Landowner C and Council have acted in accordance with a process for Council's consideration of the Urban Development Investigation, which is stated in a Notice of Prescribed Notification sent to Landowner B and Landowner C on 5 June 2017 and which was subsequently amended following consideration of the Notice by Landowner B and Landowner C.
- (b) The process was subsequently amended on 25 September 2018, as stated in a Notice of Prescribed Notification sent to Landowner B and Landowner C on that date which relevantly included an independent expert peer review of the results of the Urban Development Investigation (**Urban Development Investigation Process**) (**Figure 1**).

### **6.2. Urban Development Investigation Results**

- (a) Landowner B and Landowner C have carried out separate investigations for Investigation Area B (comprising Investigation Area B (North) and Investigation Area B (South)) and Investigation Area C respectively, to determine whether the relevant investigation area is land suitable for urban development in the Palmview Structure Plan Area.
- (b) The relevant details of each Landowners' results and technical basis for the results of the Urban Development Investigation in respect of each Investigation Area (**Urban Development Investigation Results**) are stated in the relevant section for each Investigation Area in this Final Assessment Report.

### **6.3. Further information**

- (a) Council requested further information from each Landowner with respect to the Urban Development Investigation Results (**Further Information Request**).

## **Final Assessment Report – Urban Development Investigation under the *Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2)***

- (b) The Landowners provided a response to the Further Information Request (**Further Information**).
- (c) The relevant details of the Further Information Request and the Further Information are stated in the relevant section for each Investigation Area in this Final Assessment Report.

### **6.4. State government ecologically important area assessment**

The State considered the Urban Development Investigation Results and the Further Information and made a draft determination under Special Condition 2.2(a)(ii) of the Palmview IA.

### **6.5. Draft Assessment Report and Draft Determination**

- (a) Council's draft assessment of the Urban Development Investigation Results and the Further Information is contained in the *Draft Determination of Urban Development Investigation Areas within the Palmview Structure Plan Area* (**Draft Assessment Report**).
- (b) Council passed a resolution in respect of a draft determination on 19 July 2018 (**Draft Determination**), and gave to Landowner B and to Landowner C on 30 July 2018 a Notice of Prescribed Notification regarding the Draft Determination (**Draft Determination Notice**) and the Draft Assessment Report.
- (c) The Draft Assessment Report and Draft Determination were intended to provide the relevant Landowners with notice of the issues identified by Council as a result of Council's initial assessment of the Urban Development Investigation Results and the Further Information, and to enable the relevant Landowners to make a submission on the Draft Assessment Report and Draft Determination before Council prepared this Final Assessment Report and makes the Final Determination.

### **6.6. Submissions**

- (a) The Landowners gave to the Council submissions in respect of the Draft Assessment Report and Draft Determination (**Submissions**) provided in **Attachment 2** in this Final Assessment Report.
- (b) The relevant details of the Submissions are stated in the relevant section for each Investigation Area in this Final Assessment Report.

### **6.7. Peer Review Reports**

- (a) Independent experts appropriately qualified to advise about the flood hazard assessment and the ecology assessment completed an independent expert peer review of the results of the Urban Development Investigation (Peer Review Reports), provided in **Attachment 3** to this Final Assessment Report.
- (b) The relevant details of the Peer Review Reports are stated in the relevant section for each Investigation Area in this Final Assessment Report.
- (c) Council formed the view that it would be reasonable for the Landowners to be given the opportunity to make representations in respect of the Peer Review Reports, although this was not required under the Urban Development Investigation Process or the Palmview IA.
- (d) The relevant details of the representations in respect of the Peer Review Reports are stated in the relevant section for each Investigation Area in this Final Assessment Report and provided in **Attachment 4** in this Final Assessment Report, along with Council's response to those representations provided in **Attachment 5**.

## **Final Assessment Report – Urban Development Investigation under the Palmview Structure Plan Area Infrastructure Agreement 2010 (Consolidation No. 2)**

### **6.8. Consultation and representations**

- (a) Council has received representations from interested parties with respect to the Urban Development Investigation, although this was not required under the Urban Development Investigation Process or the Palmview IA.
- (b) The relevant details of the representations are provided in **Attachment 6** in this Final Assessment Report.
- (c) Council has also given the Landowners the opportunity to present to Council with respect to the Urban Development Investigation and has attended workshops with the Landowners with respect to the Urban Development Investigation, although this was also not required under the Urban Development Investigation Process or the Palmview IA.
- (d) The relevant details of the consultation with Landowners are stated in the Consultation Report provided in **Attachment 6** in this Final Assessment Report.

### **6.9. Final Determination**

#### **6.9.1. Special Condition 2.3(c)(i)**

- (a) The Final Determination to be made by Council under Special Condition 2.3(c)(i), and the subject of this Final Assessment Report, is as follows [emphasis added]:

#### **"2.3 Urban Development Investigation**

- (a) *Landowner B and Landowner C are to, within 12 months of the Proposed Planning Scheme Amendments taking effect, each give to the Council 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.*

...

- (c) *If Landowner B or Landowner C complies with paragraph (a), the Council is to:*

- (i) determine as soon as reasonably practicable whether it is satisfied that all or part of the relevant Urban Development Investigation Area is land suitable for urban development in the Structure Plan Area subject to the provision by the relevant Landowner of necessary infrastructure to service the land for urban development at no cost to the Infrastructure Authorities; and*

- (ii) provide a reason for its determination."*

- (b) The Final Determination requires the following two questions to be answered:
  - (i) Is all or part of the relevant Investigation Area suitable for urban development in the Structure Plan Area?
  - (ii) What necessary infrastructure is required to be provided by the relevant Landowner to service the land for urban development?

#### **6.9.2. Questions relevant to Special Condition 2.3(c)(i)**

***Is all or part of the relevant Investigation Area suitable for urban development in the Structure Plan Area?***



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This question is to be answered by reference to Special Condition 2.2 of the Palmview IA, which relevantly states as follows:

### **"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 and environmental terms; and*
    - (C) *the benefit cannot otherwise be satisfied by other land that is suitable and reasonably available."*

### **What necessary infrastructure is required to be provided by the relevant Landowner to service the land for urban development?**

This question is to be answered by reference to the Palmview Structure Plan, which relevantly states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services generally, and for the following infrastructure networks in the Palmview Structure Plan Area:

- (a) Road Transport Infrastructure Network, including any infrastructure or the protection of any infrastructure specifically identified on Other Plans Map OPM P8 (Palmview Master Planned Area Road Transport Infrastructure Network);
- (b) Public Transport Infrastructure Network, including any infrastructure or the protection of any infrastructure specifically identified on Other Plans Map OPM P9 (Palmview Master Planned Area Public Transport Infrastructure Network);
- (c) Bicycle and Pedestrian Infrastructure Network, including any infrastructure or the protection of any infrastructure specifically identified on Other Plans Map OPM P10 (Palmview Master Planned Area Bicycle and Pedestrian Infrastructure Network);
- (d) Water Supply and Sewerage Infrastructure;

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- (e) Stormwater Infrastructure Network;
- (f) Urban Open Space Infrastructure Network, including any infrastructure or the protection of any infrastructure specifically identified on Other Plans Map OPM P11 (Palmview Master Planned Area Urban Open Space Infrastructure Network);
- (g) Non-urban Open Space Infrastructure Network, including any infrastructure or the protection of any infrastructure specifically identified on Other Plans Map OPM P12 (Palmview Master Planned Area Non-urban Open Space Infrastructure Network);
- (h) Community Facilities Infrastructure Network, including any infrastructure or the protection of any infrastructure specifically identified on Other Plans Map OPM P13 (Palmview Master Planned Area Community Facilities Infrastructure Network);
- (i) Energy Infrastructure Network, including any infrastructure or the protection of any infrastructure specifically identified on Other Plans Map OPM P14 (Palmview Master Planned Area Electricity Infrastructure Network);
- (j) Telecommunications Infrastructure Network; and
- (k) Other Services.

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## **Part B Investigation Area B (North)**

### **7. Urban Development Investigation material for Investigation Area B (North)**

#### **7.1. Landowner's documents for Investigation Area B (North)**

- (a) Landowner B carried out investigations for Investigation Area B (North), to determine whether the relevant investigation area is land suitable for urban development in the Structure Plan Area.
- (b) Landowner B gave to the Council on 1 April 2017 a Notice stating the results and technical basis for the results of the Urban Development Investigation of Investigation Area B (North) (**Investigation Area B (North) Urban Development Investigation Results**).
- (c) The Council requested from Landowner B on 23 October 2017 further information with respect to the Investigation Area B (North) Urban Development Investigation Results, which was provided by Landowner B on 22 September 2017 (**Investigation Area B (North) Further Information**).
- (d) Landowner B gave to the Council on 29 October 2018 a submission in respect of the Draft Assessment Report and Draft Determination (**Investigation Area B (North) Submission**) which relevantly comprised the following:
  - (i) IPS Submission October 2018, which included revised concept plans, community facility concept plans, landscape concept package, drone photo overlays, proposed replacement Other Plans Map OPM P6 and preliminary cost estimates (**IPS Report**);
  - (ii) JWA Ecological Report, October 2018 (**JWA Report**);
  - (iii) Allan & Dennis Flood Hazard Mitigation and Stormwater Management Plan October 2018, (**Allan & Dennis Flood Study Report**); and
  - (iv) BMT Flood Review Letter, 26 October 2018.
- (e) Landowner B presented further information to Councillors during January 2019 in relation to concept options for Investigation Area B (North). This further information was provided to Council on the 5 February 2019.
- (f) Landowner B gave to the State on 28 February 2019 and to Council on the 6 March 2019 supplementary information following a site meeting with the State (**Investigation Area B (North) Supplementary Information**).

#### **7.2. Peer Review Reports for Investigation Area B (North)**

- (a) Council appointed independent peer reviewer Adrian Caneris, BAAM Ecology on 17 December 2018 to undertake a peer review (ecological assessment) with respect to Investigation Area B (North).
- (b) Council appointed independent peer reviewer Mark Babister, WMA Water on 20 December 2018 to undertake a peer review (flood hazard assessment) with respect to Investigation Area B (North).
- (c) The peer review (ecological assessment) for Investigation Area B (North) was provided to Council and Landowner B on 7 February 2019 (**Investigation Area B (North) Ecology Peer Review**).

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- (d) The peer review (flood hazard assessment) for Investigation Area B (North) was provided to Council and Landowner B on 14 February 2019 (**Investigation Area B (North) Flood Hazard Peer Review**).
- (e) Council advised Landowner B on 12 March 2019, that it could make a representation with respect to the Investigation Area B (North) Ecology Peer Review and the Investigation Area B (North) Flood Hazard Peer Review (**Investigation Area B (North) Peer Review Reports**) by 18 March 2019.
- (f) Landowner B sought and was granted an extension of time to provide its representations with respect to the Investigation Area B (North) Peer Review Reports until 29 March 2019 and then to 2 April 2019.
- (g) Landowner B provided to Council on 2 April 2019 its representation with respect to the Investigation Area B (North) Peer Review Reports.

### **7.3. State ecologically important areas assessment for Investigation Area B (North)**

- (a) Council sent a letter to the Department of State Development, Manufacturing, Infrastructure and Planning on 12 December 2018, seeking the State's consideration of the Investigation Area B (North) Submission and the provision of written advice to Council with respect to whether the State determined Investigation Area B (North) to be an ecologically important area for the purposes of Special Condition 2.2(a)(ii) of the Palmview IA.
- (b) Landowner B gave to the State on 28 February 2019 and to Council on 6 March 2019, supplementary information to address matters that were discussed at a site visit with the State on 16 January 2019. This information also provided a brief summary of relevant parts of the proposal that were detailed in the Investigation Area B (North) Submission, provided to the State on the 12 December 2018.
- (c) Council received on 29 May 2019 written advice from the State in relation to Investigation Area B (North). (**Attachment 7**)

## **8. Ecologically important area assessment for Investigation Area B (North)**

### **8.1. Landowner's position for Investigation Area B (North)**

- (a) All of the land proposed for development in Investigation Area B (North) is identified on Other Plans Map OPM P2(b) as being an ecologically important area, being identified as either a Regional Habitat Corridor (State), a Local Habitat Corridor or a 100m buffer from State Significant Vegetation. Consequently, those areas are only to be considered suitable for development under the Palmview IA if determined by the State government and Council not to be an ecologically important area.
- (b) The Landowner proposes to develop 13 hectares of the 39 hectares within Investigation Area B (North) and submits that it has demonstrated that this area is not an ecologically important area because it does not contain:
  - (i) State Significant Vegetation;
  - (ii) State, Regional or Local Habitat Corridors;
  - (iii) Ecological Buffers;
  - (iv) Land in the Queensland Conservation Estate.

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- (c) The Landowner also questions the appropriateness of the 100 m buffer widths for Area B (North) on Other Plans Map OPM P2(b) of the Palmview Structure Plan and contends that 30m to 50m buffer widths are more appropriate.

### **8.2. Investigation Area B (North) Ecology Peer Review**

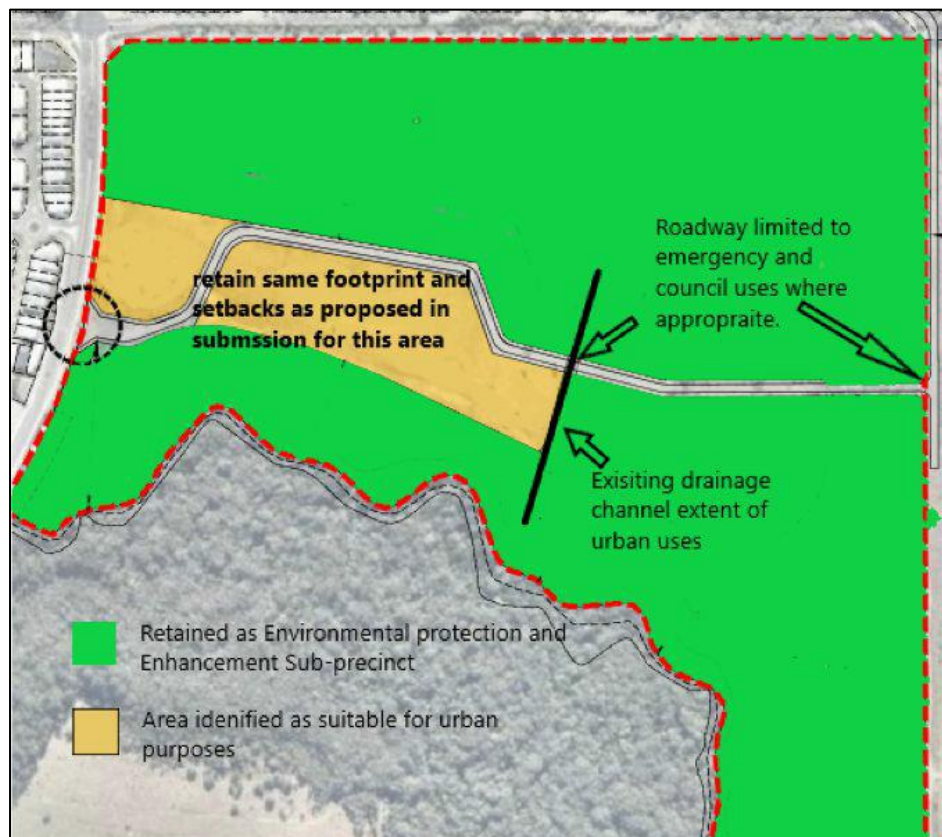
#### **8.2.1. Conclusions**

The Investigation Area B (North) Ecology Peer Review relevantly concluded as follows:

- (a) The ecologically important areas mapped on Other Plans Map OPM P2(b) are correct and therefore these mapped areas are not suitable for urban development, being approximately two-thirds of Investigation Area B (North) (page 4, paragraph 3).
- (b) Investigation Area B (North) is adjoined by remnant vegetation areas that are of high ecological value and should be buffered (page 9, paragraph 1).
- (c) Based on the number of conservation species considered as having the potential to occur, and at least one and likely two species known to occur, there are obviously important fauna habitats present. (page 7, paragraph 3)
- (d) Land east of the existing drainage channel is not suitable for urban development (including sports or other intensive recreational uses) as it would require the removal of native vegetation with high ecological value (page 9, paragraph 6).
- (e) The eastern portion should be enhanced to ensure the existing ecologically important areas maintain appropriate habitat for conservation significant fauna and suitable connectivity and wildlife movement between Sippy Creek and Mooloolah River National Park and the Mooloolah River (page 9, paragraph 7).
- (f) The proposed sports field and associated community facilities are in an unacceptable area as this location would require the removal of native vegetation of high ecological value within an appropriately planned corridor network for this area. This location would also be expected to have unacceptable impacts on hydrological flows and habitat for conservation of significant amphibian species and would have additional impacts on the adjoining corridor through edge effects and particularly light spillage and noise (page 9, paragraph 5).
- (g) Land west of the drainage channel is suitable for urban development from an ecological perspective provided that any filling, in particular on the land identified as land suitable for urban development, does not result in any notable changes to the adjoining wetlands and waterways as this may result in unacceptable impacts to ecologically important areas and would thus make the proposed uses unacceptable (page 10, paragraph 6).
- (h) The proposed road should be limited to emergency or maintenance access only because more general use would cause it to be a potential barrier and could significantly reduce safe fauna movement options (page 9, paragraph 8).
- (i) **Figure 16** identifies an area considered suitable for urban development subject to the following:
  - (i) A flood hazard assessment concluding that filling could occur in the area whilst ensuring no adverse flooding impacts on the surrounding area. This is extremely important in that any notable changes to adjoining wetlands and waterways may result in unacceptable impacts to ecologically important areas and would thus make the proposed uses unacceptable.

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- (ii) There is road frontage provided on the northern edge of the area considered suitable for urban development and fauna exclusion fencing is provided along the proposed roadway.
- (iii) The existing drainage channel is retained and buffered.
- (iv) Any recreational open space is provided within the identified footprint and all external areas are identified as Environmental Protection and Enhancement on Other Plans Map OPM P6.
- (v) Roadway lighting is designed to reduce light spillage into adjoining habitats.
- (vi) The area external to the area identified as considered suitable for urban development should be revegetated with native flora to reflect the naturally occurring ecosystems of the local landscape and be guided by a detailed landscape management plan.
- (vii) If constructed, the proposed emergency access should be designed to ensure minimum impact on hydrological flows and inundation periods on retained areas.
- (viii) All required infrastructure will be provided in accordance with the Palmview IA by reference to the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.



**Figure 16 Indicative land suitable for urban development from Investigation Area B (North) Ecology Peer Review**

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### **8.2.2. Council response to Landowner’s representations on Investigation Area B (North) Ecology Peer Review**

- (a) Landowner B raised a number of issues in its representations with respect to the Investigation Area B (North) Peer Review. Council has considered these issues and made comment in **Attachment 5** to this Final Assessment Report.
- (b) Council’s assessment has taken into consideration relevantly both the Investigation Area B (North) Ecology Peer Review and the Landowner’s representations.

### **8.3. Council response to Investigation Area B (North) Supplementary Information**

- (a) The Investigation Area B (North) Supplementary Information stated that 50m buffer widths should be used uniformly across the Palmview Structure Plan Area. The information failed to mention that the State Government had previously reduced buffers in favour of the developers during the preparation of the Palmview Structure Plan. The reduction in buffers from 100m to 50m in identified areas was agreed by the State government in recognition of the overall environmental benefit gained through the Palmview Structure Plan and Palmview IA which was the protection of 615 hectares of land (later reduced to 483.4 hectares).
- (b) The policy position regarding buffer widths did not change in the 2015 State interest review of the proposed planning scheme amendments for the Palmview Structure Plan Area.
- (c) The supplementary information also states that the Landowner believes the State only involvement in the assessment of Investigation Area B (North) is with respect to the reduced buffer to State Significant Vegetation that is being proposed.
- (d) This position fails to recognise the potential impacts the proposed development may have on the State Significant Vegetation and the identified State Biodiversity Corridor over the site and that the ecological buffers form part of the ecologically important areas.
- (e) The Investigation Area B (North) Supplementary Information only included the Investigation Area B (North) Ecology Peer Review and not the Investigation Area B (North) Flood Hazard Peer Review, giving the State an incomplete picture of the potential impacts on the State Significant Vegetation.

### **8.4. State ecologically important area assessment for Investigation Area B (North)**

- (a) In accordance with the Urban Development Investigation Process, Council passed a resolution with respect of the Draft Determination on 19 July 2018.
- (b) Council gave to Landowner B on 30 July 2018 a Notice with respect to the Draft Determination, which was accompanied by the Draft Assessment Report.
- (c) The Draft Assessment Report included the State’s draft assessment with respect to Urban Investigation Area B (North), which concluded that the majority of Investigation Area B (North) was an ecologically important area, with a small portion of the site west of an existing drainage reserve being potentially suitable for ‘limited development’, such as urban open space or recreation use including a park or informal sports field, uses that are supportive of fauna connectivity.
- (d) The State offered, and Landowner B accepted, briefings with respect to the Draft Assessment Report.
- (e) In that respect, the following briefings between the State and Landowner B occurred:
  - (i) On the 17 August 2018, the State provided Landowner B with a briefing on the technical basis for the Draft Determination and Assessment Report.

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- (ii) On 14 September 2018, the State provided a further briefing to Landowner B and its consultants.
- (f) Council provided to the State on 12 December 2018 a copy of the Investigation Area B (North) Submission and other relevant information and asked the State to consider the material and provide formal written advice to the Council whether the State, having regard to an instrument, law, policy, code, resolution or documents it considers appropriate, determines Investigation Area B (North) to be an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview Infrastructure Agreement.
- (g) The Council advised that the documents provided to the State are relevant to, but do not limit, the State's consideration of Investigation Area B South.
- (h) The Council requested that the State provide its written determination of whether Investigation Area B South is an ecologically important area and the reasons for the determination.
- (i) To that end, Landowner B sought to engage with the State with respect to Investigation Area B (North) Submission and attended a site visit with the relevant officers from the State on 16 January 2019.
- (j) Further, Landowner B provided supplementary information to the State to address matters that were the focus of discussions at the site visit and to provide a brief summary of the relevant parts of the proposals that were detailed in Landowner B's Submission.
- (k) Landowner B provided the supplementary information to the State on 28 February 2019.
- (l) Having received the Landowner B's Submission, attended the site visit with Landowner B and received the further information from Landowner B, the State on 29 May 2019 (**Attachment 7**) has relevantly advised as follows:
  - (i) This request is taken to be a pre-lodgement request for a potential planning scheme amendment process and is limited to the state interest pertaining to ecological matters;
  - (ii) The ecological values within the Palmview Master Planned Area, are deemed to be correctly reflected in the Sunshine Coast Planning Scheme 2014;
  - (iii) The submitted information has not changed the position of the state government in relation to this matter;
  - (iv) Should the council wish to propose an amendment to the planning scheme to allow further urban development at Palmview, the amendment would be subject to a state interest review which would involve a technical assessment as required under the State Planning Policy, regional plan and the relevant legislation; and
  - (v) Whilst it is noted that this response relates to a very narrow state interest focus, any amendment would need to address all the state interests relevant to an amendment
- (m) As such, the State has determined under Special Condition 2.2(a)(ii) of the Palmview IA that that the ecologically important areas as specifically identified on Other Plans Map OPM P2(b) Palmview Master Planned Area Ecologically Important Areas are correctly mapped as ecologically important areas.

### **8.5. Council ecologically important area assessment for Investigation Area B (North)**

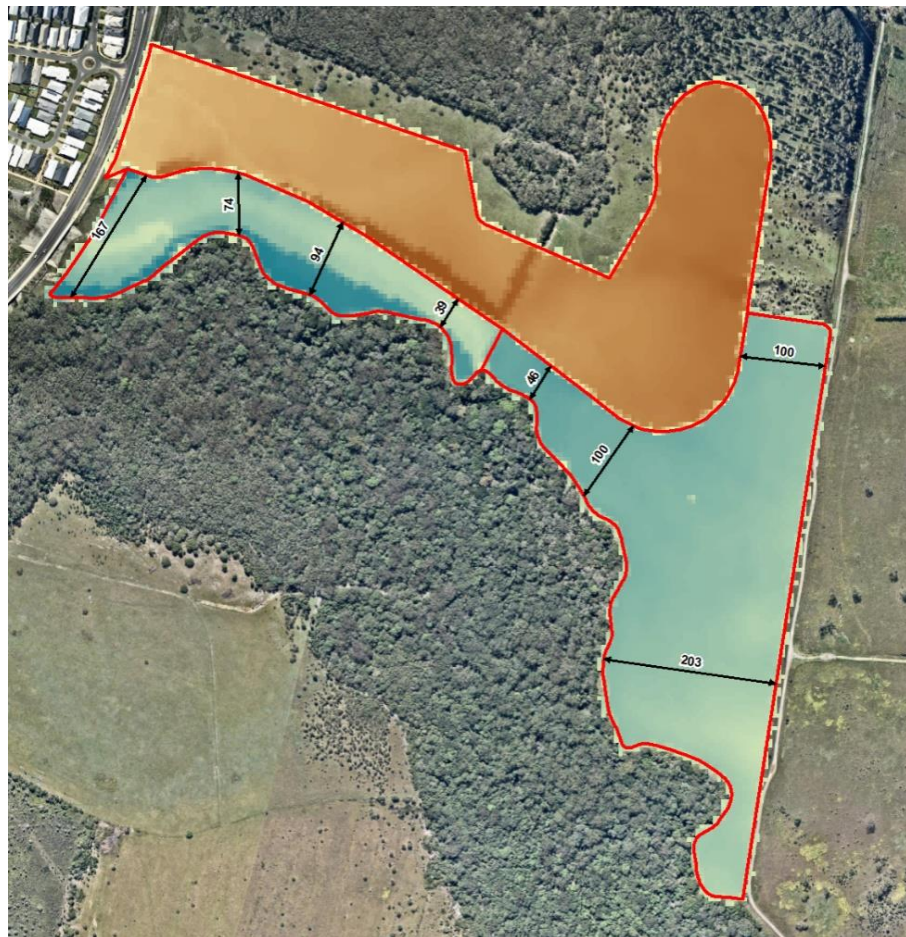
- (a) All the land proposed for development in Investigation Area B (North) is identified on Other Plans Map OPM P2(b) as being an ecologically important area, being identified as either a Regional Habitat Corridor (State), a Local Habitat Corridor or a 100m buffer from State Significant Vegetation. Consequently, those areas are only to be considered suitable for



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development under the Palmview IA if determined by the State government and Council not to be an ecologically important area.

- (b) The Landowner submits that their proposal provides an average buffer width to Sippy Creek of over 100 m. While the Sippy Creek buffer 'averages' more than 100 m width, it is much narrower than this in many areas, down to 39 m.
- (c) Buffers serve to alleviate impacts on environmental values from adjacent land uses, for example by protecting water quality, limiting trampling/physical damage, and reducing light and noise impacts. Buffers can also form part of the core area necessary for persistence of environmental values, ie. by providing foraging habitat, enabling refuge from flood events, and expanding wildlife activity beyond areas of preferred habitat. (McAlpine et al. 2007)
- (d) The buffer to Sippy Creek should be a minimum of 100 m as measured from the high bank, or to the edge of the State significant vegetation.



**Figure 17 Proposed flood hazard management area**

- (e) The Landowner is proposing to include a flood conveyance channel in the buffer to Sippy Creek (**Figure 17**). This is not in keeping with the *Sunshine Coast Environment and Liveability Strategy 2017*, which requires stormwater treatment assets to be located outside buffer areas.
- (f) The JWA Report fails to recognise that Landowner B is proposing that the buffer area become a largely modified landscape for the purposes of flood hazard management, and that this area would need to be maintained for this purpose in perpetuity. This would not be consistent with achieving the best ecological outcomes for the buffer which is its primary purpose. As can be

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seen in **Figure 17** above, the flood hazard management area covers an area of 15.8 hectares, sits entirely within the buffer to Sippy Creek and is over 4m deep in some areas.

- (g) The cut and fill drawing (Figure 5, page 216 of Allan & Dennis Flood Study Report) suggests that required cut will be a maximum of 4.4m, where existing AHD is 8 m and desired AHD is 3.6m. As such, the conveyance channel could be prohibitive to fauna movement by creating a physical barrier which would be particularly undesirable in the east of Investigation Area B (North), where fauna movement is important between Sippy Creek through to Lower Mooloolah Environmental Reserve and Mooloolah River National Park.
- (h) The Investigation Area B (North) Ecology Peer Review does not address the potential impacts of flooding on ecologically important areas nor the potential impacts of the proposed conveyance channel, however, does note that *“any notable changes to adjoining wetlands and waterways may result in unacceptable impacts to ecologically important areas and would thus make the proposed uses unacceptable.”*
- (i) The Landowner proposes to reduce the buffer width to the State Significant Remnant Vegetation in the north-west corner of the site from 100m to 50m. The JWA Report of March 2017 submitted with the Investigation Area B (North) Urban Development Investigation Results confirmed that Sippy Creek (and associated riparian vegetation) and the patch of remnant vegetation in the north-western corner contain the highest environmental values in Investigation Area B (North). This reduction in buffer width is inconsistent with the Palmview Structure Plan requirements which state a 100m buffer is to be provided.
- (j) The ecological links between Sippy Creek and the remnant vegetation in the north-western corner of Investigation Area B (North) would be directly impacted by the proposed east-west road connecting from Peter Crosby Way to the proposed Claymore Road Extension. The placement of this proposed road would also directly impact on any ecological linkage between Sippy Creek and Mooloolah River National Park. The positioning of this road will also likely create further hydrological change impacting on the condition of existing vegetation, and place limitations on the ability to deliver future habitat restoration outcomes on Investigation Area B (North), and with potential for implications to the adjoining Lower Mooloolah Environment Reserve.
- (k) The Landowner proposes to provide a 100m minimum buffer / corridor that runs the full length of the eastern boundary of Investigation Area B (North).
- (l) It is apparent from Figure 5 of the Allan & Dennis Flood Study Report that the southern portion of this buffer (i.e. south of the proposed east-west road link) has been proposed to function as flood hazard management and will be subject to significant landscape modification. It is unclear whether this area within the eastern buffer is necessary to deliver flood conveyance, flood storage or simply fill.
- (m) Whilst it is acknowledged that the habitat restoration of the area will deliver some ecological outcomes (an existing requirement of the Palmview Structure Plan and Palmview IA), there is no evidence that the modified landscape for the purposes of flood hazard management will satisfy the full ecological requirements for the delivery of an effective habitat connection between Sippy Creek and the Mooloolah River National Park.
- (n) The concern related to the effectiveness of the proposed 100m buffer is amplified by the following statement in the JWA Report (page 19): *“Six (6) species of possums and gliders have been identified as occurring within 5km of the subject site. It is envisaged that the proposed corridor (minimum 100m in width, approx. 1900m wide in total including the adjacent reserve) will support the majority of these species”*. Best practice ecological management would suggest that habitat corridors should provide an effective and functioning habitat for all species of fauna identified, not just the majority of them.
- (o) The proposed location of large flood hazard management infrastructure at this location will inevitably impact on the hydrology of the area and subsequently the ecological values of

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Investigation Area B (North), Mooloolah River National Park and the adjoining Lower Mooloolah Environment Reserve within which are identified environmental offset areas (for the Bruce Highway upgrade and Sunshine Coast Airport expansion).

- (p) The JWA Report suggests that site assessments have determined that local habitat corridors [currently] do not exist (see page 15). This statement fails to recognise that, regardless of the current land condition, the area once restored is to provide a functioning local habitat corridor.
- (q) There is a degree of inconsistency and conflicting statements both within the JWA Report and between the JWA Report of March 2017 in relation to the provision of habitat connectivity between Sippy Creek and the Mooloolah River National Park. This is evident in the following statements:
  - (i) The JWA Report states that the site assessment "*confirmed that a more suitable location for a local fauna movement corridor exists in the eastern portion of Investigation Area B (North) in association with the adjoining Lower Mooloolah Environment Reserve*" (see page 15). The previous position cited in the JWA Report of March 2017 was that the Lower Mooloolah Environment Reserve provided a superior option. This is a shift in position by JWA to recognise the importance of providing a local habitat corridor in Investigation Area B (North).
  - (ii) The JWA Report (page 19) then suggests that the 'Council-owned' Environment Park to the east of the subject site, if allowed to naturally regenerate, or if active revegetation is undertaken, would provide a far superior connection between Mooloolah River National Park and Sippy Creek compared to the north-south corridor proposed by Other Plans Map OPM P2(b).
  - (iii) The JWA Report further states that "*An additional corridor across the site linking Sippy Creek and the Mooloolah River National Park, as mapped under the Palmview Master Plan, is considered unlikely to provide any additional ecological benefit*" (see page 19).
- (r) The JWA Report states that buffers to watercourses will be provided in accordance with the *Caloundra City Plan 2004* Natural Waterways and Wetlands Code (see page 23). It is assumed that this is a reference to the *Caloundra City Plan 2004*, which is of no relevance to this matter. The JWA Report makes further references to the *Caloundra City Plan 2004* on page 25.
- (s) The infrastructure proposed by the Landowner will impact on the provision of a fully functioning ecological corridor connecting Sippy Creek and the patch of remnant vegetation in the north-western portion of Investigation Area B (North) (described as ecologically important areas under the Palmview Structure Plan and Palmview IA, the areas of natural regeneration described by Chenoweth (2005) as Areas of High Rehabilitation Potential) and the Mooloolah River National Park.
- (t) Where there is land considered suitable for urban development, it is necessary to consider the infrastructure required to support the urban development. Here, such infrastructure would appear to inevitably have direct and detrimental impacts on adjoining ecologically important areas both within the remainder of Investigation Area B (North) and on adjoining ecologically important areas such as Council's Lower Mooloolah River Environmental Reserve, Sippy Creek and the State's Mooloolah River National Park.
- (u) Council's assessment of the flood modelling (refer to section 9.3) has also identified that the Landowner's proposal would have material impacts on the hydrological regimes of the Lower Mooloolah River Environmental Reserve, Mooloolah River National Park and Mooloolah River in a number of ways, including the following:
  - (i) areas that were once wet, would now be dry due to flows being diverted away from them; and

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- (ii) other areas will be subject to flood increases in excess of 200mm.
- (v) Further considerations include the following:
  - (i) There is no ability to provide appropriate public access via tracks and trails to enhance the recreation opportunities connecting through areas which have been designed and constructed to function as flood hazard management areas.
  - (ii) The proposal to use some of the area within Investigation Area B (North) for urban development, including for social infrastructure and age care facilities, will require the imposition of setbacks from vegetation to manage fire hazard. It is expected that these setbacks would be delivered within the proposed developable area further limiting the proposed developable area; and The JWA Report incorrectly states that local habitat corridors can only be applied to corridors that are currently in existence and vegetated. Of interest, many of the identified ecological buffers do not currently exist in a vegetated state, but they will be established through habitat restoration, in exactly the same manner as the identified local habitat corridors will be reinstated through habitat restoration.

**8.6. Council findings in respect of ecologically important areas for Investigation Area B (North)**

- (a) In conclusion, Council has found that the portion of Investigation Area B (North) to the west of the existing drainage channel shown as suitable for urban purposes, an area of approximately 2.77 hectares as indicated on **Figure 18** is not an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview IA subject to the following requirements:
  - (i) provision of a 100m buffer to the State significant remnant vegetation in the north-west corner of the site;
  - (ii) provision of a minimum 100m buffer from the edge of the State significant vegetation along Sippy Creek or from the high bank;
  - (iii) buffering of the existing drainage channel in the middle of the site and the rehabilitation of all land to the east of the drainage channel;
  - (iv) no development that would require the road connection (emergency or other) through to Claymore Road on the eastern boundary;
  - (v) any conveyance channel would need to be located outside the 100m buffers;
  - (vi) no stormwater treatment infrastructure or WSUD is to be located within the buffer to ecologically important areas;
  - (vii) stormwater infrastructure (and associated cut and fill) must not present a barrier to wildlife movement between Sippy Creek, Lower Mooloolah Environmental Reserve and the Mooloolah River National Park, nor should it impact on natural hydrological processes;
  - (viii) proposed development is limited to compatible uses such as passive recreation which do not require filling of the area;
  - (ix) provision of other necessary infrastructure.



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**Figure 18 Area potentially suitable for urban development following ecologically important area assessment**

## 9. Flood hazard assessment for Investigation Area B (North)

### 9.1. Landowner's position for Investigation Area B (North)

- (a) The Landowner acknowledges that all of Investigation Area B (North) is flood prone land and that for the purposes of Special Condition 2.2(b) of the Palmview IA, is only to be considered suitable for urban development if "[t]he Council in its absolute discretion has determined that incorporating [Investigation Area B (North)] in the land suitable for urban development satisfies an overriding need in the public interest in that:
- (i) *it would not result in any material adverse impact both upstream and downstream of the land; and*
  - (ii) *it would result in a significant overall benefit for a significant part of the community in social, economic or environmental terms; and*
  - (iii) *the benefit cannot otherwise be satisfied by other land that is suitable and reasonably available."*
- (b) The Landowner believes that it has demonstrated that the proposed development of Investigation Area B (North) would not have any material adverse impact upstream or downstream and would result in significant flood benefits by providing peak design flood level reductions upstream and increases to flood plain storage of approximately 48,000 m<sup>3</sup>.
- (c) The Landowner also believes that the proposed development of Investigation Area B (North) would provide additional benefits to a significant part of the community in social, economic and environmental terms including:
- (i) social benefits through the land contribution and \$2.5 million financial contribution to construct community facilities for the Sippy Downs Community;
  - (ii) economic benefits through the community and sporting facilities being delivered at no cost to Council; and

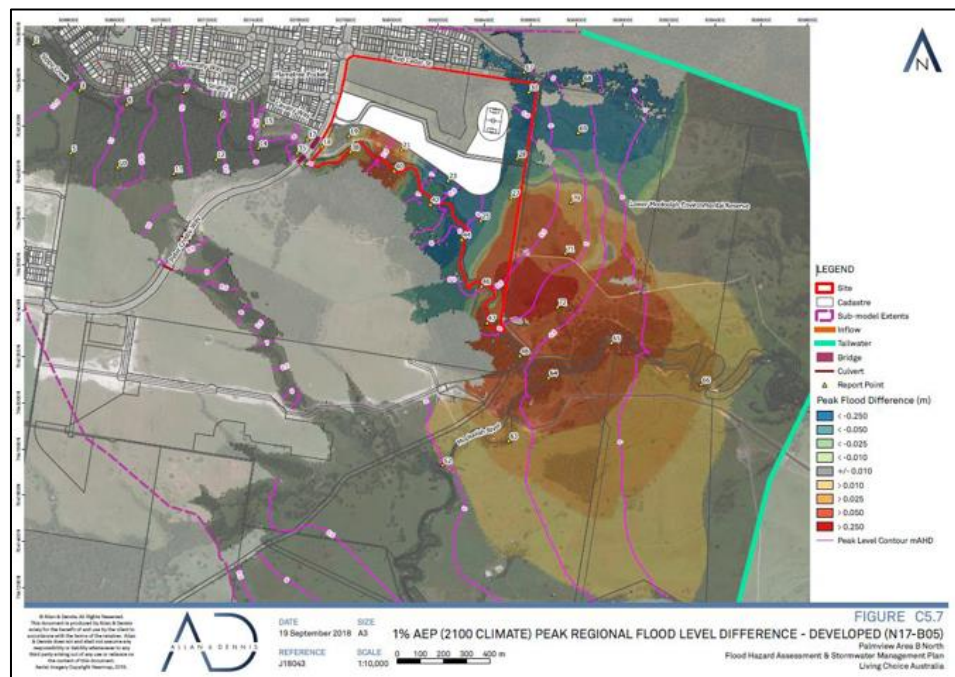
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- (iii) environmental benefits through the increase in flood plain storage, the reduction in peak design flood levels immediately upstream and the ability to fully rehabilitate the environmental area adjacent to Sippy Creek within Investigation Area B (North).
- (d) The Landowner believes these benefits could not be satisfied by land that is suitable and reasonably available elsewhere as the benefits are primarily attributable to Sippy Downs residents. The Landowner states that the majority of other land in Sippy Downs is in private ownership or that the community facilities that are identified within the area are intended to accommodate different functions to those being proposed in their submission.

### 9.2. Investigation Area B (North) Flood Hazard Peer Review

#### 9.2.1. Conclusions

- (a) The Investigation Area B (North) Flood Hazard Peer Review concluded as follows:
  - (i) There is no residential development proposed by the Landowner. This statement is incorrect as Landowner B proposes a retirement village, aged care facility or school in the Community Land Use Precinct.
  - (ii) It was unclear if the additional floodplain storage claimed in the proposal could be considered true floodplain storage.
  - (iii) It is important to not set a precedent of removing floodplain storage to allow development.
  - (iv) There are impacts downstream ranging from 0.01m to over 0.25m as indicated in **Figure 19** below. While these downstream impacts do not appear to coincide with residential or other development they may impact on ecologically important areas and private property.



**Figure 19 1% AEP Climate Change Peak Regional Flood Level Difference - Figure taken from the Allan & Dennis Report in Investigation Area B (North) Submission**

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- (v) Should Council determine the proposal does meet an overriding need in the public interest, the peer reviewer considers the investigation area to be appropriate for the proposed non-residential development from a flood hazard perspective provided that evidence can be provided with respect to the following:
  - (A) details of the proposed cut and fill, in particular details with respect to impacts and functionality, as the proposal concentrates the conveyance through this area;
  - (B) a breakdown of added floodplain storage at each of the flood levels for the pre-development and post-development case; and
  - (C) confirmation that the impacts identified as a result of the proposal do not result in unacceptable impacts on ecologically important areas.

### **9.2.2. Council response to Landowner's representations on Investigation Area B (North) Flood Hazard Peer Review**

- (a) Landowner B raised a number of issues with respect to the Investigation Area B (North) Flood Hazard Peer Review. Council has considered these issues and made comment in **Attachment 5** to this Final Assessment Report.
- (b) Council's assessment has taken into consideration relevantly both the Investigation Area B (North) Flood Hazard Peer Review and the Landowner's representations.

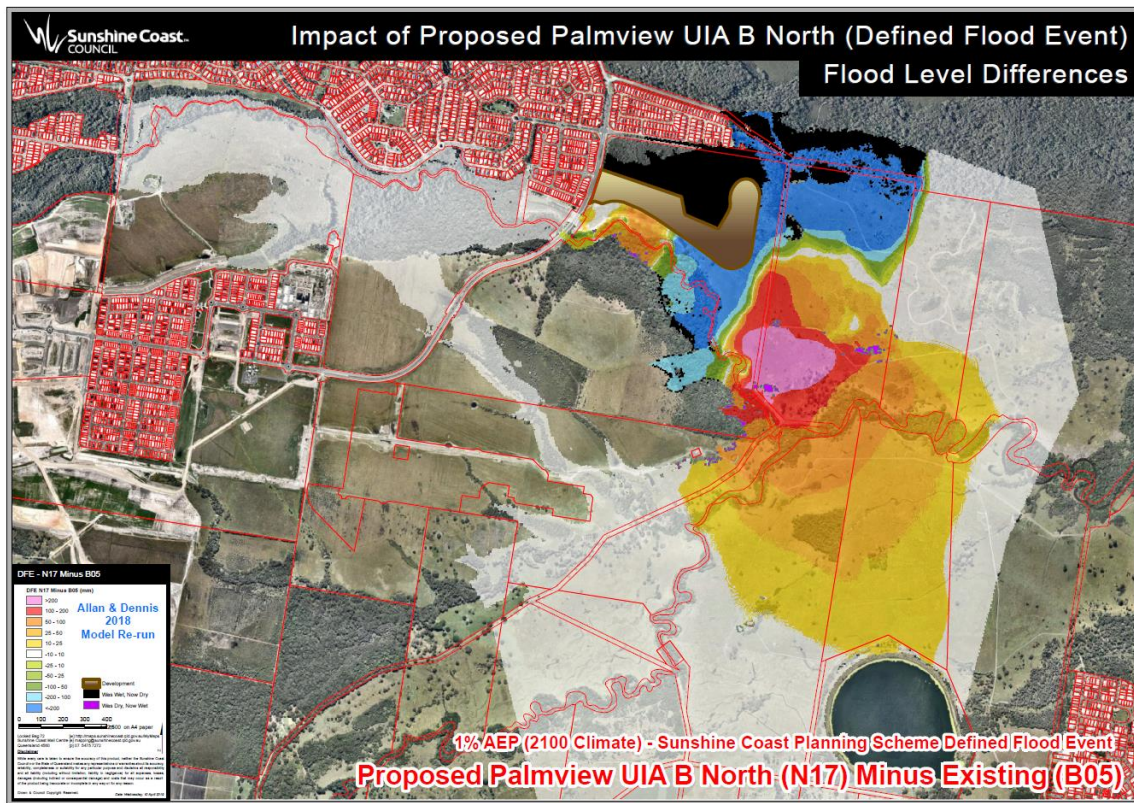
### **9.3. Council flood hazard assessment for Investigation Area B (North)**

- (a) Council notes that the extract of Council's Regional Mooloolah River TUFLOW model used by the Landowner's consultant was used without gaining the requisite Council contract which commits parties to specific conditions of use. This was later remedied by the Landowner's consultant on the 21 March 2019.
- (b) Council notes that the Allan & Dennis Flood Study Report erroneously states that the Flame Tree Pocket development and conveyance channel were not in the 2015 Mooloolah River Flood Study Model (**MRFS**). The adopted model scenario supplied by Council included these features. The Allan & Dennis Flood Study Report presents a Scenario B04 that excludes the Flame Tree Pocket development and conveyance channel.
- (c) The Draft Determination made note that the Cardno Flood Impact Assessment provided with the Investigation Area B (North) Urban Development Investigation Results was based on the same erroneous position. With an awareness of this feedback, and the fact that works within the Flame Tree Pocket footprint commenced around four years ago, it is unclear why the Allan & Dennis Flood Study Report includes Scenario B04 in the new assessment, and it should have been removed.
- (d) Council officers undertook an analysis of the impact of the proposed development of Investigation Area B (North) Scenario N17 compared to the Base Case (B05) Scenario for a number of scenarios and flood events (refer to **Attachment 8** for more detail).
- (e) In respect of peak flood level impacts, **Figure 20, Figure 21, Figure 22 and Figure 23** below demonstrate that the incorporation of the proposed development in Investigation Area B (North) results in a material adverse impact, being an increase in excess of 200 mm for all four flood events for the Lower Mooloolah River Environmental Reserve downstream of the site, and extending to the Mooloolah River. Large portions of land within the conservation area, which are currently subject to flooding in the 39% AEP flood event, would also have flow diverted away from them and would no longer receive flows from this event.



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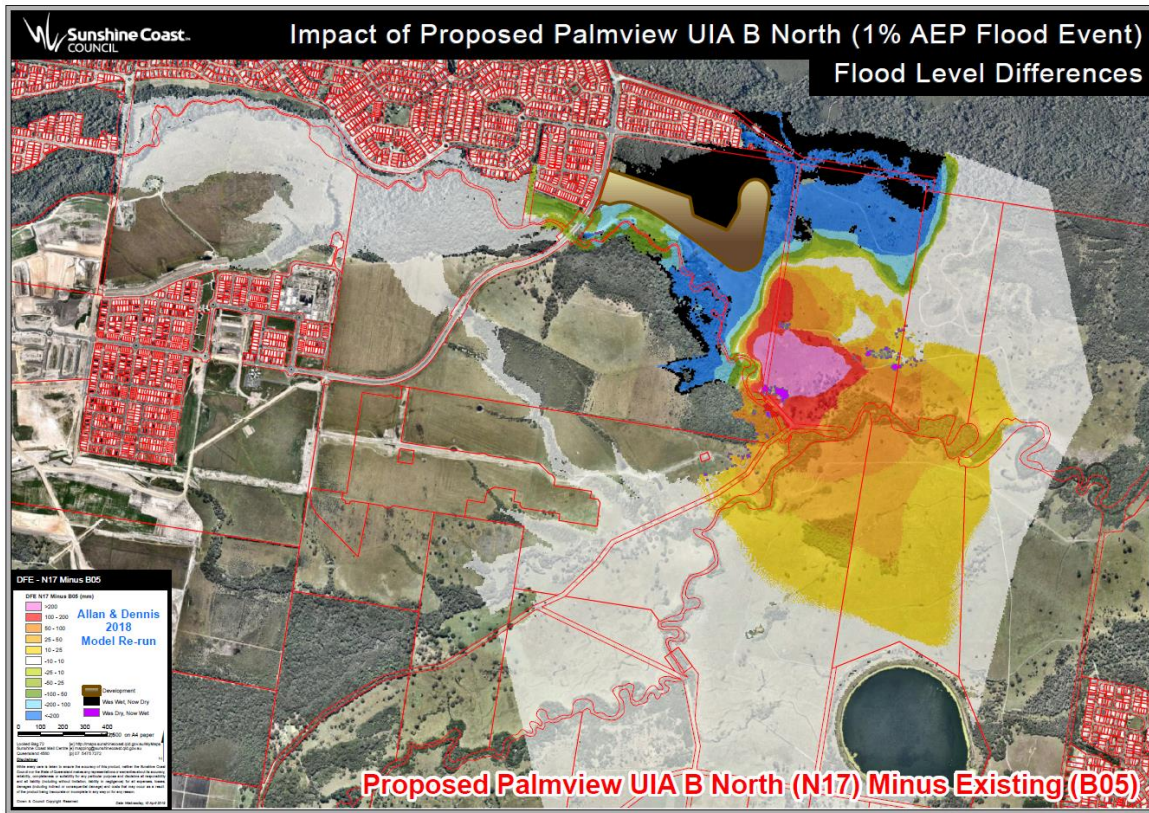
- (f) The material adverse impacts also extend to privately owned land south of the Mooloolah River, where peak impacts are in the order of 50mm to 100 mm for all four flood events. Most of Lot 4 RP 97720 (immediately north of the ring tank) would experience a material adverse impact for the DFE, 1% AEP flood event and 39% AEP flood event.
- (g) Frequent flow analysis has primarily concentrated on the 39% AEP flood event (ie. 2 year flood event). Hydrographs have not been extracted to demonstrate changes in flow characteristics as it is considered that the mapped changes in conservation areas that were previously wet, and are now dry, infers a change that is so dramatic that this extra level of analysis is not necessary.



**Figure 20 Impact of proposed development of Investigation Area B (North) (DFE) flood level differences**



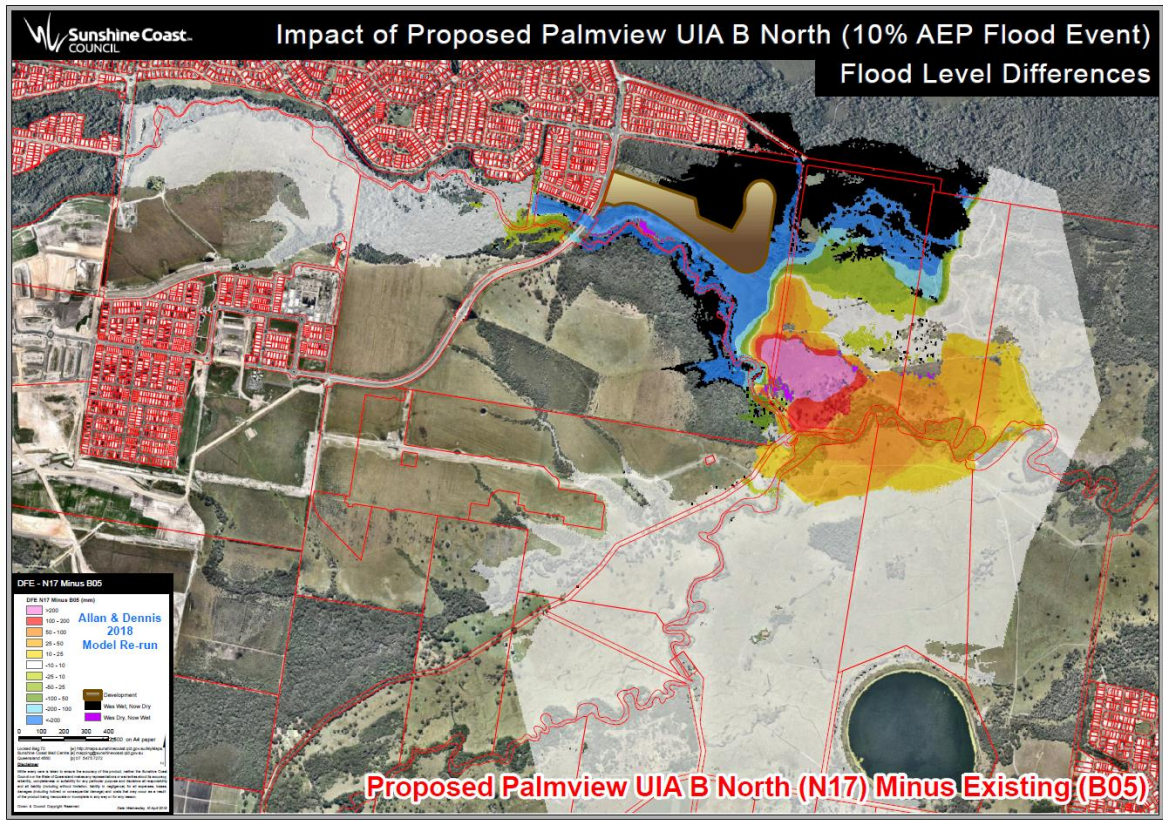
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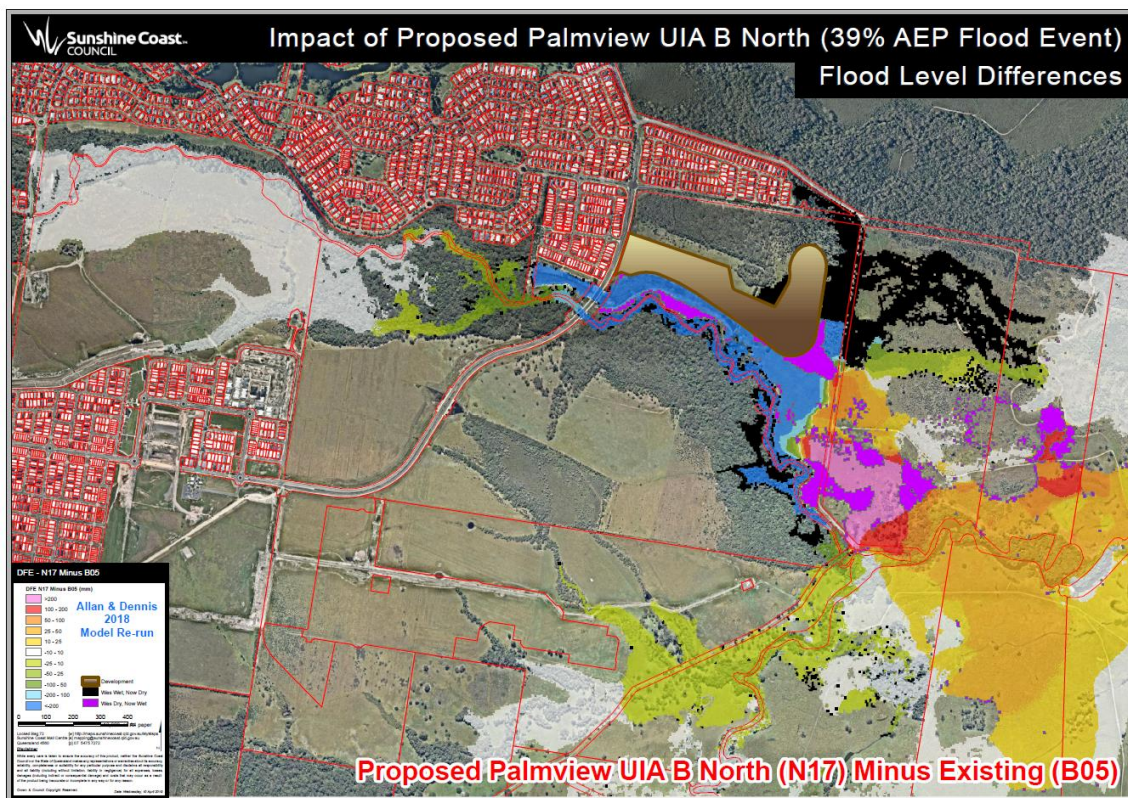
**Figure 21 Impact of proposed development of Investigation Area B (North) (1% AEP Flood Event) flood level differences**



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**Figure 22 Impact of proposed development of Investigation Area B (North) (10% AEP Flood Event) flood level differences**



**Figure 23 Impact of proposed development of Investigation Area B (North) (39% AEP Flood Event) flood level differences**

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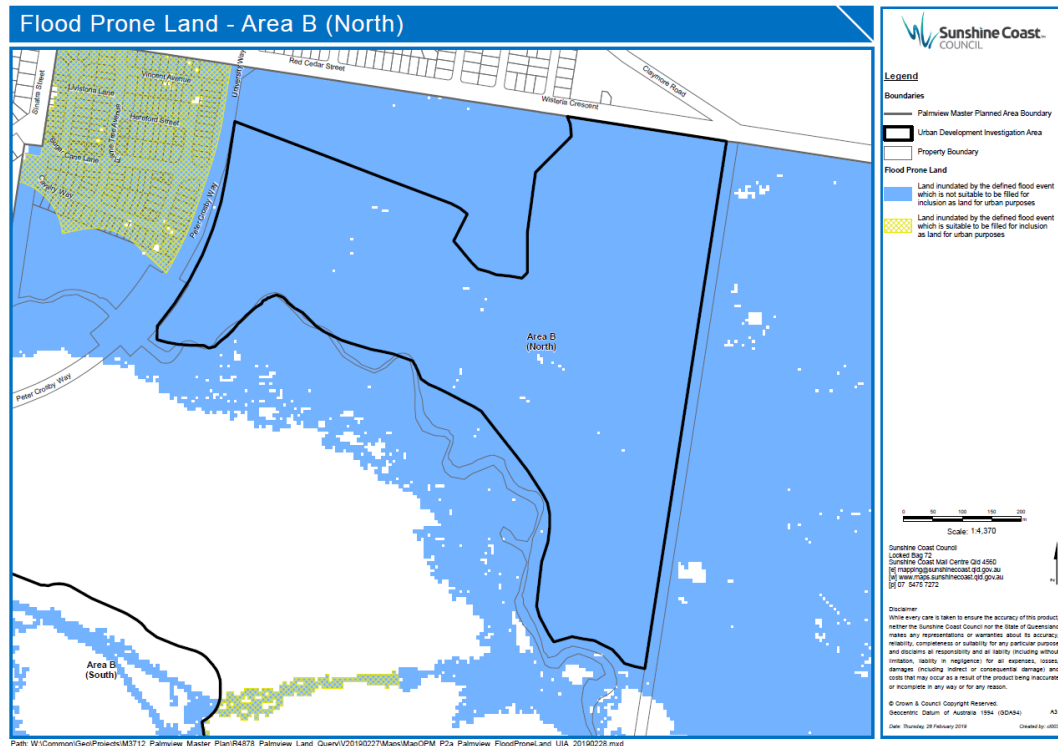
- (h) **Figure 23** demonstrates changes in peak flood levels for a small frequent flood event (39% AEP flood event). It is evident that the channel on the south-eastern side of the proposed development, which provides initial conveyance and then flood storage later in an event, significantly changes 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 Lower Mooloolah River Environmental Reserve.
- (i) **Figure 20, Figure 21, Figure 22 and Figure 23** also demonstrate that, post development, the Lower Mooloolah River Environmental Reserve may not receive any flow from Sippy Creek for a number of years and will only flow from local rainfall.
- (j) The analysis by the Landowner's consultants has not considered the influence of the groundwater table or impacts of the proposed development on the groundwater table. It is possible that the proposed channels on the southern and eastern sides of the proposed development may drain the groundwater table and the potential flood storage of the proposal may be compromised by groundwater that is expressed to the channel.
- (k) The IPS Report and the JWA Report contend that if 80 hectares of melaleucas were not removed and the proposed development did not occur, there would be adverse flooding impacts on existing residences along Sippy Creek.
- (l) Council has considered this contention and does not believe it is correct as different mapping shows that the impacts of revegetation across all four events do not propagate upstream of Flame Tree Pocket. Council's adopted modelling and flood searches takes into account the revegetation (i.e. future revegetation was considered as part of the Flame Tree Pocket development).
- (m) Council notes that the Investigation Area B (North) Flood Hazard Peer Review Report incorrectly assumed there is no residential development for the proposal and as such didn't consider emergency management aspects. However, Council considers the proposed development would be able to demonstrate that the flood risk is acceptable for a residential use.
- (n) It is also unclear to Council whether the peer reviewer understood that some of the land shown as impacted in the proposed development scenario is privately owned and the peer reviewer also does not appear to have considered the diversion of flows away from conservation areas. This may be as a result of the mapping in the Allan & Dennis Flood Study Report excluding the "Was Wet, Now Dry" areas.
- (o) Council has concluded that the proposed development of Investigation Area B (North) results in unacceptable material adverse offsite impacts. These impacts include flood level increases to adjacent private property that are substantially beyond the 10mm thresholds that are considered reasonable and tolerable by Council. The material adverse impacts also include the diversion of natural flows away from a conservation area. It is considered that this will dramatically change the hydrological characteristics of flows to an environmentally sensitive area. It is considered that the Allan & Dennis Flood Study Report misrepresents offsite impacts and that this had the potential to compromise the assessment by the peer reviewer.
- (p) Council considers the proposed development of Investigation Area B (North) to be unsuitable for urban development as it will result in material adverse offsite impacts.

### **9.4. Overriding need assessment for Investigation Area B (North)**

- (a) The Landowner, Council and the flood hazard peer reviewer agree that Investigation Area B (North) is Flood Prone Land. (**Figure 24**)



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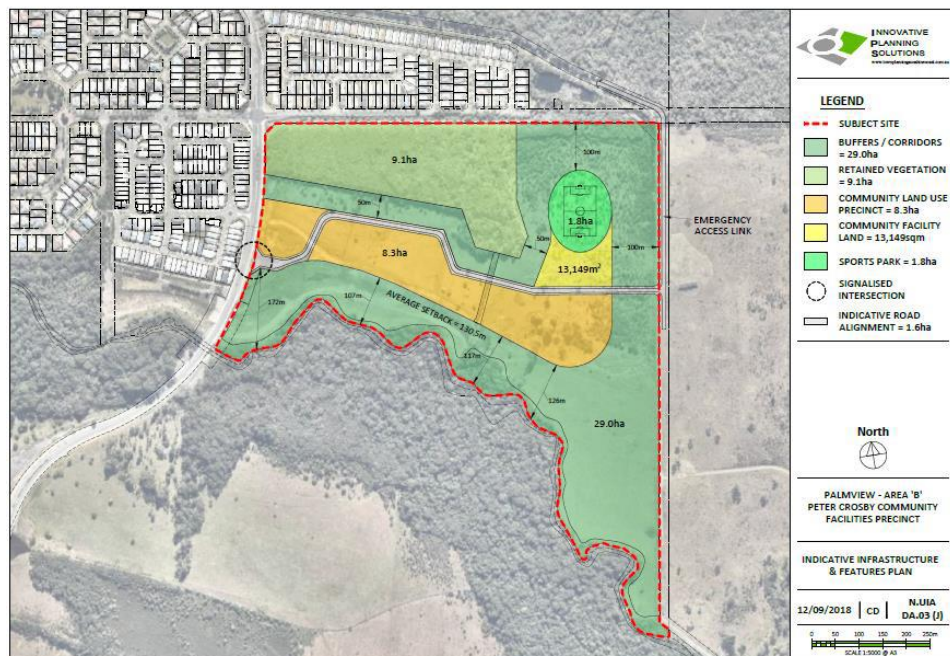
**Figure 24 Flood Prone Land**

- (b) If the land is Flood Prone Land, the Council in its absolute discretion can determine that incorporating the Flood Prone Land in the land suitable for urban development satisfies an overriding need in the public interest in that (see Special Condition 2.2(b)(ii) of the Palmview IA:
- (i) it would not result in any material adverse impact both upstream and downstream of the land; and
  - (ii) it would result in a significant overall benefit for a significant part of the community in social, economic or environmental terms; and
  - (iii) the benefit cannot otherwise be satisfied by other land that is suitable and reasonably available.
- (c) Council has assessed whether the proposal for Investigation Area B (North), satisfies an overriding need in the public interest.
- (d) In respect of material adverse impacts (stated in paragraph (b)(i) above), Council has determined that the proposal will result in material impacts as discussed in section 9.3 above.
- (e) In respect of significant overall benefits for a significant part of the community, the proposal has been assessed against Council’s adopted policy positions in accordance with the *Environment and Liveability Strategy 2017 (ELS)* and the *Sunshine Coast Planning Scheme 2014* to determine if there is a benefit to the wider community in the development of the site.
- (f) The ELS sets Council’s policy directions, desired standards of service and *Network Blueprint for Open Space and Social Infrastructure (Network Blueprint)* to inform the next 20 years of infrastructure delivery. The ELS also provides clear strategic policy direction in relation to protection of the natural environment, neighbourhood and housing outcomes, flooding and stormwater and sustainable living.

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## 9.4.1. Investigation Area B (North) development proposal

- (a) The Landowner's proposal (**Figure 25**) is to develop 13 hectares (28.8 hectares if the flood conveyance channel is included) of Investigation Area B (North) to incorporate the following:
- a single sporting field with an area of 1.8 hectares;
  - 1.3 hectares of land for Community Facilities including a building/clubhouse (1600 sqm covered and 400sqm building), dog off leash area (1,372sqm), car parking (2,150sqm) and community square (1,170sqm);
  - a financial contribution of \$2.5 million for the construction of playing fields, the community building and community gardens or an offer for the Landowner to construct the playing fields, building and gardens;
  - a community use precinct, being 8.3 hectares of land for school, aged care or retirement living, which is proposed to be revenue generating;
  - an ecological corridor, being 100m wide along the eastern boundary;
  - a flood conveyance channel covering an area of 15.8 hectares and up to 4m deep in some parts and located entirely within the environmental buffer;
  - an access road (1.6 hectares).



**Figure 25 Investigation Area B (North) development proposal**

- (b) The Landowner's proposal includes gifting to Council the Peter Crosby Community Facility Precinct as a community/open space facility to be embellished with a Community centre/clubhouse, meeting rooms, amenities (400 sqm enclosed building and 1,220sqm covered outdoor area), recreation park including dog park, town square and associated car parking. The remainder of the area (8.3 hectares) is proposed to include either an educational establishment or a retirement/aged care facility.

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- (c) The Landowner's proposal offers to deliver the Community Facility Precinct on fully serviced land with completed earth works and a contribution of \$2.5 million to fund the development or an offer for the Landowner to undertake the construction and return any surplus cash to Council.
- (d) The establishment of the Community Facilities Precinct is proposed to benefit the broader Chancellor Park/Sippy Downs community and it is contended that the community has a shortfall of open space and social infrastructure. The proposal specifically states it is not to service the emerging community of Palmview and focusses on Sippy Downs.

### **9.4.2. Council findings in respect of overriding need for Investigation Area B (North)**

- (a) An assessment of the Landowner's proposal (**Attachment 1**) against Council's adopted strategic framework has determined that the broader community benefit contended by the Landowner has not been adequately demonstrated or evidenced. Key issues that have informed this determination are as follows:
  - (i) The proposal is inconsistent with and conflicts with Council's adopted policy direction (as articulated in the *Environment and Liveability Strategy*), and desired standards of service in regard to function, size, location, safety and access for Open Space and Social Infrastructure.

#### **Sporting Field**

A standalone single sporting field (1.8 hectares) as is proposed does not meet the minimum size requirements of 15 hectares, does not comply with the centralisation approach of sports grounds, and does not provide adequate road frontage. One field facilities have limited capacity and generally can only be used for training or local exercise. Field lighting is not proposed, which further reduces the capacity of the proposal.

The proposed sporting field location is isolated and would be inconsistent with the desired outcome for surveillance which requires 50% frontage. The proposed sporting field has no road frontage and is only accessible through the community facility and retirement village or school. The safety of users of the proposed sporting field is of significant concern.

The land proposed for the sporting field also contains significant ecological values and therefore vegetation removal or development are not supported by policy.

#### **Recreation Park**

The proposal contains a recreation park consisting of an off-leash dog park, general recreation area and town square within the land designated for community purpose. The proposed recreation park is for an area of approximately 0.534 hectares.

The delivery of a dog park would preferably be located within a District Recreation Park, which has a minimum size of 3 to 5 hectares to ensure suitable separation from other park users and adjoining land uses. The proposed 1,500sqm off-leash dog area could be functional in this proposed recreation park, however its location and isolation does raise safety concerns as a result of poor visual surveillance.

The proposed recreation park meets the required size of 0.5 hectares for park purposes under the *Environment and Liveability Strategy 2017* (but not under the Palmview Structure Plan and Palmview IA), however the proposal does not meet the required road frontage of 50%.

A local recreation park is intended to service a residential catchment within an approximately 500m radius or a 5 to 10 minute walk. The proposal is seeking this

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park to function at a district level capacity however does not meet the requirements in terms of size and accessibility.

In conclusion, the proposed establishment of one sporting field with no visual surveillance and a local recreation park in this location is not supported by Council policy and does not meet the Open Space desired standards of service.

### **Community Facilities**

The proposed community centre/clubhouse equates to a Local Community Venue in Council's Social Infrastructure standards. The desired standards of service for Local Community Venues requires that it services a catchment of 5,000-10,000 people; is to have a minimum gross floor area of 300sqm; and a minimum land area of approximately 5,000sqm.

The strategic directions require a proposal for community facilities to meet the following requirements:

- 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 flood event (1 in 100);
- sites are to be in locations which encourage the reduction of private vehicle travel, that is, they are within walking and cycle distance.

The proposal offers 1.3 hectares of land for community purpose land incorporating the recreation park and the community centre which is proposed to be shared as a clubhouse, with shared car parking.

While the area of land would seem to have capacity to host these proposed functions, the size, shape and location does not meet the desired standards of service for all functions proposed. The proposal would service only a local catchment of approximately 10,000 residents and not service the district catchment as proposed. The delivery of community meeting places/venues is preferred to be located in Activity Centres which stimulate the local economy and provide a safe community meeting place accessible to residents within 3 km of the venue.

Consideration will also need to be given in relation to venue access, shared use, management arrangements and leasing that would need to be established if this proposal was to proceed.

In conclusion, a stand-alone building in an isolated area away from an Activity Centre is not supported unless the proposed use has a synergy or specific purpose with the adjoining Lower Mooloolah River Environmental Reserve and Mooloolah National Park such as an environmental education centre or nature based recreation.

- (ii) The revised proposal could be considered a duplication of facilities being delivered and planned in the adopted Network Blueprint.

The Network Blueprint (contained within Part C of the *Environment and Liveability Strategy*) provides a comprehensive plan for the delivery of infrastructure over the next 20 years to meet existing shortfalls and forecasted population needs.

Open Space and Social Infrastructure network planning considers the Sippy Downs/Chancellor Park and Palmview communities as a "locality of interest" with planning for facilities to service the local and district catchment needs. The network

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planning does not consider Palmview and Sippy Downs communities as isolated from each other.

In Council's network planning it has been identified that the current community of Sippy Downs has a shortfall of Open Space due to the configuration of the lake system, however the recently adopted *Sippy Downs Parks Master Plan* is being implemented to address these concerns.

The following infrastructure being delivered in Sippy Downs and Palmview will provide the following for these communities:

- Palmview Structure Plan will deliver 66 hectares of unconstrained (94.9 hectares constrained) Urban Open Space comprised of 26.7 hectares of sports grounds and 39.3 hectares of Recreation Park over the 15 -20 year life of the project.
- An additional District Recreation Park of approximately 3 hectares will be delivered in Sippy Downs Town Centre in the next 2 to 3 years.
- The Network Blueprint also proposes the establishment of significant sport and recreation facilities in the vicinity of Meridan Plains.
- Stage 1 of District Sports Park (DS1) in Area A is to be operational by October 2019. This will contain three multi-purpose fields and a clubhouse on 8.35 hectares which will be accessible to the District catchment.
- District Recreation Park (DR1) in Area A, with an area of 5 hectares, is to be delivered in 2019 and is to include an off-leash dog area.
- Regional Recreation Park 1-2 within Area B is to be delivered before the development of the 150<sup>th</sup> lot in Area B and is just over 500m away from Investigation Area B (North). This could be delivered earlier by the Landowner.
- 3.5 hectares is available to develop community facilities to service community needs in both the existing Sippy Downs and Palmview areas and fulfils the desired standards of service for Social Infrastructure for the forecasted population for these areas.

The catchment also hosts numerous state and private schools and the University of the Sunshine Coast, all of which provide general community access to a range of facilities including sports grounds, an aquatic centre and meeting spaces.

With regard to timing and delivery of Social Infrastructure, it is Council's priority to invest in the establishment of district level facilities first followed by local venues. This policy position enables the facilities with greatest capacity to meet needs to be delivered first.

The investigation into suitable land in Sippy Downs for a community meeting place/library is currently a high priority, and is intended to be delivered through a partnership arrangement in the next 5 years.

Within Palmview, the commencement of planning for the District Community Centre is recommended in the forward Capital Works Program for 2025/26. The land dedication for this District Community Centre may be provided earlier if current plans to develop the Palmview District Activity Centre are brought forward by the developer.

Development of the Palmview District Community Centre will be funded from a Community Facilities Fund established under the Palmview IA. The Landowners are to contribute approximately \$10 million (indexed) over the life of the project into the



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Palmview Community Facilities Account for the construction of community facilities on land contributed for this purpose or land contributed for Urban Open Space Infrastructure (refer Special Condition 1.2 of the Palmview IA).

This fund will assist in the delivery of the community venue and aquatic facility planned for the emerging Palmview District Activity Centre.

The proposal for Investigation Area B (North) could duplicate these planned projects and compete for operational and management resources which will be needed for the planned network.

The timing of the proposal to deliver a community centre in Investigation Area B (North) is unclear however due to the detailed planning requirements that would be necessary for the proposal to proceed it would seem to be a long term outcome and thereby not providing a short term outcome for the Sippy Downs community.

The proposed model of delivery is not considered to be sustainable and will impact Council financially and could become a burden to the future ratepayers.

### **Capital costs**

Landowner B has provided an estimate for the capital cost of developing the sporting field, community centre, dog park and car parking, being between \$2.3 million and \$4.6 million.

Whilst the cost estimate may be appropriate to cover the listed items, the assessment has identified a number of elements that have not been costed and it is unclear how these will be funded and by whom. These include the following:

- Community square/courtyard (1,170sqm);
- General recreation/equipment and landscaping for the Local Recreation Park;
- Field and security lighting for the sports and community facilities;
- Utility and infrastructure charges (eg. Energex and water);
- Capacity of services – 3 phase power etc;
- Internal roads, pathways and access points;
- Planning and design;
- Professional fees, contingency fees and statutory fees and charges; and
- Fit out.

Based on similar Council projects the budget of \$2.5 million is considered to be inadequate to plan and deliver the proposal without significant increase in investment or compromise on the quality of construction.

### **Operational costs**

The proposed facility is considered to have limited potential for revenue making activities due to the single use sporting field, the location and public access functions.

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The offer to contribute \$2.5 million to the development of the community facility and sporting field by the Landowner is considered a long term liability for the following reasons:

- the potential shortfall in capital funding;
- the limited ability to ensure the project is designed and delivered to a Council standard if delivered by the Landowner; and
- the ongoing management and maintenance cost implications.

Investment would be better directed to the District Sports Park being delivered in Area A in Palmview (a total of 16.7 hectares unconstrained land, made up of 8.35 hectares in Stage 1 and 8.35 hectares in Stage 2). Land dedication and the embellishment of Stage 1 is to be funded by the Landowner to the value of \$2,668,943 and to the value of \$2,668,943 for Stage 2. With cost estimates for District Level Sports facilities now estimated to be around \$6.9 million, a further investment of \$1.5 million by the Landowners would see the use of this facility maximised.

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 car parking 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 a standalone field.

Alternatively, Landowner B could bring forward the development of Regional Recreation Park 1-2 which is located in Area B. This is currently proposed to be delivered before the development of the 150th lot in Area B and is just over 500m away from the proposed development area in Investigation Area B (North).

Bringing forward the delivery of the Sippy Downs and the Palmview community venues in the appropriate locations would ensure that the capital investment is in the most suitable location and provides the intended strategic outcomes of activating town centres and creating community civic pride.

The Landowner's proposal is not considered to be a good investment for Council or the community due to the limitations, duplication and potential misdirection of funds.

- (iii) The proposal conflicts with Council's strategic policy direction of more compact and self-contained neighbourhoods, vibrant Activity Centres and ongoing protection of the natural environment.

The Palmview Structure Plan has been developed around sound planning principles relating to good urban form and self-containment creating functional neighbourhoods supported by appropriate Open Space, Social Infrastructure and Activity Centres supporting self-containment and compact living outcomes. The provision of community land uses in an isolated area not surrounded with supporting infrastructure in a vulnerable location is considered in conflict with Council's endorsed strategic policy intent for future neighbourhoods.

The Investigation Area B (North) Submission outlines a precinct which includes land proposed for community land uses and community facilities, and a sporting field surrounded by environmental and flood conveyance land. The uses proposed in the precinct include a school, retirement village or aged care use. The school use is a high traffic generator and the impact of this land use has not been addressed by the Landowner.

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The Landowner proposes that there is a likely need for two access points which would be from Peter Crosby Way and via Claymore Road, to the north as an emergency access only. The access via Claymore Road would create a more direct and accessible route to the community precinct rather than travelling through the school or retirement living.

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

The whole area of Investigation Area B (North) is identified in the Palmview 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 within the Palmview Structure Plan Area to occur.

The ongoing protection of the urban footprint within the current extent is strongly supported by the ELS, which seeks to balance the growth of the region with the natural assets. This proposal seeks to extend a residential use (retirement living) into an ecologically significant gateway to Mooloolah National Park and the Lower Mooloolah River Environmental Reserve.

The land being offered in the proposal for community use is proposed to meet Q100 flood immunity, with flood modelling indicating there are potential benefits upstream of the site. However, the modelling also indicates that there will be adverse downstream impacts on the Lower Mooloolah River Environmental Reserve, the Mooloolah River National Park and rural land to the east and south-east.

The ELS policy in respect of flooding and stormwater is clear that flood risk is managed for the wellbeing and resilience of our communities and development should not burden emergency services.

All of the proposed uses can occur within the Palmview Structure Plan Area, and to some extent are already included within the planning for the urban development envisaged by the Palmview Structure Plan. The inclusion of these uses in Investigation Area B (North) could have the effect of relocating uses from within the Palmview Structure Plan Area resulting in additional residential land within the Palmview Structure Plan Area, rather than additional Open Space and Social Infrastructure, thereby not providing any additional community benefit.

- (iv) There is no evidence in the Investigation Area B (North) Submission or need demonstrated for additional land to be rezoned for either a school or retirement/aged living outside the Palmview Structure Plan urban footprint.

The Investigation Area B (North) Submission does not provide evidence in relation to the need for additional land for either a school or retirement/aged living in this location.

The Palmview Structure Plan has allocated land for 3 school sites, complementing the existing schools and university. The Palmview Structure Plan also allows additional schools to be developed within the District Activity Centre Precinct.

Residential land is suitable for retirement living/aged care and there is currently 336.2 hectares of land available in the Palmview Structure Plan Area for this purpose.

The retirement village option is considered to be residential development and would therefore not meet the test for overriding need in the public interest as the benefit from this use can be satisfied by other land that is suitable and reasonably available.

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- (v) In conclusion, the Landowner's proposal for Investigation Area B (North) is not consistent with Council's current policy direction, desired standards of service and network planning and delivery. The proposal would deliver outcomes which are below the desired standard of service outcomes and would duplicate planned facilities and compete for funding in the long term. It is not considered a good community outcome or good financial offer for Council.

Investigation Area B (North) therefore ought not be incorporated in the land suitable for urban development as it does not satisfy an overriding need in the public interest in that it results in material offsite impacts, does not result in a significant overall benefit for a significant part of the community and any proposed benefits can be satisfied by other land that is suitable and readily available.

### **9.5. Council findings in respect of flood hazard for Investigation Area B (North)**

In conclusion, Investigation Area B (North) is flood prone land. Council has determined that it should not be incorporated in the land suitable for urban development as it does not satisfy an overriding need in the public interest as it would result in material adverse offsite impacts, it would not result in a significant overall benefit for a significant part of the community and any proposed benefit can otherwise be satisfied by other land that is suitable and reasonably available.

## **10. Land suitable for urban development for Investigation Area B (North)**

### **10.1. Assessment of land suitable for urban development in Investigation Area B (North)**

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

### **10.2. Map**

Council has determined that no land in Investigation Area B (North) is suitable for urban development and therefore this is no correlated map.

## **11. Necessary infrastructure to service the land for urban development Investigation Area B (North)**

In any event, Council has still considered the necessary infrastructure to service Investigation Area B (North) for urban development.

### **11.1. Landowner's position for Investigation Area B (North)**

- (a) Road transport infrastructure

The Investigation Area B (North) Submission identifies a 16.8m wide road connecting from a proposed signalised intersection at Peter Crosby Way in the west to Claymore Road in the east, with the eastern part proposed to be for emergency access only.

The proposal does not identify road upgrade requirements for Claymore Road (a length of approximately 1,183m) but does state that road access and sufficient car parking to accommodate the proposed community activities would be constructed at no cost to Council.

- (b) Public transport infrastructure

No information was provided in the Investigation Area B (North) Submission.

- (c) Bicycle and pedestrian infrastructure

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The concept plan in the Investigation Area B (North) Submission indicates a pedestrian bridge across the flood drainage channel in the centre of the site, however no detail or costings have been provided.

The Investigation Area B (North) Submission states that pedestrian and bicycle access will be via internal pathways that connect to existing footpaths along Peter Crosby Way, Claymore Road, Mooloolah River National Park and across Sippy Creek. No detail or costings for these have been provided.

### **(d) Water supply & sewerage infrastructure**

No information was provided in the Investigation Area B (North) Submission, but it can be reasonably assumed that water supply and sewerage infrastructure would not be a constraint to development provided that the Landowner identifies the impact of the additional loading on the existing water and sewerage infrastructure; and obtains the necessary approvals and funds and completes the works at their cost.

### **(e) Stormwater Infrastructure**

No information was provided in the Investigation Area B (North) Submission other than the flood conveyance channel that is proposed to be constructed within the buffer to Sippy Creek and which covers an area of approximately 15.8 hectares and is up to 4m deep in some parts.

### **(f) Urban open space infrastructure**

The Investigation Area B (North) Submission includes the following urban open space infrastructure:

- a single sporting field with an area of 1.8 hectares; and
- a financial contribution of \$2.5 million for the construction of playing fields, the community building and community gardens or an offer for the Landowner to construct the playing fields, building and gardens.

### **(g) Non-urban open space infrastructure**

The Investigation Area B (North) Submission proposed to retain the existing State Significant Vegetation but reduced the buffers to that vegetation and to Sippy Creek from 100m to 50m and in some areas down to 39m.

The buffer to Sippy Creek is covered by the proposed flood conveyance channel.

The Investigation Area B (North) Submission includes an ecological corridor (100m wide) along the eastern boundary of the site, but this is bisected by the proposed road corridor and also contains part of the flood conveyance channel.

### **(h) Community facilities infrastructure**

The Investigation Area B (North) Submission includes the following community facility infrastructure:

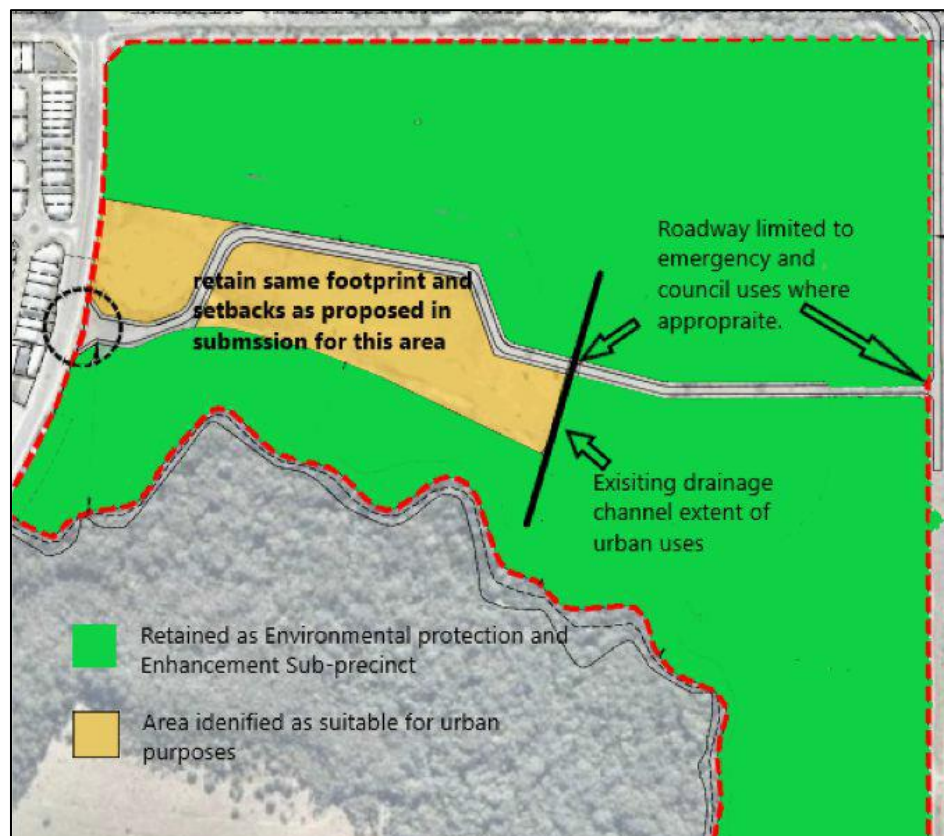
- 1.3 hectares of land for Community Facilities including a building/clubhouse (1600 sqm covered and 400sqm building), dog off-leash area (1,372sqm), car parking (2,150sqm) and community square (1,170sqm); and
- a financial contribution of \$2.5 million for the construction of playing fields, the community building and community gardens or an offer for the Landowner to construct for playing fields, building and gardens.

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### 11.2. Peer Review Report conclusion for Investigation Area B (North)

- (a) The Investigation Area B (North) Flood Hazard Peer Review did not consider that the proposal included land for residential development and as such did not consider infrastructure in respect of that use.
- (b) The Investigation Area B (North) Ecology Peer Review recommends that all required infrastructure be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services. More specifically, the peer reviewer recommended the following:
  - (i) Road transport infrastructure

Road frontage would be required to be provided on the northern edge of the area identified as suitable for urban development in **Figure 26** below, with fauna exclusion fencing provided along the length of the roadway.



**Figure 26 Indicative land suitable for urban development from Investigation Area B (North) Ecology Peer Review Report**

The Investigation Area B (North) Ecology Peer Review does not support the proposed access road on the eastern half of the site, and recommends that if it cannot be removed, that its use be limited to emergency vehicles and Council use only, and if constructed should be designed to ensure minimum impact of hydrological flows and inundation periods on retained areas.

The Investigation Area B (North) Ecology Peer Review also recommends roadway lighting be designed to reduce light spillage into adjoining habitats.

- (ii) Public transport infrastructure



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Public transport infrastructure would be required to be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.

(iii) Bicycle and pedestrian infrastructure

Bicycle and pedestrian infrastructure would be required to be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.

(iv) Water supply and sewerage infrastructure

Water supply and sewerage infrastructure would be required to be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.

(v) Stormwater infrastructure

All sediment and erosion control, bio-basins and similar infrastructure would be required to be provided within the area identified as suitable for urban purposes, including any diversion drains, temporary sediment basins and silt fences.

The existing drainage channel would be required to be retained and buffered. Refer **Figure 26** above.

Consideration would be required to be given to stormwater quality.

(vi) Urban open space infrastructure

Any recreational open space would be required to be provided within the land identified as land suitable for urban development.

(vii) Non-urban open space infrastructure

The area external to the land identified as land suitable for urban development would be required to be identified as Environmental Protection and Enhancement on Other Plans Map OPM P6 of the Palmview Structure Plan and revegetated with native flora to reflect the naturally occurring ecosystems of the local landscape and be guided by a detailed landscape management plan.

The existing drainage channel would be required to be retained and buffered. Refer **Figure 26** above.

(viii) Community facilities infrastructure

Community facilities infrastructure would be required to be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.

### **11.3. Council necessary infrastructure assessment for Investigation Area B (North)**

- (a) An assessment has been undertaken of the necessary infrastructure under the Palmview Structure Plan, which requires consideration of the following infrastructure networks:

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- (i) Road transport infrastructure
  - (ii) Public transport infrastructure
  - (iii) Bicycle and pedestrian infrastructure
  - (iv) Water supply and sewerage infrastructure
  - (v) Stormwater infrastructure
  - (vi) Urban open space infrastructure
  - (vii) Non-urban open space infrastructure
  - (viii) Community facilities infrastructure
- (b) Road transport infrastructure
- (i) Permanent road access (16.8m wide consistent for local access streets elsewhere in the Palmview Structure Plan Area) would be required to Claymore Road via the eastern boundary of the site, in addition to any access to Peter Crosby Way to the west of the site to avoid a ‘cul-de-sac’ development. However, this is in considerable conflict with the ecological outcomes for the site which seek to avoid barriers or conflicts to fauna movement and the maintenance of hydrological flows in this ecological corridor.
  - (ii) Claymore Road would be required to be upgraded to a two-way, two lane road, with sealed shoulders, for the length between the intersection with Peter Crosby Way to the north and the site access to the east, being an additional 1,183m (**Figure 27**). This would increase the development cost of the proposal.



**Figure 27 Additional road requirements**

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- (iii) The proposed intersection to Peter Crosby Way would be required to be signalised, for vehicular and pedestrian safety. The location of this intersection should be a minimum of 300m from the University Way signalised intersection, which should also result in it being clear of the existing left turn lane into Flame Tree Pocket.
  - (iv) Road frontage (16.8m wide consistent with local access streets elsewhere in the Palmview Structure Plan Area) is to be provided on the outer edges of the developable area and this road frontage is to include provision of a 5m verge on the outer edge as additional buffer to retained areas. This is important for the management of fire, tree fall and weeds.
  - (v) Roadway lighting should be designed to reduce light spillage into adjoining habitats.
  - (vi) Fauna exclusion fencing is included within the outer verge area.
- (c) Public transport infrastructure
- Public transport infrastructure would be required to be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.
- (d) Bicycle and pedestrian infrastructure
- A shared path through the north-west of the site would be required to provide a direct pedestrian/cycle connection to the University Way/Peter Crosby Way intersection which currently exists along Peter Crosby Way, but would need to be provided within the area considered suitable for urban development and not within the buffer area.
- There would be no ability to provide appropriate public access via tracks and trails to enhance the recreation opportunities connecting through areas which have been designed and constructed to function as flood hazard management areas.
- (e) Water supply and sewerage infrastructure
- Any water supply and sewerage infrastructure is to be located entirely within the area identified as suitable for urban purposes.
- To the extent that the additional water and sewer loads require augmentation, upsizing or bringing forward of the existing infrastructure, the Landowner would be required to obtain the necessary approvals and funds, and complete the works at its cost.
- (f) Stormwater infrastructure
- (i) PO26(j) of the Palmview Structure Plan requires that Stormwater Infrastructure, including treatment, conveyance and storage be located, within Non-Urban Open Space Infrastructure other than in an Environmental Transition Area which does not form part of the buffer to the ecologically important area. There are no Environmental Transition Areas in Investigation Area B (North). This means that the proposed conveyance channel in the buffer to Sippy Creek and the State Significant Vegetation would not comply and would be in conflict with PO26(j) of the Palmview Structure Plan.
  - (ii) All sediment and erosion control, bio-basins and similar infrastructure would be required to be provided within the area identified as suitable for urban purposes, including any diversion drains, temporary sediment basins and silt fences.

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- (iii) The existing drainage channel would be required to be retained and buffered. Refer **Figure 28**.
- (g) Urban open space infrastructure
  - (i) Appropriate urban open space infrastructure has been included within the Palmview Structure Plan to service the residents of the Palmview Structure Plan Area and surrounding catchments in accordance with Council's Desired Standards of Service.
  - (ii) The allocation of land for urban open space as proposed by the Landowner is not consistent with Council's current policy direction, desired standards of service, and network planning and delivery.
- (h) Non-urban open space infrastructure
  - (i) The proposed development footprint includes buffers to the State Significant Vegetation and waterways which are less than what is required under the Palmview Structure Plan. The Palmview Structure Plan requires that the buffers to the State Significant Vegetation in the north-west of the site be 100m rather than the proposed 50m.
  - (ii) The buffer to Sippy Creek and the State Significant Vegetation should be maintained at 100m as required under the Palmview Structure Plan, with the buffer applied to the edge of State Significant Vegetation or to the defined high bank. Council does not believe it is reasonable to reduce the buffer width to as low as 39 metres in some places as proposed in the Investigation Area B (North) Submission.
  - (iii) In addition, road frontage should be provided on the edge of any proposed residential/school development if it is determined the land is suitable for such uses.
  - (iv) Investigation Area B (North) forms part of the 483ha of land to be dedicated to Council for ecological protection in accordance with the Palmview Structure Plan and the Palmview IA. If this area is to be considered suitable for development, the equivalent area (and any identified offset requirements) would need to be provided by the Landowner within the vicinity of the Palmview Structure Plan Area.
  - (v) In accordance with the Palmview Structure Plan and the Palmview IA, Landowner B is required to provide 71.1 hectares of land for ecological protection and rehabilitation based on the current development footprint (chargeable area) of 53.5 hectares. If the chargeable area increases as a result of additional land being considered suitable for urban purposes, additional land will be required to be provided for ecological protection and rehabilitation to maintain the 483.4 hectares overall requirement.
  - (vi) Landowner B will be able to achieve this within their current land holdings, however, it would mean that the land within Area B that was intended to be purchased by both Landowner A and C (at a total cost of over \$2.9m) to achieve their requisite dedication of land for ecological protection and enhancement would need to be purchased in a location that has a nexus to the Palmview Structure Plan Area instead.
  - (vii) Fauna exclusion fencing would be required to separate residential areas from ecologically important areas, along with other relevant fauna sensitive design features.
- (i) Community facilities infrastructure
  - (i) Appropriate community facilities infrastructure has been included within the Palmview Structure Plan to service the residents of the Palmview Structure Plan Area and surrounding catchments in accordance with Council's desired standards of service.

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- (ii) The allocation of land for community facilities infrastructure as proposed by the Landowner is not consistent with Council's current policy direction, desired standards of service, and network planning and delivery.

**12. Investigation Area B (North) Assessment**

**12.1. Land suitable for urban development for Investigation Area B (North)**

- (a) In respect of whether Investigation Area B (North) is an ecologically important area under Special Condition 2.2(a) of the Palmview IA, Council considers the portion of Investigation Area B (North) west of the existing drainage channel shown as suitable for urban purposes on **Figure 28** is land suitable for urban development subject to the following requirements:
  - (i) provision of a 100m buffer to the remnant vegetation in the north-western corner of the site;
  - (ii) provision of a minimum 100m buffer along the full extent of Sippy Creek;
  - (iii) no conveyance channel is located within the 100m buffers;
  - (iv) all sediment and erosion control, bio-basins and similar infrastructure are to be provided within the area identified as suitable for urban purposes, including any diversion drains, temporary sediment basins and silt fences;
  - (v) buffering of the existing drainage channel in the middle of the site and the rehabilitation of all land to the east of the drainage channel;
  - (vi) development is limited such that there is no requirement for a road connection (emergency or other) through to Claymore Road on the eastern boundary.
  - (vii) any road does not go further east than the existing drainage channel and provides frontage to the State Significant Vegetation in the north-western corner of the site;
  - (viii) development should be limited to compatible recreation uses where consistent with the primary function of the ecologically important areas;
  - (ix) any lighting is designed to reduce light spillage into adjoining habitats.

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**Figure 28 Area suitable for urban development following ecologically important area assessment and including necessary road infrastructure**

- (b) In respect of whether Investigation Area B (North) is a flood hazard under Special Condition 2.2(b) of the Palmview IA, Investigation Area B (North) is flood prone land. Council has determined that it should not be incorporated in the land suitable for urban development as it does not satisfy the overriding need in the public interest as it would result in material adverse offsite impacts, it would not result in a significant overall benefit for a significant part of the community and any proposed benefit can otherwise be satisfied by other land that is suitable and reasonably available.
- (c) Council has therefore determined that no land in Investigation Area B (North) is suitable for urban development.

## 12.2. Necessary infrastructure to service the land for urban development for Investigation Area B (North)

Council has assessed the necessary infrastructure to service the land for urban development, which is discussed in section 11 above. Such assessment is however irrelevant as Council has determined that no land in Investigation Area B (North) is suitable for urban development.

## 12.3. Council findings for Investigation Area B (North)

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



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**Part C Investigation Area B (South)**

**13. Urban Development Investigation material for Investigation Area B (South)**

**13.1. Landowner's documents for Investigation Area B (South)**

- (a) Landowner B carried out investigations for Investigation Area B (South), to determine whether the relevant investigation area is land suitable for urban development in the Palmview Structure Plan Area.
- (b) Landowner B gave to the Council on 1 April 2017 a Notice stating the results and technical basis for the results of the Urban Development Investigation of Investigation Area B (South) (**Investigation Area B (South) Urban Development Investigation Results**).
- (c) The Council requested from Landowner B on 23 October 2017 further information with respect to the Investigation Area B (South) Urban Development Investigation Results, which was provided by Landowner B on 22 September 2017 (**Investigation Area B (South) Further Information**).
- (d) Landowner B gave to the Council on 29 October 2018 a submission in respect of the Draft Assessment Report and Draft Determination (**Investigation Area B (South) Submission**), which comprised the following:
  - (i) IPS Submission, October 2018, which included revised concept plans, community facility concept plans, landscape concept package, drone photo overlays, proposed replacement Other Plans Map OPM P6 and preliminary cost estimates (**IPS Report**);
  - (ii) JWA Ecological Report, October 2018 (**JWA Report**);
  - (iii) Allan & Dennis Flood Hazard Mitigation and Stormwater Management Plan October 2018 (**Allan & Dennis Flood Study Report**)
  - (iv) USC Compensatory Habitat Project Report, undated.
- (e) Landowner B gave to the State on 28 February 2019 and to Council on 6 March 2019 supplementary information following a site meeting with the State (**Investigation Area B Supplementary Information**)

**13.2. Peer Review Reports for Investigation Area B (South)**

- (a) Council appointed on 17 December 2018 independent peer reviewer Adrian Caneris, BAAM Ecology, to undertake a peer review (ecological assessment) with respect to Investigation Area B (South).
- (b) Council appointed on 20 December 2018 independent peer reviewer Mark Babister, WMA Water, to undertake a peer review (flood hazard assessment) with respect to Investigation Area B (South).
- (c) The peer review (ecological assessment) for Investigation Area B (South) was provided to Council and Landowner B on 7 February 2019 (**Investigation Area B (South) Ecology Peer Review**).
- (d) The peer review (flood hazard assessment) for Investigation Area B (South) was provided to Council and Landowner B on 14 February 2019 (**Investigation Area B (South) Flood Hazard Peer Review**).

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- (e) Council advised Landowner B on 12 March 2019 that it could make a representation with respect to the Investigation Area B (South) Ecology Peer Review and the Investigation Area B (South) Flood Hazard Peer Review (**Investigation Area B (South) Peer Review Reports**) by 18 March 2019.
- (f) Landowner B sought and was granted an extension of time to provide its representations with respect to the Investigation Area B (South) Peer Review Reports until 29 March 2019 and then to 2 April 2019.
- (g) Landowner B provided to Council on 2 April 2019 its representations with respect to the Investigation Area B (South) Peer Review Reports.

### **13.3. State ecologically important areas assessment for Investigation Area B (South)**

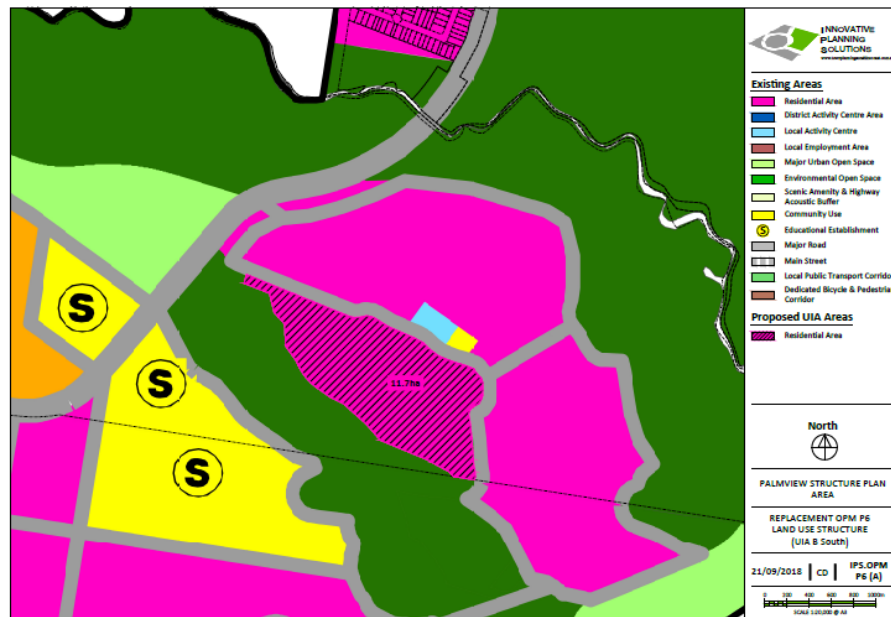
- (a) Council sent a letter to the Department of State Development, Manufacturing, Infrastructure and Planning on 12 December 2018 seeking the State’s consideration of the Investigation Area B (South) Submission and the provision of written advice to Council with respect to whether the State determined Investigation Area B (South) to be an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview IA.
- (b) Landowner B gave to the State on 28 February 2019 and to Council on 6 March 2019, supplementary information to address matters that were the focus of discussions at a site visit held with the State on 16 January 2019. This information also provided a brief summary of relevant parts of the proposal that were detailed in the Investigation Area B (South) Submission, provided to the State on 12 December 2018.
- (c) Council received on 29 May 2019 written advice from the State in relation to Investigation Area B (South). (**Attachment 7**)

## **14. Ecologically important area assessment for Investigation Area B (South)**

### **14.1. Landowner's position for Investigation Area B (South)**

- (a) The Landowner acknowledges that Investigation Area B (South) is an ecologically important area, being an area containing State Significant Vegetation.
- (b) The Landowner proposes to “translocate” up to 10 hectares of the State Significant Vegetation (heathland vegetation - RE 12.3.13) within Investigation Area B (South) to a suitable offset site in the surrounding area. The Landowner submits that the translocation proposal will result in a far superior environmental outcome (**Figure 29**).

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**Figure 29 Landowner B (South) area proposed to be translocated**

**14.2. Investigation Area B (South) Ecology Peer Review**

**14.2.1. Conclusions**

(a) The Investigation Area B (South) Ecology Peer Review states the following conclusions:

(i) Based on the site visit, Investigation Area B (South) is comprised of the following:

- (A) to the west and south - *Melaleuca quinquenervia* open forest, in very good condition and provides very high habitat values within the local landscape;
- (B) over the majority of the area - closed heathland on seasonally waterlogged alluvial plains, in excellent condition and containing a notable variety of native floristic values for this ecosystem.

(ii) The Landowner's submission that translocating the heathland would result in a far superior environmental outcome is flawed for the following reasons:

(A) *Current values* - the heathland has existing extant ecological values, in that:

- (i) there are long-term strategic connections provided for by the Environmental Protection and Enhancement Sub-precinct (page 6, second last paragraph);
- (ii) the area provides important habitat values, particularly for the significant frog species (page 7, paragraph 1);
- (iii) "[g]iven the ecological importance of this heathland (wallum swamp/palustrine wetland) and associated conservation significant species and its current status as remnant vegetation and identification as essential habitat, there is no dispute as to Investigation Area B (South) comprising an ecologically important area" (page 10, paragraph 3).

(B) *Proposed translocation* - the proposed translocation would not result in a far superior outcome, in that:

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- (i) it is extremely unlikely that any selected location would be more suitable than the existing location (page 7, paragraph 2);
  - (ii) it is fraught with many potentials for failure or low success (page 7, paragraph 2);
  - (iii) there are significant fauna in the locality, being the wallum rocket-frog and the wallum sedge-frog (page 7, paragraph 3);
  - (iv) there is mapped essential habitat for the wallum rocket-frog in the locality (page 7, paragraph 3);
  - (v) Special Condition 2 of the Palmview IA does not provide for translocation and, even if it did, the proposal here is not a superior ecological outcome and, at best, is a secondary option to be explored where translocation could not be avoided (page 7, paragraph 5).
- (C) *Offset* - the proposed translocation involves an offset area which:
- (i) does not exist for these purposes in the proposed location (page 7, paragraph 4);
  - (ii) is of a different broad vegetation group and not suitable for these purposes (page 7, paragraph 4);
  - (iii) has already been allocated as an environmental mitigation/offsetting area for other projects and is therefore inappropriate to be "reused" as an offset area (page 7, paragraph 4).
- (iii) *Clearing* - the proposed clearing would involve clearing under the *Vegetation Management Act 1999* and would trigger the requirements for an offset under the *Environmental Offsets Act 2014* which would require an additional offset area or financial offset (page 7, paragraph 5).
- (i) The Investigation Area B (South) Ecology Peer Review concludes all of the investigation area currently under review is not suitable for urban development as it is an ecologically important area; and even if Special Condition 2 of the Palmview IA enabled the consideration of a translocation proposal, which it does not, the translocation proposal does not provide a superior ecological outcome.

### **14.2.2. Council response to Landowner's representations on Investigation Area B (South) Ecology Peer Review**

- (a) Landowner B raised a number of issues with respect to the Investigation Area B (South) Ecology Peer Review. Council has considered these issues and made comment in **Attachment 5** to this report.
- (b) Council's assessment has taken into consideration relevantly both the Investigation Area B (South) Ecology Peer Review and the Landowner's representations.

### **14.3. State ecologically important area assessment for Investigation Area B (South)**

- (a) In accordance with the Urban Development Investigation Process, Council passed a resolution with respect of the Draft Determination on 19 July 2018.
- (b) Council gave to Landowner B on 30 July 2018 a Notice with respect to the Draft Determination, which was accompanied by the Draft Assessment Report.

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- (c) The Draft Assessment Report included the State's draft assessment with respect to Urban Investigation Area B (South), which concluded that Investigation Area B (South) was an ecologically important area, and that development of the site and the translocation proposal would not be supported.
- (d) The State offered, and Landowner B accepted, briefings with respect to the Draft Assessment Report.
- (e) In that respect, the following briefings between the State and Landowner B occurred:
  - (i) On the 17 August 2018, the State provided Landowner B with a briefing on the technical basis for the Draft Determination and Assessment Report.
  - (ii) On 14 September 2018, the State provided a further briefing to Landowner B and its consultants.
- (f) Council provided to the State on 12 December 2018 a copy of the Investigation Area B (South) Submission and other relevant information and asked the State to consider the material and provide formal written advice to the Council whether the State, having regard to an instrument, law, policy, code, resolution or documents it considers appropriate, determines Investigation Area B (South) to be an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview Infrastructure Agreement.
- (g) The Council advised that the documents provided to the State are relevant to, but do not limit, the State's consideration of Investigation Area B (South).
- (h) The Council requested that the State provide its written determination of whether Investigation Area B (South) is an ecologically important area and the reasons for the determination.
- (i) To that end, Landowner B sought to engage with the State with respect to Investigation Area B (South) Submission and attended a site visit with the relevant officers from the State on 16 January 2019.
- (j) Further, Landowner B provided supplementary information to the State to address matters that were the focus of discussions at the site visit and to provide a brief summary of the relevant parts of the proposals that were detailed in Landowner B's Submission.
- (k) Landowner B provided the supplementary information to the State on 28 February 2019.
- (l) Having received the Landowner B's Submission, attended the site visit with Landowner B and received the further information from Landowner B, the State on 29 May 2019 (**Attachment 7**) has relevantly advised as follows:
  - (i) This request is taken to be a pre-lodgement request for a potential planning scheme amendment process and is limited to the state interest pertaining to ecological matters;
  - (ii) The ecological values within the Palmview Master Planned Area, are deemed to be correctly reflected in the Sunshine Coast Planning Scheme 2014;
  - (iii) The submitted information has not changed the position of the state government in relation to this matter;
  - (iv) Should the council wish to propose an amendment to the planning scheme to allow further urban development at Palmview, the amendment would be subject to a state interest review which would involve a technical assessment as required under the State Planning Policy, regional plan and the relevant legislation; and

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- (v) Whilst it is noted that this response relates to a very narrow state interest focus, any amendment would need to address all the state interests relevant to an amendment
- (m) As such, the State has determined under Special Condition 2.2(a)(ii) of the Palmview IA that that the ecologically important areas as specifically identified on Other Plans Map OPM P2(b) Palmview Master Planned Area Ecologically Important Areas are correctly mapped as ecologically important areas.

### **14.4. Council ecologically important area assessment Investigation Area B (South)**

- (a) Council's ecological assessment of Investigation Area B (South) has been for that part of the Investigation Area identified by Landowner B as considered suitable for urban development as indicated on **Figure 11**.
- (b) Investigation Area B (South) contains an area of remnant heath vegetation (RE 12.3.13) of approximately 10 hectares. The JWA Report confirms that the area is an ecologically important area because it contains State Significant Vegetation. This is reconfirmed in the Investigation Area B (South) Ecology Peer Review which also notes that more than 90% of the area contains intact remnant vegetation and is likely to support threatened species.
- (c) The JWA Report identifies all vegetation communities identified on the site as being in either good or excellent condition. Investigation Area B (South) is also considered to be of sufficient size to function effectively as a viable bushland reserve in its own right. With Investigation Area C in place, Investigation Area B (South) will also provide connectivity south to the Mooloolah River. Connectivity to the north (ie. to Sippy Creek, via the wildlife crossing infrastructure already installed at Peter Crosby Way) would also be maintained (for more mobile species in particular), contrary to the JWA Report which states it has "limited connectivity".
- (d) The Landowner states concerns with sustaining Investigation Area B (South)'s ecological values given surrounding urban development. Buffer widths to Investigation Area B (South) and buffer design may therefore need to be reconsidered (ie. increased width) to ensure the buffer is able to sufficiently serve its purpose of limiting impacts from adjacent land uses.
- (e) Council supports the findings of the Investigation Area B (South) Ecology Peer Review being, in particular, the following:
  - (ii) all of the investigation area is not suitable for urban development as it is an ecologically important area;
  - (iii) even if Special Condition 2 of the Palmview IA enabled the consideration of a translocation proposal, which it does not, the translocation proposal does not provide a superior ecological outcome.
- (f) The Landowner proposes to translocate up to 10 hectares of the State Significant Vegetation (RE 12.3.13 heathland vegetation) to a suitable site in the surrounding area and proposed three alternative offset sites, namely the Council owned Lower Mooloolah River Environmental Reserve, the University of the Sunshine Coast and the Strawberry Farm.
- (g) Council notes however that the Investigation Area B (South) Ecology Peer Review provided comment in relation to only one of the three proposed offset sites, being the Lower Mooloolah River Environmental Reserve. Council notes that the Landowner has proposed two other sites, being the University of the Sunshine Coast site and the Strawberry Farm site.
- (h) In relation to the Lower Mooloolah River Environmental Reserve, the proposal to use this as a receiving site fails to recognise that this area is already included in the 483.4 hectares to be dedicated to Council and is already a receiving site for other projects, based on the Vegetation Management Plan for the Lower Mooloolah River Environmental Reserve prepared for Council

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by Stringybark Consulting proposes the appropriate vegetation types and locations of revegetation appropriate to the soil types and habitat connectivity required. This management plan does not propose RE 12.3.13 heathland vegetation in the mix of communities to be restored.

- (i) In relation to the University of the Sunshine Coast site, there is no indication in the JWA Report that land is available on the University of the Sunshine Coast site to accommodate the vegetation proposed to be translocated or any agreement to utilise any land the University of the Sunshine Coast may have. There is also no evidence of the protective tenure that is required to ensure the protection in perpetuity for any translocated heath vegetation to the university site.

In addition, Council notes that the findings of the USC Compensatory Habitat Report being that "*Element 2 – Compensatory Habitat – Fauna – It would appear that this element was the least well considered with respect to the whole project*". This is an important consideration as a functioning ecological habitat is incomplete without fauna.

- (j) In relation to the proposed Strawberry Farm site, Laxton Road, Palmview, no detail as to the suitability of this site as a potential heath translocation receiving site was available at the time of preparation of this Final Assessment Report. Council is therefore unable to complete a detailed assessment of the Strawberry Farm site.

Council is of the view however that even if Special Condition 2 of the Palmview IA enabled the consideration of a translocation proposal, which it does not, the Strawberry Farm site is not likely to be a suitable translocation site for the following reasons:

- (i) The land is not currently in the ownership of the Landowner, and there is a risk that an agreement will not be reached with the Landowner for purchase.
  - (ii) There is a long history of intensive horticulture on the Strawberry Farm site, including the likely application of chemicals and fertilisers, which may not be conducive to the translocation of native vegetation.
- (k) Other relevant considerations in respect of the Strawberry Farm site would be as follows:
    - (i) suitability of on-site soil conditions;
    - (ii) pre-clearing vegetation type; and
    - (iii) the requirement for a lengthy translocation, habitat restoration, and on-maintenance period which would remain the responsibility of the Landowner until such time as any agreed standards were met.
  - (l) If the translocation were to be supported, the Palmview Structure Plan requires an environmental offset for the State Significant Vegetation (RE12.3.13 heathland vegetation) to be offset at a 1.5 : 1 multiplier.
  - (m) In conclusion, Investigation Area B (South) is mapped as 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 Council has determined that Investigation Area B (South) is an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview IA, and therefore it is not considered suitable for urban development.
  - (n) For completeness however Council officers considered the translocation proposals and determined that the retention and management of the heath in-situ in Investigation Area B (South) provides the best option for the long-term viability of the flora and fauna supported by the heath community.



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## 14.5. Council findings in respect of ecologically important areas for Investigation Area B (South)

Council's finding is that Investigation Area B (South) is not considered suitable for urban development because it is included in an ecologically important area as specifically identified on Other Plans Map OPM P2(b) (Palmview Master Planned Area Ecologically Important Areas) of the Palmview Structure Plan and Council has determined that it is an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview IA.

## 15. Flood hazard assessment for Investigation Area B (South)

### 15.1. Landowner's position for Investigation Area B (South)

- (a) The Landowner acknowledges that some of Investigation Area B (South) is flood prone land for the purpose of Special Condition 2.2 (b) of the Palmview IA.
- (b) The Landowner submits that it has demonstrated that a significant part of Investigation Area B (South) is not flood prone land and that it is within those areas that the Landowner proposes urban development, being an area of approximately 11.7 hectares.

### 15.2. Investigation Area B (South) Flood Hazard Peer Review

#### 15.2.1. Conclusions

- (a) The Investigation Area B (South) Flood Hazard Peer Review states the following conclusions:
  - (i) The impact mapping shows there are small increases in flood levels (up to 0.25m) confined to the site for the 1% AEP regional flood event. These impacts increase in extent in the 0.2% AEP flood event and are significant in the PMF regional flood event. Impact mapping provided for the local flood event show increases in flood levels cover a larger area of the site for the 1% AEP local flood event.

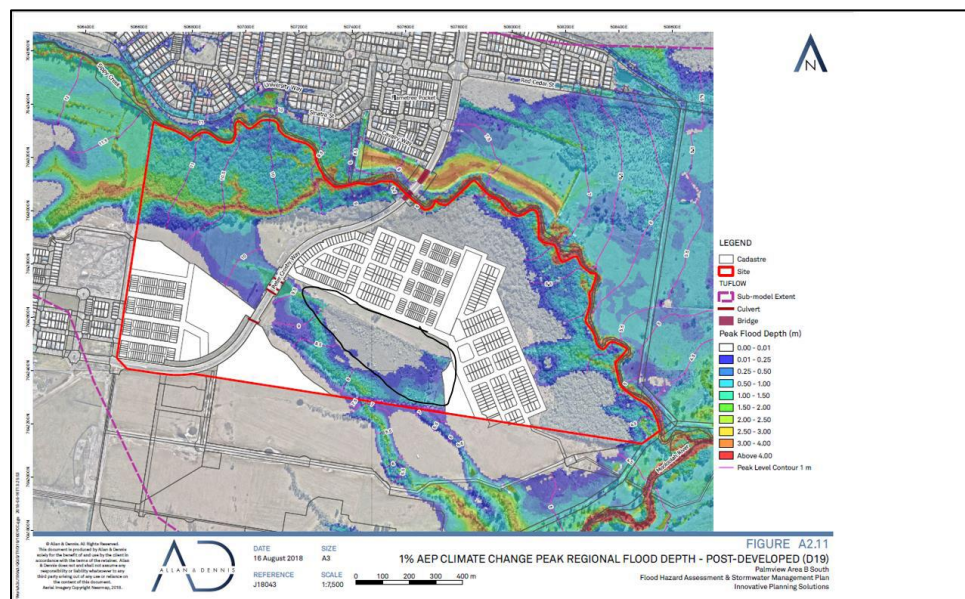
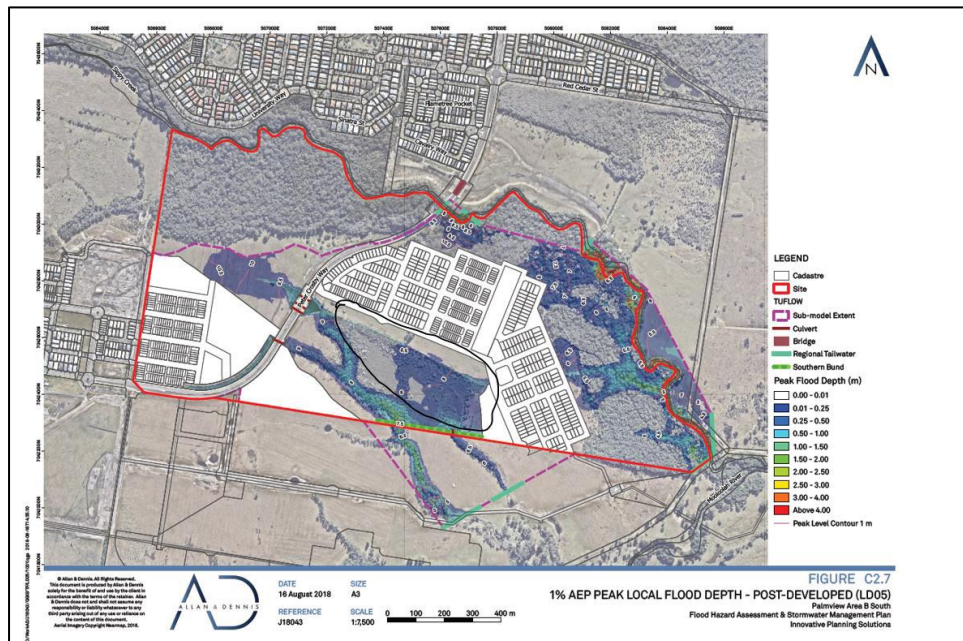


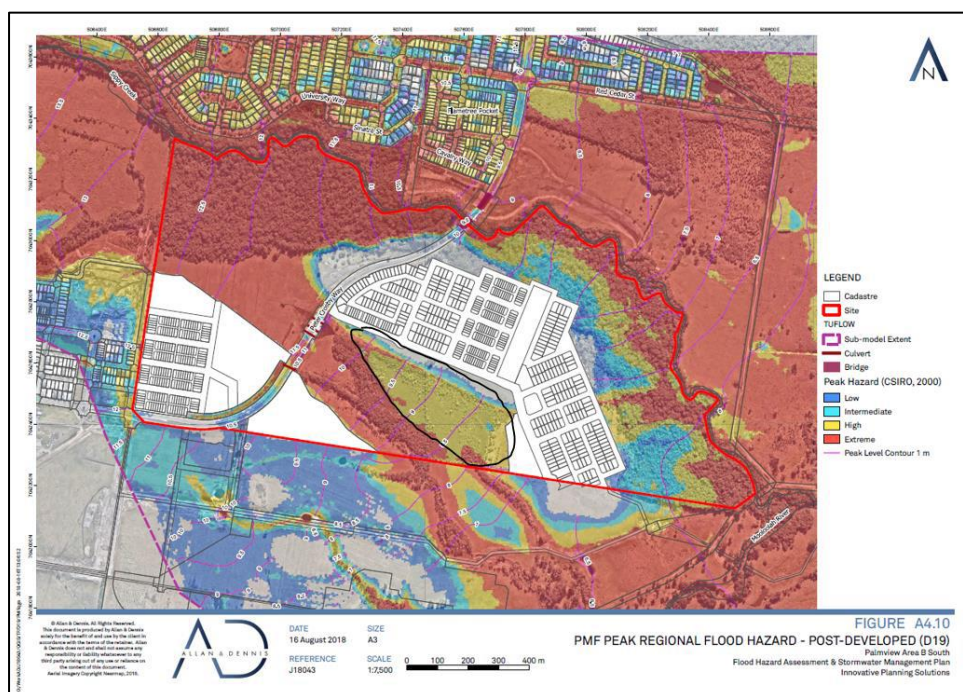
Figure 30 1% AEP Climate Change Peak Regional Flood Depth - Figure taken from Allan & Dennis Flood Study Report in the Investigation Area B (South) Submission

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**Figure 31 1% AEP Peak Local Flood Depth - Figure taken from the Allan & Dennis Flood Study Report in the Investigation Area B (South) Submission**

- (ii) The flood modelling does not include the flood impacts if Investigation Area B (South) was developed as proposed or if any of the other investigation areas were developed.
- (iii) The mapping in **Figure 30** and **Figure 31** above indicate parts of Investigation Area B (South) that may be inundated in both the 1% AEP climate change regional flood event and the 1% AEP local flood event for the post-developed case. The majority of the site is within the 0.2% AEP regional flood extent and completely inundated in the PMF regional flood extent (see **Figure 32** below).



**Figure 32 PMF Peak Regional Flood Hazard - Figure taken from Allan & Dennis Report in the Investigation Area B (South) Submission**

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- (iv) Emergency flood evacuation is via Peter Crosby Way, which leads to a flooded, isolated area above the PMF that would need a means to provide resupply to this area and a plan should there be medical emergencies.
- (b) The Investigation Area B (South) Flood Hazard Peer Review states the following recommendations:
  - (i) The part of Investigation Area B (South) that is not flood prone land as defined in the Palmview Structure Plan can be considered suitable for urban development from a flood hazard perspective, subject to the following:
    - (A) the land proposed for residential development be reduced to exclude the area inundated by the 1% AEP climate change regional and local flood event;
    - (B) consideration be given to the emergency management requirements for the residents of Investigation Area B (South);
    - (C) mapping be provided for the design surfaces and flood level difference maps including the proposed development for Investigation Area B (South); and
    - (D) confirmation that the impacts identified as a result of the proposed filling do not result in unacceptable impacts on ecologically important areas.

### **15.2.2. Council response to Landowner’s representations on Investigation Area B (South) Flood Hazard Peer Review**

- (a) Landowner B raised a number of issues with respect to the Investigation Area B (South) Flood Hazard Peer Review. Council has considered these issues and made comment in **Attachment 5** to this Final Assessment Report.
- (b) Council's assessment has taken into consideration relevantly both the Investigation Area B (South) Flood Hazard Peer Review and the Landowner’s representations.

### **15.3. Council flood hazard assessment for Investigation Area B (South)**

- (a) The Allan & Dennis Flood Study Report considers the impacts of development adjacent to Investigation Area B (South) within the current urban footprint but does not consider the impacts of developing Investigation Area B (South). Council sought clarification from the Landowner as to whether the impacts of developing Investigation Area B (South) had been considered. The Landowner confirmed they had not.
- (b) The local area model shows an increase in on-site flooding within Investigation Area B (South). This is associated with stormwater detention as a result of the inclusion of a bund along the southern boundary of Investigation Area B (South) and Investigation Area C (refer to the green line in **Figure 33** below).

The bund has been placed on the southern boundary of the site to manage offsite impacts and ensure no worsening for Investigation Area C. However, onsite detention will occur behind this bund and the Landowner proposes residential development for Investigation Area B (South) at this location.

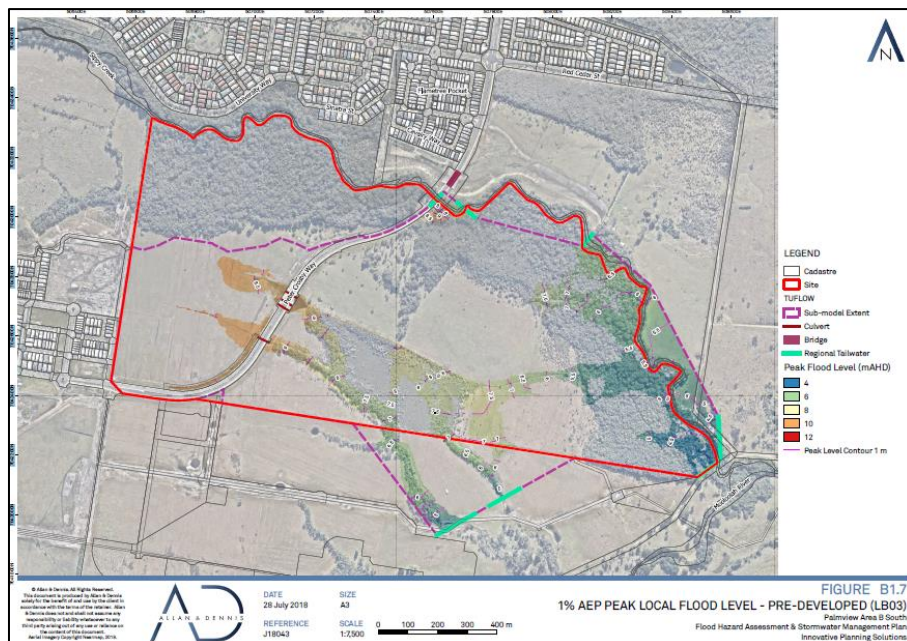


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**Figure 33 Proposed bund in Investigation Area B (South) from Allan & Dennis Flood Study Report**

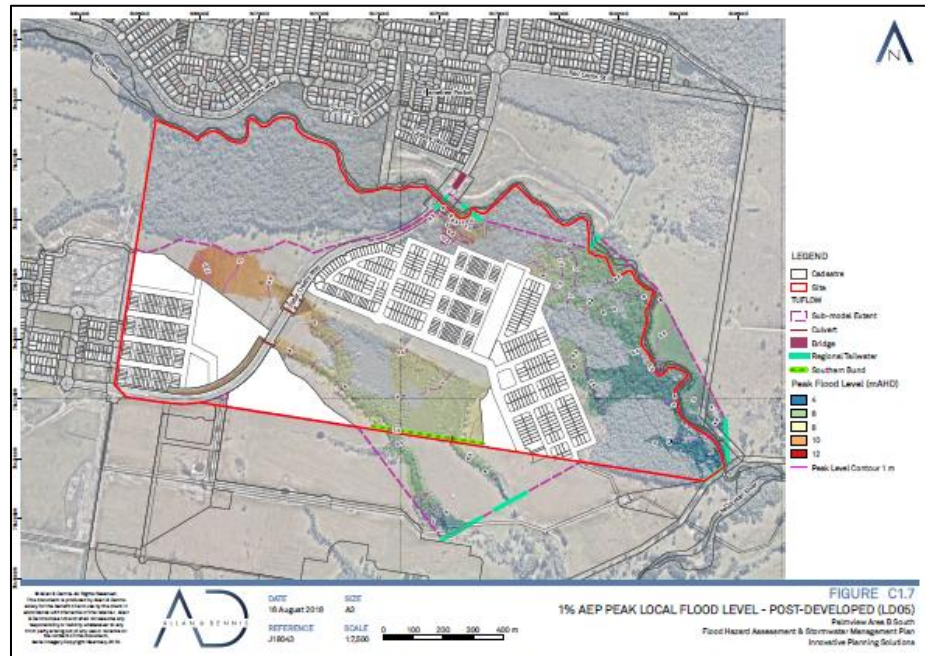
- (c) The 1% AEP pre-development flood mapping showing in **Figure 34** indicates that the finer resolution modelling identifies new locations subject to flooding within Investigation Area B (South) that the coarser resolution model had not previously shown. These newly identified flood affected areas are relevant in assessing the flood requirements of the Palmview Structure Plan.



**Figure 34 1% AEP pre-development flood mapping - Fig B1.7 from Allan & Dennis Flood Study Report**

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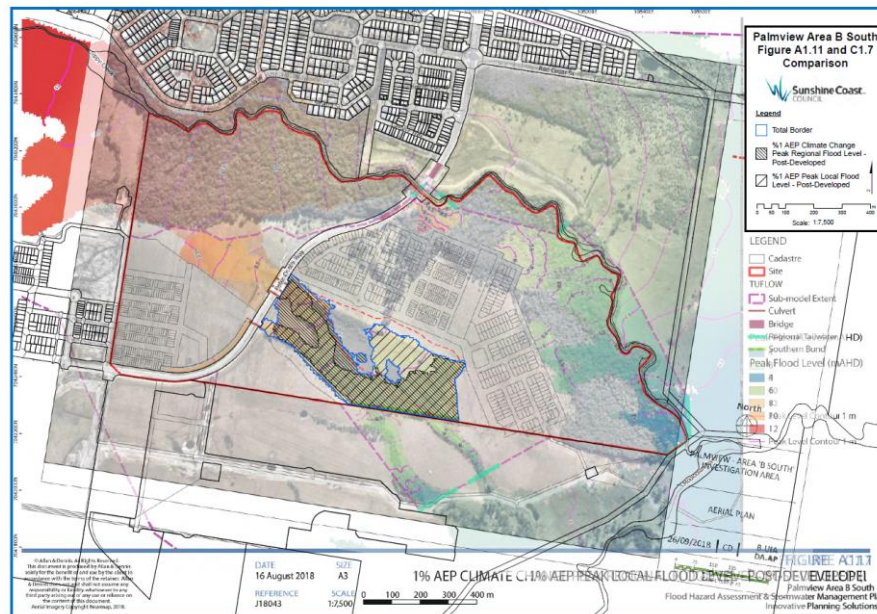
**Figure 35** therefore shows that Investigation Area B (South) is flood prone land under the Palmview Structure Plan. The Allan & Dennis Flood Study Report has not considered the impacts associated with the proposed residential areas of Investigation Area B (South), and therefore it has not been demonstrated how Investigation Area B (South) could be developed without material adverse impacts.



**Figure 35 1% AEP Peak Local Flood Level - Figure C1.7 of Allan & Dennis Flood Study Report**

- (d) The Investigation Area B (South) Flood Hazard Peer Review also identifies that land proposed for mixed residential development in Investigation Area B (South) appears to be shown to be flooded by the DFE mapping of the local area flood model, and recommends that the footprint for mixed residential development be reduced to avoid this flooding. Council also observed this conflict and supports the recommendation by the peer reviewer.
- (e) In conclusion, flooding constraints significantly impede the development potential of Investigation Area B (South). The overlapping flood extents of Figures A1.11 and C1.7 in the Allan & Dennis Flood Study Report (hatched area in **Figure 36** below) show most of Investigation Area B (South) to be flood affected and this may increase further when the DFE is considered for local area flooding.

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**Figure 36 Overlapping Flood Extents - Fig A1.11 and C1.7 from Allan & Dennis Flood Study Report**

**15.4. Overriding need assessment for Investigation Area B (South)**

- (a) The proposal for Investigation Area B (South) is for residential development only, with an estimated yield of 200 dwellings.
- (b) Council has determined that there is no overriding need in the public interest for residential development in this location as any benefit can otherwise be satisfied by other land that is suitable and reasonably available for residential development.

**15.5. Council findings in respect of flood hazard for Investigation Area B (South)**

Investigation Area B (South) is predominantly flood prone land. There is an area of the site that is not identified as being flood prone land but this may become flood affected when the DFE is considered for local area flooding.

**16. Land suitable for urban development for Investigation Area B (South)**

**16.1. Assessment of land suitable for urban development in Investigation Area B (South)**

- (a) In respect of whether Investigation Area B (South) is an ecologically important area under Special Condition 2.2(a) of the Palmview IA, Council considers all of Investigation Area B (South) is an ecologically important area and not suitable for urban development.
- (b) Council has considered the translocation proposal submitted by the Landowner even though it is not required to be considered under Special Condition 2 of the Palmview IA. Council officers have determined that it does not provide a superior ecological outcome and therefore Council does not support the proposal.
- (c) Council has determined that Investigation Area B (South) is predominantly flood prone land and that the portion of the site that is not flood prone land is an ecologically important area.
- (d) Council therefore does not consider Investigation Area B (South) suitable for urban development.



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### **16.2. Map**

Council has determined that there is no land within Investigation Area B (South) that is suitable for urban development and therefore there is no correlated map.

## **17. Necessary infrastructure to service the land for urban development for Investigation Area B (South)**

### **17.1. Landowner's position for Investigation Area B (South)**

The Landowner has not provided any information with respect to the provision of necessary infrastructure to service the land for urban development.

### **17.2. Peer Review Report conclusion for Investigation Area B (South)**

The Investigation Area B (South) Peer Review Reports do not comment in respect of the provision of necessary infrastructure to service the land for urban development.

### **17.3. Council necessary infrastructure assessment for Investigation Area B (South)**

Council's assessment does not comment in respect of the provision of necessary infrastructure to service the land for urban development given Council's finding that Investigation Area B (South) is not suitable for urban development.

### **17.4. Council findings for Investigation Area B (South)**

Council has made no findings with respect to the provision of necessary infrastructure to service the land for urban development as Council has determined that the land is not suitable for urban development.

## **18. Investigation Area B (South) Assessment**

### **18.1. Land suitable for urban development for Investigation Area B (South)**

Council has determined that Investigation Area B (South) is not suitable for urban development as it is an ecologically important area under Special Condition 2.2(a) of the Palmview IA.

### **18.2. Necessary infrastructure to service the land for urban development for Investigation Area B (South)**

Council has made no findings in respect of the provision of necessary infrastructure to service Investigation Area B (South) for urban development as Council has determined that it is not suitable for urban development.

### **18.3. Council findings for Investigation Area B (South)**

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

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**Part D Investigation Area C**

**19. Urban Development Investigation material for Investigation Area C**

**19.1. Landowner's documents for Investigation Area C**

- (a) Landowner C gave to the Council on 1 April 2017 a Notice stating the results and technical basis for the results of the Urban Development Investigation of Investigation Area C (**Investigation Area C Urban Development Investigation Results**).
- (b) The Council requested from Landowner C on 23 October 2017 further information with respect to the Investigation Area C Urban Development Investigation Results, which was provided by Landowner C on 22 December 2017 (**Investigation Area C Further Information**).
- (c) Landowner C gave to the Council on 29 October 2018 a submission in respect of the Draft Assessment Report and Draft Determination (**Investigation Area C Submission**), which comprised the following:
  - (i) HWL Ebsworth Letter, 29 October 2018
  - (ii) IPS Report, 29 October 2018 which included Other Plans Map OPM P2(a) and Other Plans OPM P2(b) overlay plans, and drone photo overlays (**IPS Report**);
  - (iii) Saunders Havill Group Ecological Technical Memorandum, 29 October 2018 (**SHG Technical Memo**);
  - (iv) Water Technology Flooding Memorandum, 25 October 2018 (**Water Technology Report**);
  - (v) Peak Urban Engineering Services Report, 25 October 2018 (**Peak Urban Report**).
- (d) Landowner C gave to the State on 28 February 2019 and to Council on 6 March 2019 supplementary information following a site meeting with the State (**Investigation Area C Supplementary Information**)

**19.2. Peer Review Reports for Investigation Area C**

- (a) Council on 17 December 2018 appointed independent peer reviewer Adrian Caneris, BAAM Ecology to undertake a peer review (ecological assessment) with respect to Investigation Area C.
- (b) Council on 20 December 2018 appointed independent peer reviewer Mark Babister, WMA Water to undertake a peer review (flood hazard assessment) with respect to Investigation Area C.
- (c) The peer review (ecological assessment) for Investigation Area C was provided to Council and Landowner C on 7 February 2019 (**Investigation Area C Ecology Peer Review**).
- (d) The peer review (flood hazard assessment) for Investigation Area C was provided to Council and Landowner C on 14 February 2019 (**Investigation Area C Flood Hazard Peer Review**).
- (e) Landowner C, in letters to Council dated 11 March 2019 and 12 March 2019, outlined concerns it had with the Investigation Area C Flood Hazard Peer Review.
- (f) Council advised Landowner C on 12 March 2019 that it could make representations with respect to the Investigation Area C Ecology Peer Review and the Investigation Area C Flood Hazard Peer Review (**Investigation Area C Peer Review Reports**) by 18 March 2019.

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- (g) Landowner C provided to Council on 18 March 2019 its representations with respect to the Investigation Area C Peer Review Reports.

### **19.3. State ecologically important areas assessment for Investigation Area C**

- (a) Council sent a letter to the Department of State Development, Manufacturing, Infrastructure and Planning on 12 December 2018 seeking the State's consideration of the Investigation Area C Submission and the provision of formal written advice to Council with respect to whether the State determined Investigation C to be an ecologically important area.
- (b) Landowner C gave to the State on 28 February 2019 and to Council on 6 March 2019 supplementary information to address matters that were discussed at a site visit with the State on 16 January 2019 and to provide a brief summary of relevant parts of the proposal that were detailed in the Investigation Area C Submission, provided to the State on 12 December 2018.
- (c) Council received on 29 May 2019 written advice from the State in relation to Investigation Area C. (**Attachment 7**)

## **20. Ecologically important area assessment for Investigation Area C**

### **20.1. Landowner's position for Investigation Area C**

- (a) The Landowner has identified a 2.9 hectare area of land within the 18 hectares of Investigation Area C (**Subject Area**) which the Landowner submits is suitable for urban development as it is not constrained by ecological values.
- (b) The Investigation Area C Submission states that the Landowner has demonstrated that suitable buffers, reduced from those in the Palmview Structure Plan, can be accommodated around the proposed development area to achieve environmental connectivity outcomes and ensure the protection of existing vegetated drainage lines.
- (c) In addition, the Landowner states that as a result of land identified in their proposal not being constrained by ecological values, the State's assessment is unnecessary, is not in accordance with the process and should not be taken into account.

### **20.2. Investigation Area C Ecology Peer Review**

#### **20.2.1. Conclusions**

- (a) The peer reviewer states that Landowner C has based its submission on the Subject Area, being an area of 2.9 hectares within Investigation Area C.
- (b) The Investigation Area C Ecology Peer Review relevantly states the following:
  - (i) based on the site visit:
    - (A) Investigation Area C is comprised of the following:
      - (i) patches of vegetation associated with mapped waterways which are in relatively good condition, dominated by Broad-leaved Paperbark (Least Concern RE 12.3.5), with patches generally remnant in the south and non-remnant in the north(see page 8, paragraph 3);
      - (ii) waterways and associated habitats including heathlands are suitable habitat for the Wallum Sedge-frog and the Wallum Froglet (see page 8, paragraph 4);

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- (iii) cleared areas, dominated by introduced grasses with little to no natural regrowth occurring except within the proposed buffer areas (see page 8, paragraph 5);
    - (iv) native vegetation including Eucalyptus open forest, Melaleuca open forest and seasonally waterlogged closed heathland, also occurring adjacent to Investigation Area C, which are habitats areas of high ecological value (see page 8, paragraph 6);
  - (B) Investigation Area C is adjoined by the following:
    - (i) to the north (within Investigation Area B (South) by waterways and heathland which are significant wetlands and hold important habitat values, particularly as fauna movement corridors and refuge areas (see page 10, paragraph 1);
    - (ii) to the south by waterways and ephemeral drainage/pondage areas (see page 10, paragraph 1);
  - (C) the Subject Area:
    - (i) is cleared (see page 8, paragraph 6);
    - (ii) does not have the potential for any notable presence of significant frog species (see page 10, paragraph 2);
    - (iii) does not comprise core breeding habitats for any conservation significant species (see page 10, paragraph 3);
    - (iv) is very unlikely to provide important habitat values for any state or federally listed species (see page 10, paragraph 3).
- (ii) At a first principle level, the Subject Area is not an ecologically important area or flood prone land and the majority of it is land suitable for urban development (see page 10, paragraph 5; page 11, paragraph 6).
- (iii) The area identified as land suitable for urban development appears in Figure 3 on page 13 of the Investigation Area C Ecology Peer Review and has been identified provided that:
  - (A) any proposed filling or hydrological changes are acceptable and do not cause any unacceptable impacts to ecologically important areas (see page 11, paragraph (1));
  - (B) there is road frontage on the outer edges of the developable area, which includes a 5 metre verge on the outer edge as an additional buffer (see page 11, paragraph (2));
  - (C) the setback from the drainage line in the east is increased from 40 metres to 50 metres (see page 12, paragraph (5)). However, the Investigation Area C Peer Review does not comment on the extent of the buffer from the drainage line in the west;
  - (D) fauna exclusion fencing, roadway lighting, sediment and erosion control, and any recreational open space are provided within the land suitable for urban development (see page 11, paragraph (3); page 12, paragraphs (4), (6) and (7));

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- (E) the area external to the land suitable for urban development is to be revegetated (see page 12, paragraph (8));
- (F) infrastructure is provided in accordance with the Palmview IA (see page 12, paragraph (9));
- (G) a fauna crossing treatment is designed and deployed for the roadway in the south (see page 12, paragraph (10));
- (H) other design elements are satisfied (see page 12 and 13, bulletpoints).

### **20.2.2. Council response to Landowner’s representations on Investigation Area C Ecology Peer Review**

Landowner C made no representations with respect to the Investigation Area C Ecology Peer Review.

### **20.3. State ecologically important area assessment for Investigation Area C**

- (a) In accordance with the Urban Development Investigation Process, Council passed a resolution with respect of the Draft Determination on 19 July 2018.
- (b) Council gave to Landowner C on 30 July 2018 a Notice with respect to the Draft Determination, which was accompanied by the Draft Assessment Report.
- (c) The Draft Assessment Report included the State’s draft assessment with respect to Urban Investigation Area C, which concluded that the majority of Investigation Area C was an ecologically important area and that further development would not be supported.
- (d) The State offered, and Landowner C accepted, briefings with respect to the Draft Assessment Report.
- (e) In that respect, the following briefings between the State and Landowner c occurred:
  - (i) On the 30 August 2018, the State provided Landowner C with a briefing on the technical basis for the Draft Determination and Assessment Report.
  - (ii) On 14 September 2018, the State provided a further briefing to Landowner C and its consultants.
- (f) Council provided to the State on 12 December 2018 a copy of the Investigation Area C Submission and other relevant information and asked the State to consider the material and provide formal written advice to the Council whether the State, having regard to an instrument, law, policy, code, resolution or documents it considers appropriate, determines Investigation Area C to be an ecologically important area for the purposes of Special Condition 2.2(a) of the Palmview Infrastructure Agreement.
- (g) The Council advised that the documents provided to the State are relevant to, but do not limit, the State's consideration of Investigation Area C.
- (h) The Council requested that the State provide its written determination of whether Investigation Area C is an ecologically important area and the reasons for the determination.
- (i) To that end, Landowner C sought to engage with the State with respect to Investigation Area Submission and attended a site visit with the relevant officers from the State on 16 January 2019.

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- (j) Further, Landowner C provided supplementary information to the State to address matters that were the focus of discussions at the site visit and to provide a brief summary of the relevant parts of the proposals that were detailed in Landowner C's Submission.
- (k) Landowner C provided the supplementary information to the State on 28 February 2019.
- (l) Having received the Landowner C's Submission, attended the site visit with Landowner B and received the further information from Landowner C, the State on 29 May 2019 (**Attachment 7**) has relevantly advised as follows:
  - (i) This request is taken to be a pre-lodgement request for a potential planning scheme amendment process and is limited to the state interest pertaining to ecological matters;
  - (ii) The ecological values within the Palmview Master Planned Area, are deemed to be correctly reflected in the Sunshine Coast Planning Scheme 2014;
  - (iii) The submitted information has not changed the position of the state government in relation to this matter;
  - (iv) Should the council wish to propose an amendment to the planning scheme to allow further urban development at Palmview, the amendment would be subject to a state interest review which would involve a technical assessment as required under the State Planning Policy, regional plan and the relevant legislation; and
  - (v) Whilst it is noted that this response relates to a very narrow state interest focus, any amendment would need to address all the state interests relevant to an amendment
- (m) As such, the State has determined under Special Condition 2.2(a)(ii) of the Palmview IA that that the ecologically important areas as specifically identified on Other Plans Map OPM P2(b) Palmview Master Planned Area Ecologically Important Areas are correctly mapped as ecologically important areas.

### **20.4. Council ecologically important area assessment for Investigation Area C**

- (a) Council notes that the Landowner does not believe the State should be involved in the assessment of Investigation Area C as it is not proposing development within the State Significant Vegetation or buffers to that vegetation.

This position fails to recognise the potential impacts the proposed development may have on the State Significant Vegetation. In any event, this is not relevant to the Council findings as discussed in section 22.2.

- (b) Council's assessment confirms that Investigation Area C contains the following values:
  - (i) ecologically important areas in the west and south, reflective of the State remnant vegetation mapping, which require adequate buffering;
  - (ii) ecologically important areas adjacent to the site in Investigation Area B (South);
  - (iii) a Local Habitat Corridor in the very south of Investigation Area C;
  - (iv) Environmental Transition Areas in the centre, with Environmental Protection Areas and Environmental Enhancement Areas on the outer edges as per OPM P12 of the Palmview Structure Plan;
  - (v) two areas of Least Concern remnant vegetation (Regional Ecosystem (RE) 12.3.5 *Melaleuca quinquenervia* open forest) in the west and south of the area, with the



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balance of land mapped as non-remnant Category X under the *Vegetation Management Act 1999* (VMA);

- (vi) mapped remnant vegetation which is also mapped as palustrine wetland vegetation (i.e. vegetated wetland areas), and these are also identified as essential habitat for the Vulnerable (*Nature Conservation Act 1992*) Wallum Froglet (*Crinia tinnula*) and Wallum Rocketfrog (*Litoria Freycineti*);
  - (vii) mapped essential habitat for Koala (*Phascolarctos cinereus*) and Southern Emu-wren (*Stipiturus malachurus*) in the local landscape;
  - (viii) two watercourses mapped on the eastern and western edges of the area (Stream Order 1 and 2 respectively);
  - (ix) State mapped wetlands of High Ecological Significance and General Ecological Significance; and
  - (x) is located within a Koala Assessable Development Area and Identified Broad Hectare Development Area under the South East Queensland Koala State Planning Regulatory Provisions.
- (c) Council notes that the mapped Regional Ecosystem (RE 12.3.5) in this area is the same State Significant Vegetation as is in Investigation Area B (North) which has a mapped 100m buffer rather than a 50m buffer.
- (d) Council notes the following points from the SHG Technical memo:
- (i) All areas containing Matters of State Environmental Significance are external to the proposed developable area within Investigation Area C and are to be retained, rehabilitated and effectively buffered to meet State Policy Requirements (see page 9).
  - (ii) The Regional Ecosystem (RE12.3.5) and State mapped wetlands of High Ecological Significance in the western and southern portion of Investigation Area C are the only areas that can be categorised as State Significant Vegetation and will not be impacted by the additional development footprint (page 11). These statements recognise that Matters of State Environmental Significance, in particular wetlands of High Ecological Significance, are identified over the western creek line and vegetation in the south of Investigation Area C.
  - (iii) Ecological buffers are the 50m and 100m buffers or transition zones to the State Significant Vegetation, and these are not proposed to be impacted (see page 12). This comment by SHG may suggest that a 100m buffer to State Significant Vegetation is appropriate, a width that is more consistent with those recommended by the earlier Chenoweth Report 2005.
  - (iv) The remnant areas within Investigation Area C are recognised State Significant Wetlands that are mapped as essential habitat for the Wallum Froglet (*Crinia tinnula*) and Wallum Rocketfrog (*Crinia freycineti*) (see page 10). While SHG did not record the presence of these species, the SHG Technical Memo indicates that during the second of the two Amphibian Field Surveys conducted (October 2018 and February 2019) which was expected to be the wet season survey, conditions were unusually dry, with very few pools of water within the drainage lines and the dams empty or near empty (see page 10).

This could indicate that the conditions for conducting the surveys were not ideal, and that the findings are not sufficiently conclusive to rule out the presence of either Wallum Froglet and Wallum Rocketfrog.

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Council also notes that the Investigation Area C Ecology Peer Review states that three Federal and/or State listed frogs have been recorded by the DES WildNet database within a 5km radius of Investigation Area C (see page 6).

- (v) The remnant areas within Investigation Area C will be retained, rehabilitated and effectively buffered with connectivity to southern values reinstated to ensure that the ongoing viability of Investigation Area B (South) is enhanced well above and beyond current conditions (see page 9). This does not acknowledge that the connectivity originally envisaged by the Palmview Structure Plan will be reduced by the Landowner proposal.
- (e) Investigation Area C also forms part of the 483.4 hectares to be dedicated to Council for ecological protection and enhancement in accordance with the Palmview Structure Plan and Palmview IA. The Landowner's submission does not appear to account for any offset for the proposed loss of 2.9 hectares of this land.

## 20.5. Council findings in respect of ecologically important areas for Investigation Area C

- (a) The Council has determined that the highest ecological values in Investigation Area C are in those areas containing the remnant vegetation and associated essential habitat, High Ecological Significance wetland areas, and the two waterways on the boundaries of Investigation Area C, which also provide a connection between Investigation Area B (South) and the Mooloolah River.
- (b) Some of those areas are specifically identified as ecologically important area on Other Plans Map OPM P2(b). The Council has therefore determined that these areas are an ecologically important area under Special Condition 2.2(a) of the Palmview IA and should not be considered suitable for urban development.
- (c) Council has therefore determined that the area shown in **Figure 37** below as Area C is not an ecologically important area under Special Condition 2.2(a) of the Palmview IA and can therefore be considered for its suitability for development. This area correlates with the area that Landowner C described as the Subject Site in the Investigation Area C Submission.

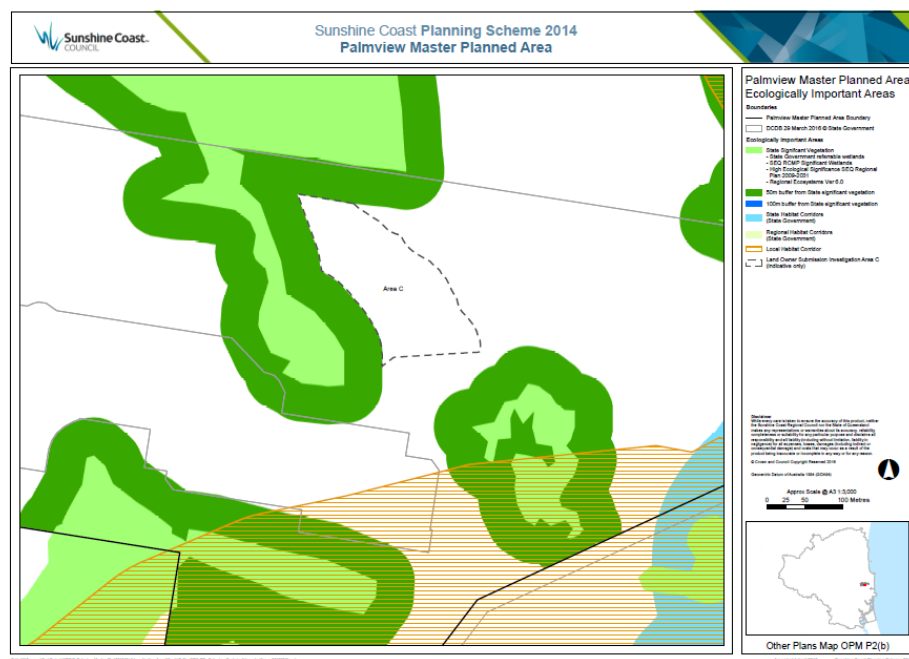


Figure 37 Area that is not an ecologically important area (shown as Area C)

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## 21. Flood hazard assessment for Investigation Area C

### 21.1. Landowner's position for Investigation Area C

- (a) The Landowner's submission is that the Subject Site is suitable for urban development in that:
  - (i) it is not identified as being flood prone on Other Plans Map OPM P2(a);
  - (ii) the Landowner can demonstrate that development can occur on the Subject Site whilst achieving compliance with the Palmview Structure Plan and State Government policies in relation to flooding and water quality and quantity management.

### 21.2. Investigation Area C Flood Hazard Peer Review

#### 21.2.1. Conclusions

- (a) The Investigation Area C Flood Hazard Peer Review states the following conclusions:
  - (i) The peer reviewer could not comment on the setup of the flood models as the information had not been provided by the Landowner.
  - (ii) Mapping for the 1% AEP climate change flood event (**Figure 38**) shows that the area considered for future development in the Investigation Area C Submission is outside the 1% AEP climate change flood event extent except for a small section in the south west corner. However, the impact mapping shows there may be an increase in flood levels of up to 0.5m along the western side of the site and may result in an unacceptable impact on the ecologically important wetlands and retained habitats.

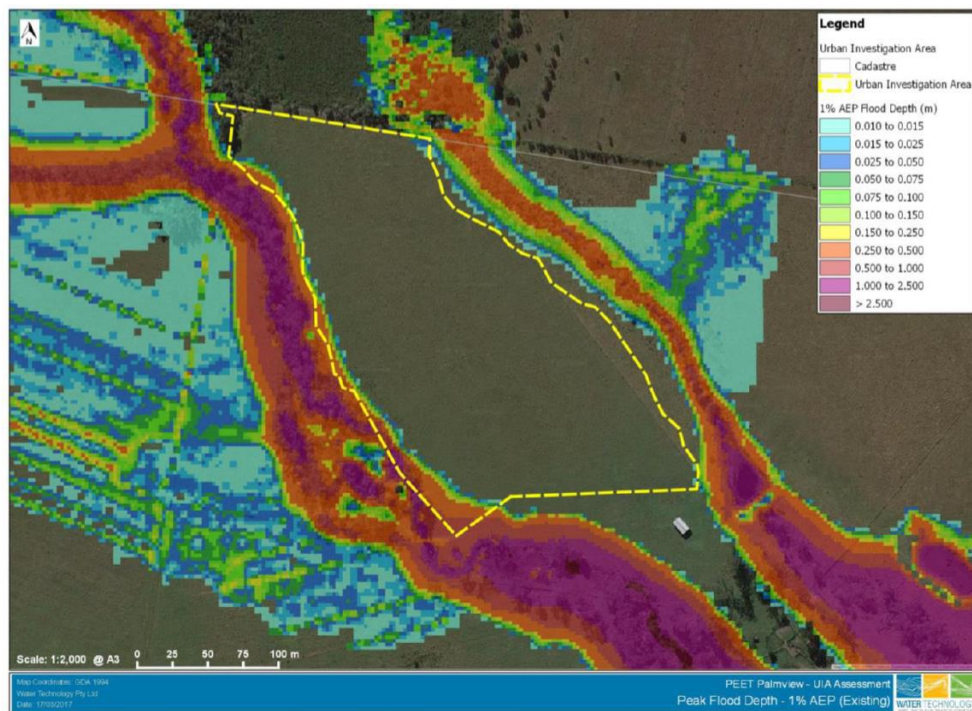
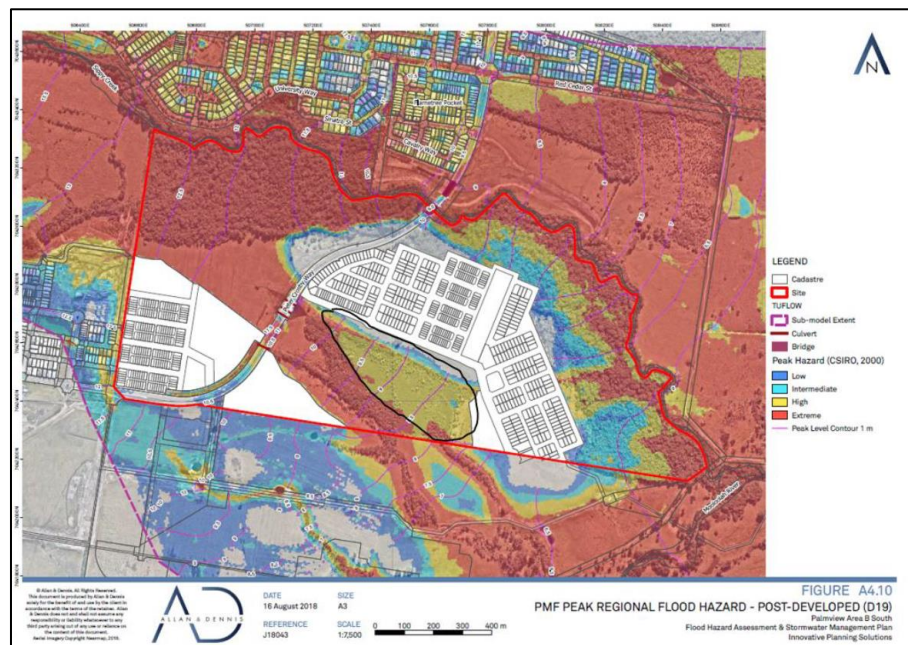


Figure 3-1 1% AEP Existing Flood Depth (Climate Change)

### Figure 38 Extract from the Water Technology Report in the Investigation Area C Submission

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- (iii) The peer reviewer was not provided with mapping for more extreme events or mapping detailing the flood velocity or flood hazard which provides an indication of the potential consequences of the flood water to people, cars and structures.
- (iv) Mapping of flood level, depth, velocity and hazard information up to and including the PMF flood event was sourced from the material for Investigation Area B (North) and it includes Investigation Area C (**Figure 39** below). This mapping shows that Investigation Area C will likely first become isolated in an event larger than the 1% AEP flood event and then become inundated in the PMF. The mapping also shows the two flowpaths draining along the east and west of the site are to be classified with extreme hydraulic hazard. This indicates there is greater consequence should people, cars or structures be within these areas of extreme hazard.



**Figure 39 PMF Peak Regional Flood Hazard for the Developed Case - Figure taken from Allan and Dennis Flood Report in the Investigation Area B Submission**

- (v) When the emergency response classifications are applied, Investigation Area C is defined as a flooded isolated and submerged area (FIS), otherwise known as a Low Flood Island (LFI). An area defined as an FIS firstly becomes an isolated area before becoming fully submerged in a PMF flood event or smaller. The area is isolated from community facilities and are likely to lose utilities such as electricity, gas, water, sewerage and telecommunications. This is considered the most extreme scenario and if not appropriately managed, areas defined as FIS will require an evacuation response by either boat or air.
- (vi) Development in a FIS area can occur; however consideration should be given to the type of development. FIS areas are best suited to non-residential developments such as parks, sporting fields or even commercial development however associated emergency response management requirements are still required to be taken into account.
- (vii) Key design considerations, with respect to flood hazard and necessary infrastructure, for Investigation Area C include the following:
  - (A) The current proposal for residential development in Investigation Area C is not appropriate given the risk and emergency response requirements associated with a flooded, isolated and submerged area (FIS).

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- (B) Should residential development in Investigation Area C be pursued, an engineering solution to reduce the risk associated with a FIS area is required.
- (C) Development other than residential development could be considered in Investigation Area C and could be compatible with a FIS area.
- (D) An emergency evacuation route is likely to be required and this infrastructure will need to be assessed for impacts and functionality, across the full range of flood events.
- (E) The small section in the south west corner of Investigation Area C that is flood prone in the 1% AEP flood event should be removed from the area being considered for development.
- (F) It should be confirmed that the impacts identified as a result of the proposed filling do not result in unacceptable impacts on ecologically important areas.
- (G) The Water Technology Report detailing the flood and stormwater assessment should be expanded to be a standalone report including information such as the model setup, parameters used or any assumptions made.

**21.2.2. Council response to Landowner’s representations on Investigation Area C Flood Hazard Peer Review**

- (a) Landowner C raised a number of issues with respect to the Investigation Area C Flood Hazard Peer Review. The primary issue raised was that the figure referenced from the Allan & Dennis Flood Study Report submitted with the Investigation Area B (North) Urban Development Investigation Results shows a PMF under developed conditions which Landowner C submits is misleading as it does not show developed conditions for Investigation Area C and therefore overstates the flooding conditions. Council has considered this issue and other issues raised by Landowner C and made comment in **Attachment 5** to this Final Assessment Report.
- (b) Council’s assessment has taken into consideration relevantly both the Investigation Area C Flood Hazard Peer Review and the Landowner’s representations.

**21.3. Council flood hazard assessment for Investigation Area C**

- (a) Council is of the view that regional flooding constraints do not prevent the development of Investigation Area C, however local stormwater flooding also needs to be considered.
- (b) Any area identified as potentially suitable for urban development would need to be revised to ensure that the current offsite impact shown in Figure 4-1 of the Water Technology Report (2017) is eliminated and any impacts associated with the urban stormwater runoff from the site would be managed within the development footprint, and that the portion in the south west corner that is inundated in the 1% AEP climate change flood event is excluded.
- (c) It is also apparent that Investigation Area C will need to demonstrate that the risk associated with flooding above the DFE can be appropriately managed either through progressive evacuation or filling to PMF levels to provide a flood safe refuge.
- (d) The information provided with respect to Investigation Area B has demonstrated the need for a local area stormwater study. It is likely that the on-site detention requirements associated with managing stormwater runoff and avoiding offsite impacts will reduce the developable area within Investigation Area C. The development footprint of Investigation Area C would also need to be modified to ensure that the impact currently identified on the boundary of the site, and within the ecologically important area, is eliminated.



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- (e) Should Investigation Area C also comply with the Palmview Structure Plan requirements in relation to ecology, and be supported for urban development, it will be a requirement of development that the risk of flooding above the DFE be managed, either by providing a flood free refuge above the PMF level or by providing for a progressively rising evacuation route (above floor level immunity) from the site to connect with Peter Crosby Way.
- (f) The Investigation Area C Flood Hazard Peer Review stated that consideration should be given to the type of development to occur in this area and it would be best suited to development such as parks, sporting fields or commercial development. Council has considered this conclusion and in the context of the determination that Council is required to make under Special Condition 2.3(c)(i) of the Palmview IA, is not of the view that this is a reasonable conclusion.

### 21.4. Overriding need assessment for Investigation Area C

An assessment of the overriding need in the public interest is not applicable in this instance, if the proposed development footprint is reduced to avoid any encroachment into the flood prone areas.

### 21.5. Council findings in respect of flood hazard for Investigation Area C

- (a) Council is of the view that regional flooding constraints do not prevent the development of Investigation Area C, however local (stormwater) flooding also needs to be considered before determining the extent of the area to be considered suitable for urban development.
- (b) Council is of the view that there is an area that is not flood prone land and is therefore to be considered suitable for urban development subject to the following:
  - (i) Ensure that the current offsite impact shown in **Figure 40** is eliminated and any impacts associated with the urban stormwater runoff from the site are to be managed within the development footprint.

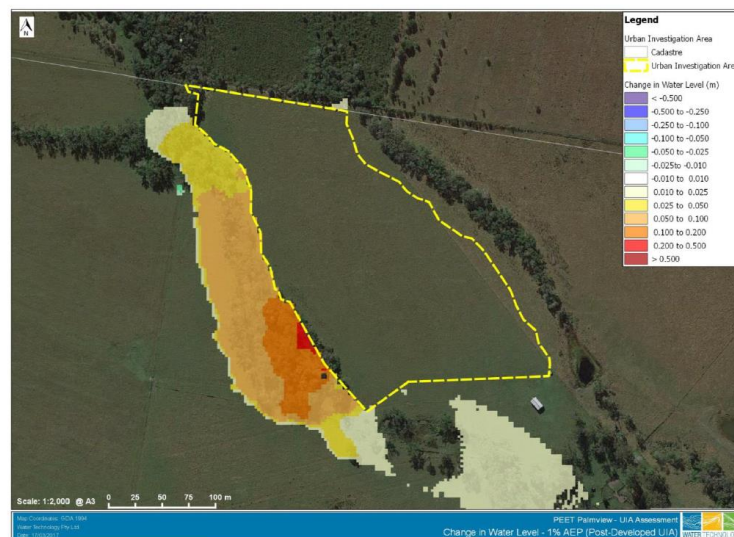


Figure 4-1 1% AEP (Climate Change) Change in Water Level

### Figure 40 1% AEP (Climate Change) Change in Water Level - Fig 4-1 of Water Technology Report

- (ii) Exclude the portion in the south west corner that is inundated in the 1% AEP climate change flood event (**Figure 41**).



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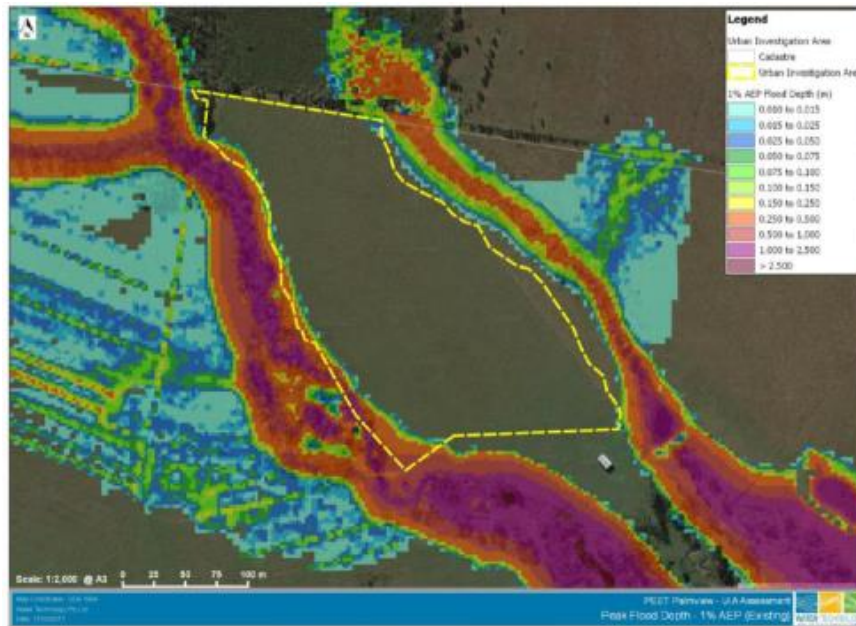


Figure 3-1 1% AEP Existing Flood Depth (Climate Change)

**Figure 41 1% AEP Existing Flood Depth (extract from Water Technology Report)**

**22. Land suitable for urban development in Investigation Area C**

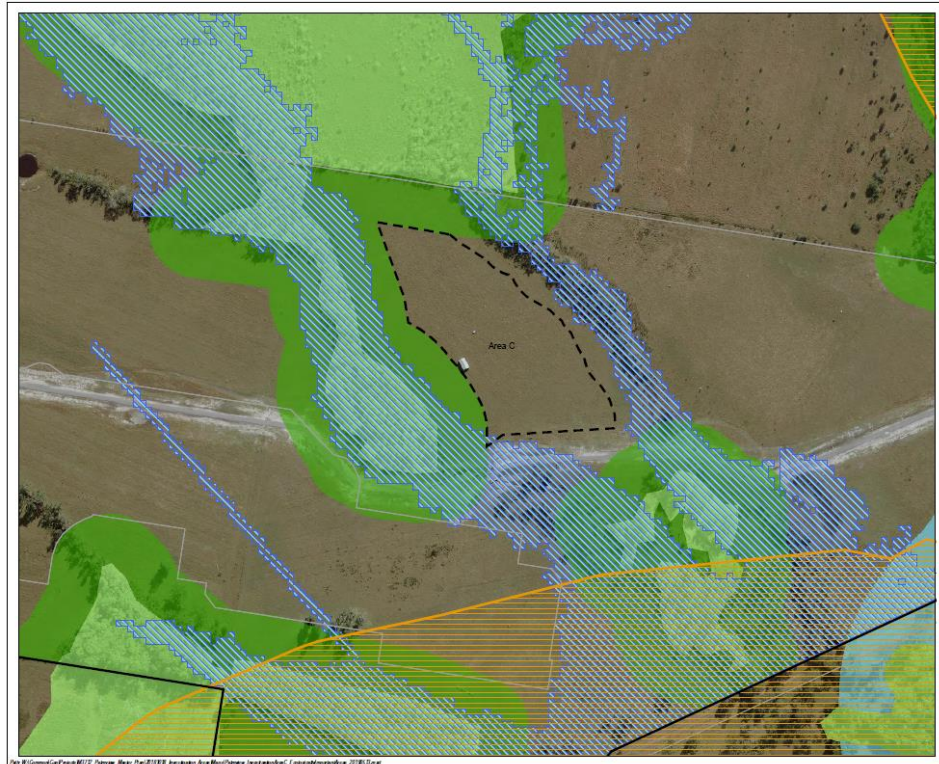
**22.1. Assessment of land suitable for urban development for Investigation Area C**

- (a) Council has assessed all of the relevant material and determined that there is an area suitable for urban development within Investigation Area C, being an area that is not:
  - (i) an ecologically important area as identified in the map in section 20.5 for the reasons stated in section 20.5.
  - (ii) a flood hazard after taking into consideration the comments stated in section 21.5.

**22.2. Map**

- (a) The following map (**Figure 42**) identifies the area that the Council has determined is suitable for urban development subject to the provision of necessary infrastructure to service the land urban development. In particular, at this stage of the assessment, Council notes that any impacts associated with urban stormwater runoff from the site need to be addressed to ensure that they are managed within the development footprint. The area identified in **Figure 42** generally correlates with the area described as the Subject Site in the Investigation Area C Submission. Therefore the Landowner’s contention in respect of the State’s involvement in the assessment under Special Condition 2.2(a)(ii) of the Palmview IA was not determinative in this instance.

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**Figure 42 Investigation Area C land suitable for urban development subject to the provision of necessary infrastructure**

**23. Necessary infrastructure to service the land for urban development for Investigation Area C**

**23.1. Landowner's position for Investigation Area C**

- (a) The Landowner submits that the Peak Urban Report has demonstrated that the land is able to be serviced by all requisite urban infrastructure, at no cost to the infrastructure authorities. This report covered civil infrastructure only and considered roads, water, sewerage, stormwater (quality and quantity) and utilities.
- (b) The Landowner also believes that the infrastructure necessary to service the land should be determined by reference to the *Sustainable Planning Act 2009* for the purposes of Special Condition 2.3(c)(i), and not by reference to the Palmview Structure Plan which in addition to roads, water, sewerage, stormwater (quality and quantity) and utilities, also covers urban open space infrastructure, non-urban open space infrastructure, bicycle and pedestrian infrastructure, community facility infrastructure and public transport infrastructure.
- (c) The Landowner submission (SHG Technical Memo) states that while the proposed buffers are intended to be set aside for rehabilitation, SHG consider that compatible uses could occur within the buffers with thoughtful consideration, including elements of water sensitive urban design for stormwater infrastructure, pedestrian trails and cycle paths, and other amenities typically associated with recreational parks and open space (see page 12).

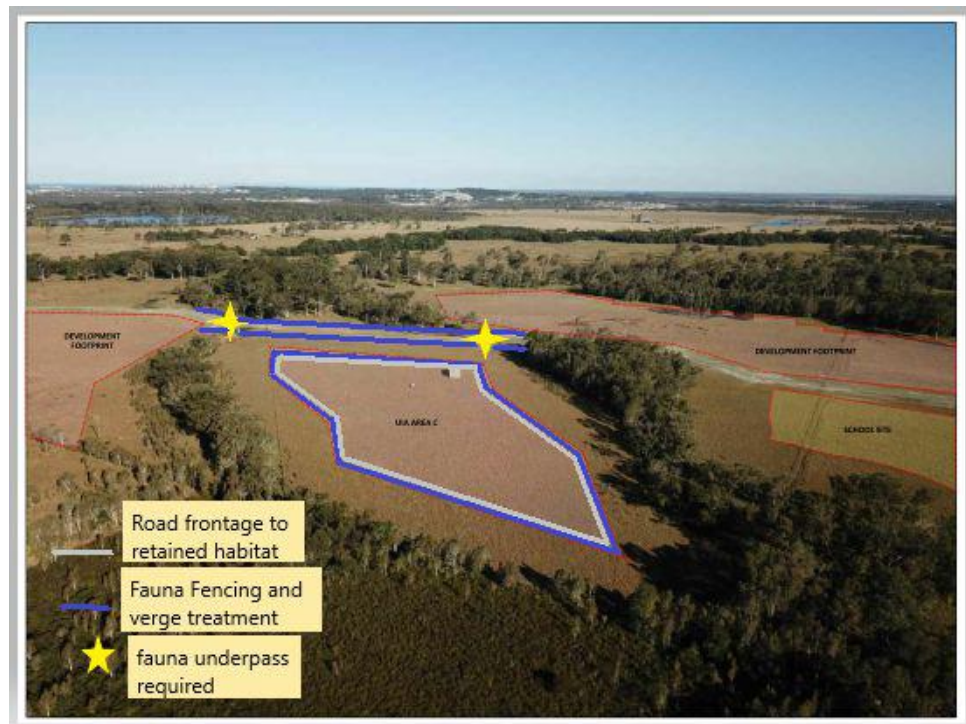
**23.2. Peer Review Report conclusion for Investigation Area C**

- (a) The Investigation Area C Flood Hazard Peer Review Report found that the most appropriate type of development for Investigation Area C, in those areas not considered to be flood prone or an ecologically important area, would be development such as parks, sporting fields or commercial development and that residential development is not appropriate.

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- (b) Alternatively, if residential development was to be considered, a substantial engineering solution would be required to manage the risks of being a Low Flood Island (LFI).
- (c) Should any portion of the identified area be approved for urban development, it is important that restoration of the proposed buffer areas is undertaken in conjunction with any development to provide these ecological values in a timely manner.
- (d) The Investigation Area C Ecology Peer Review Report found that in determining the final area considered to be suitable for urban development that a number of parameters and infrastructure requirements needed to be achieved, including the following:
  - (i) Measures to ensure the provision of any infrastructure will not result in the removal or degradation of environmentally important areas outside of the land identified as suitable for urban development. That is, all infrastructure (e.g. sewer and water) can be provided without loss of the State Significant Vegetation.
  - (ii) The Landowner can provide the necessary infrastructure to service the land for urban development at no cost to Council.
  - (iii) Any associated filling or hydrological changes are acceptable and there are no adverse flooding or hydrological changes impacting on retained habitats;
- (e) Some portions of Investigation Area C could be reasonably considered and approved for urban development provided that:
  - (i) there is road frontage on the outer edges of the developable area and this road frontage includes provision of a 5m verge on the outer edge as additional buffer to retained areas (**Figure 43**);
  - (ii) fauna exclusion fencing is included within the outer verge area;
  - (iii) roadway lighting is designed to reduce light spillage into adjoining habitats;
  - (iv) the proposed 40m setback from the drainage line in the east is increased to 50m to provide greater opportunity for fauna movement in this location;
  - (v) all sediment and erosion control, bio-basins and similar infrastructure will be provided within the identified area including any diversion drains, temporary sediment basins and silt fences;
  - (vi) any recreational open space is provided within the identified footprint and all areas external to the identified suitable land is identified as Environmental Protection and Enhancement on Other Plans Map OPM P6;
  - (vii) the area external to the identified 'land suitable for urban development' should be revegetated with native flora to reflect the naturally occurring ecosystems of the local landscape and be guided by a detailed landscape management plan;
  - (viii) all required infrastructure will be provided in accordance with the Palmview IA;
  - (ix) there is detailed design and deployment of fauna crossing treatments for the roadway in the southern portion as detailed on Other Plans Map OPM P8. This fauna crossing treatment should provide for fauna movement which is achieved through grade-separated (bridge or culvert) fauna movement opportunities. There should be a sub-road space designed to facilitate fauna movement through the underpass. To be appropriately functional, fauna underpasses will need to provide for a dry land passage portal (an area above standard water depths – though can accommodate water during high flow/flood events) of a minimum size of 2.4m high by 2m wide.

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**Figure 43 Land suitable for urban development (taken from the Investigation Area C Ecology Peer Review) with identified key infrastructure**

**23.3. Council necessary infrastructure assessment for Investigation Area C**

(a) An assessment has been undertaken by reference to the Palmview Structure Plan which requires consideration of the following infrastructure networks:

- (i) Road transport infrastructure
- (ii) Public transport infrastructure
- (iii) Bicycle and pedestrian infrastructure
- (iv) Water supply and sewerage infrastructure
- (v) Stormwater infrastructure
- (vi) Urban open space infrastructure
- (vii) Non-urban open space infrastructure
- (viii) Community facilities infrastructure

Any land identified as being suitable for urban development will require all infrastructure to be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.

(b) Road transport infrastructure

- (i) Road frontage (16.8m wide) is to be provided on the outer edges of the developable area (once the non-urban open space requirements have been addressed) and this



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road frontage includes provision of a 5m verge on the outer edge as additional buffer to retained areas. This is important for the management of fire, tree fall and weeds.

The 16.8m wide road width is a road reserve width consistent with local access streets elsewhere in the Palmview Structure Plan Area.

- (ii) Roadway lighting is to be designed to reduce light spillage into adjoining habitats.
- (iii) There is detailed design and deployment of fauna crossing treatments for the roadway in the southern portion as detailed on Other Plans Map OPM P8. This fauna crossing treatment should provide for fauna movement which is achieved through grade-separated (bridge or culvert) fauna movement opportunities. There should be a sub-road space designed to facilitate fauna movement through the underpass. To be appropriately functional, fauna underpasses will need to provide for a dry land passage portal (an area above standard water depths – though can accommodate water during high flow/flood events) of a minimum size of 2.4m high by 2m wide.
- (iv) Fauna exclusion fencing is included within the outer verge area.

### (c) Public transport infrastructure

Public transport infrastructure is required to be provided in accordance with the Palmview IA and the Palmview Structure Plan, which states the overall outcomes, performance outcomes and acceptable outcomes for the development of infrastructure and services.

### (d) Bicycle and pedestrian infrastructure

While the Palmview Structure Plan (Table 10.2.4.3A) allows for compatible passive recreation uses including pedestrian and cycle paths, picnic areas and water sensitive urban design features within the environmental transition areas, this was determined at the time the whole Investigation Area C was considered non-urban open space.

If the environmental transition area is to be reduced to a buffer, then pedestrian and cycle paths and other amenities typically associated with recreation parks and open space which are required to be provided, are to be located outside the vegetated buffer in adjoining road reserves to ensure they do not negatively impact on the ecological values of the area.

### (e) Water supply and sewerage infrastructure

- (i) Any water supply and sewerage infrastructure is to be located entirely within the area identified as land suitable for urban purposes.
- (ii) The extent that the additional water and sewer loads require augmentation, upsizing or bringing forward of the existing infrastructure, the Landowner is to obtain the necessary approvals, and fund and complete the works at their cost.

### (f) Stormwater infrastructure

Stormwater management should aim to maintain water quality, including the typically low pH of wallum habitat (particularly relevant to the western and southern wetland areas) and minimise potential offsite impacts to Endangered/Critically Endangered RE 12.3.1 downstream.

All sediment and erosion control, bio-basins and similar infrastructure are to be provided within the area defined as being suitable for urban development including any diversion drains, temporary sediment basins and silt fences.

### (g) Urban open space infrastructure

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- (i) Where residential development is proposed a local recreation park of 1ha in size may be required if residents in this area are not within the 400m walking distance of a local recreation park, in accordance with Council's desired standards of service.
  - (ii) Any recreational open space is provided within the identified footprint and all areas external to the identified land suitable for urban development is identified as Environmental Protection and Enhancement on Other Plans Map OPM P6.
- (h) Non-urban open space infrastructure
- (i) Under the Palmview Structure Plan the relevant performance outcomes for non-urban open space infrastructure in Investigation Area C include, but are not limited to the following:
    - (A) Performance Outcome 7 – Development protects and enhances the environmental protection area (being part of the non-urban open space infrastructure network) specifically identified on Other Plans Map OPM P12 (Palmview Master Planned Area Non-urban Open Space Infrastructure Network), which includes both the western and eastern creek lines which are identified as stream orders 2 and 1 respectively.
    - (B) Performance Outcome 9 - Development provides for the environmental transition area specifically identified on Other Plans Map OPM P12 (Palmview Master Planned Area Non-urban Open Space Infrastructure Network) to be:
      - (i) rehabilitated as a buffer to the environmental protection area and environmental enhancement area to ensure the following:
        - (A) maintenance and appropriate buffering of existing vegetation and habitat;
        - (B) maintenance of habitat corridors and fauna movement through the area;
        - (C) maintenance of water quality and natural hydrological conditions;
        - (D) maintenance of public safety.
    - (C) Performance Outcome 12 - Development ensures the following:
      - (i) the protection of the biodiversity and ecosystem values of springs, waterways and wetlands.
    - (D) With respect to compliance with Performance Outcome 9 and 12, the Palmview Structure Plan has applied 100m buffers to areas of significant ecological value including north of Sippy Creek, and bounding the patch of vegetation in the north-west corner of Area B North. The vegetation located at the western drainage line of Area C is considered to be a State High Ecological Significance wetland, and is the same vegetation community (RE 12.3.5) as is occurring in Investigation Area B (North). It is therefore appropriate to consider the application of a 100m buffer to the western creek line.

The required buffers in OPM P2(b) of 50m for ecologically important areas in Investigation Area C were set when it was understood that these would be further supported by the broader environmental transition area, and again, the



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application of a 100m buffer is considered more appropriate where the environmental transition area is proposed to be reduced.

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

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

- (F) Ecological protection and rehabilitation outcomes (from Table 10.3.4.3B) specific to Investigation Area C are to:

- (i) increase the extent of wetland ecosystems, with particular emphasis on active regeneration of land enclosed by remnant vegetation.
- (ii) rehabilitate wetland ecosystems to remnant status.

- (G) These outcomes are to be achieved in the following way:

- (i) The management of this landscape unit is to retain and enhance remnant vegetation, re-establish habitat connectivity through mainly active mechanisms and protect habitat from the impacts of development. Management actions are to include the following:
  - (A) active revegetation, with particular emphasis on consolidating and expanding wetland vegetation and reconnecting habitat from north to south;
  - (B) maintain a grassed transition zone between residential development and vegetated areas.

- (H) Performance Outcome 11 requires 483.4 hectares for ecological protection and rehabilitation purposes, within the Palmview Structure Plan Area or within 20km of it.

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

The Landowner submission has not accounted for any offset for the proposed loss of 2.9 hectares for ecological protection and rehabilitation.

- (I) The ecological protection and rehabilitation objectives for an environmental protection area include:

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- (i) Provide for management that assists in the area becoming largely self sustaining and in good bio-condition for its corresponding regional ecosystem.

A buffer of 50m in width incorporating WSUD and recreation infrastructure would significantly limit the ability of the High Ecological Significance wetland located along the western creek line to become 'largely self sustaining'. It can be expected that significant edge effects including fragmentation, public access, and weed incursion would result from such infrastructure being located within a 50m buffer. Impacts would require the responsible land manager to apply a higher level of active and ongoing management, which would not meet the objective of being 'largely self sustaining'.

- (J) The recommended 100m buffer width is consistent with the *Environment and Liveability Strategy* which recommends that buffers around the perimeter of natural wetlands and waterbodies are fully vegetated with suitable native plants to at least the following widths:

- (i) urban: default – 50m,
- (ii) significant – 100m.

Given that the wetland is classified by the State as being of High Ecological Significance, then the wetland would meet the 'significant' category within the *Environment and Liveability Strategy*.

- (K) In conclusion, the following (at a minimum) is considered to be necessary infrastructure to be applied to Investigation Area C:

- (i) western creek line – application of a 100 m fully vegetated buffer from the edge of the environmental protection area. This:
  - (A) will meet performance outcomes 9 and 12 of the Palmview Structure Plan;
  - (B) restores buffer width to the original 100 m, noting that this was negotiated down to 50 m during development of the Palmview Structure Plan on the assumption that there would be 483.4 ha of non-urban open space provided within the Palmview Structure Plan Area;
  - (C) is consistent with the 100 m buffer to significant wetlands in urban areas, as recommended in the *Environment and Liveability Strategy*;
  - (D) is consistent with the 100 m buffer applied to State Significant Vegetation in Investigation Area B (North), which is the same vegetation community (RE 12.3.5);
  - (E) creates a structural linkage/wildlife corridor which will:
    - (1) build connectivity between wildlife habitat areas (Investigation Area B (South) and Mooloolah River)
    - (2) allow for 're-established connectivity', which is a management requirement for Investigation Area C (Palmview Structure Plan Table 10.3.4.3B).

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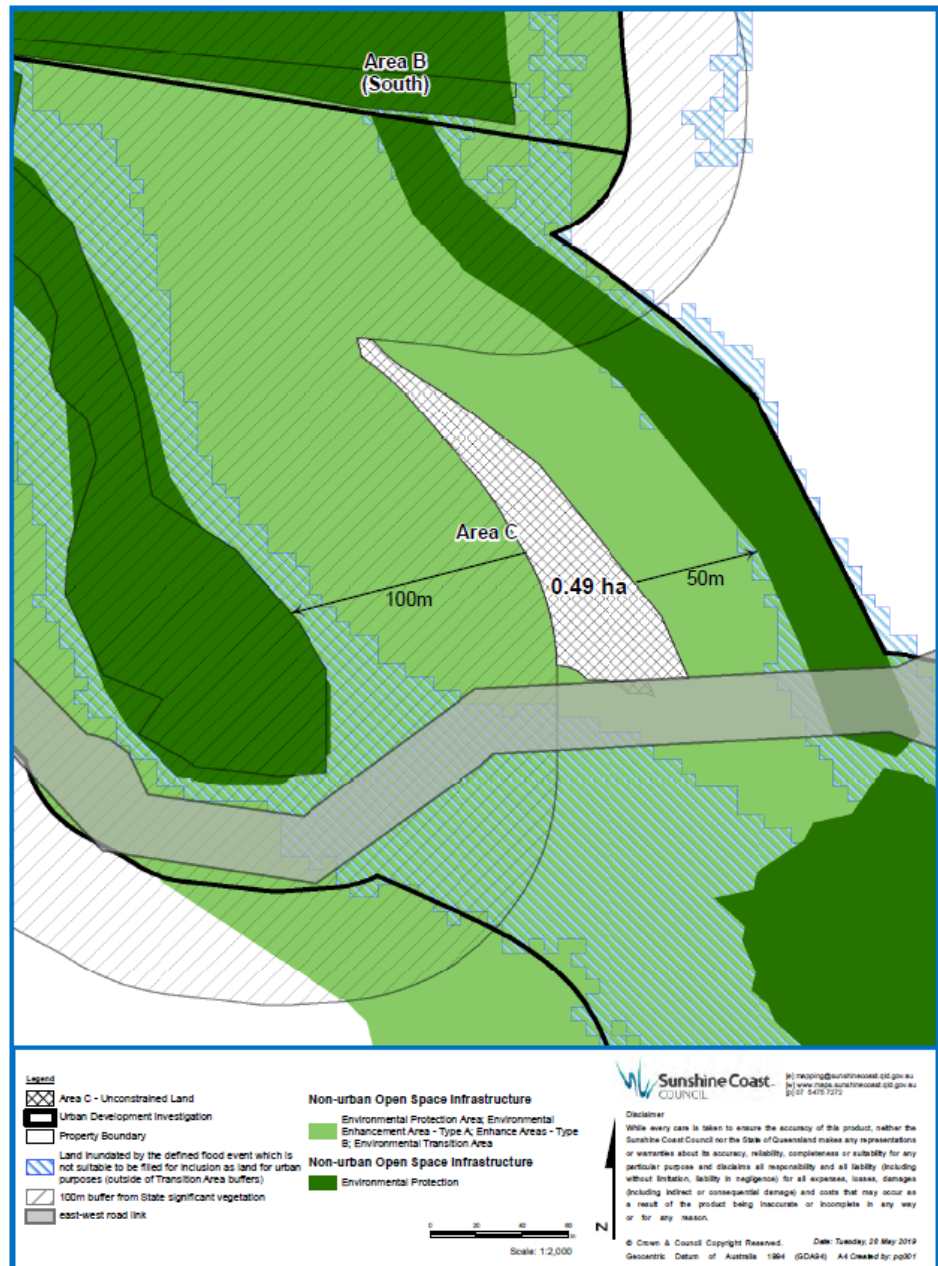
- (3) provide an alternative linkage to that on the eastern side, increasing the potential for wildlife movement and providing redundancy in case anthropogenic or other influences/events reduce functionality along one of the creek lines.
- (4) reduce the edge to area ratio (compared with any lessor buffer width).
- (F) provides appropriate buffering, allows for fauna movement and maintenance of natural hydrological conditions in accordance with Performance Outcome 9 of the Palmview Structure Plan.
- (ii) Western creek line – application of a 50 m fully vegetated buffer from the edge of the environmental enhancement area. This:
  - (A) is consistent with the default 50 m buffer recommended in the *Environment and Liveability Strategy*;
  - (B) continues the structural linkage/wildlife corridor between patches of environmental protection area.
- (iii) Eastern creek line – application of a 50 m fully vegetated buffer from the edge of the environmental protection area. This:
  - (A) is consistent with the average buffer provided elsewhere in the Palmview Structure Plan Area.
  - (B) creates a structural linkage/wildlife corridor, with benefits as per the western creek line.
- (iv) A fully vegetated buffer rather than a grassed transition zone is considered necessary for the eastern and western creek lines in order to separate and buffer the environmental protection area and the environmental enhancement area from impacts associated with any potential urban development within Investigation Area C, as well as protecting and providing important habitat corridors.

The Investigation Area C Ecology Peer Review noted that an area can be conserved and managed for its potential to provide important ecological values, including strategic, long term habitat management and wildlife movement and Council officers agree with this approach, which also acknowledges that a changing climate presents an additional threat to sustaining ecology.

- (v) Stormwater management in Investigation Area C should aim to maintain water quality, including the typically low pH of wallum habitat (particularly relevant to the western and southern wetland areas) and minimise potential offsite impacts to Endangered (*VM Act*)/Critically Endangered (*EPBC Act*) RE 12.3.1 downstream along Mooloolah River.
- (vi) Infrastructure should be located outside of the vegetated buffer, including water sensitive urban design for stormwater infrastructure, pedestrian trails and cycle paths, and other amenities typically associated with recreational parks and open space.

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- (vii) Non-urban open space infrastructure should include the provision of appropriate fauna fencing and road crossing treatments.
- (L) The non-urban open space infrastructure requirements discussed above have been mapped and result in the remaining land (**Figure 44**) being suitable for urban development, subject to other necessary infrastructure.



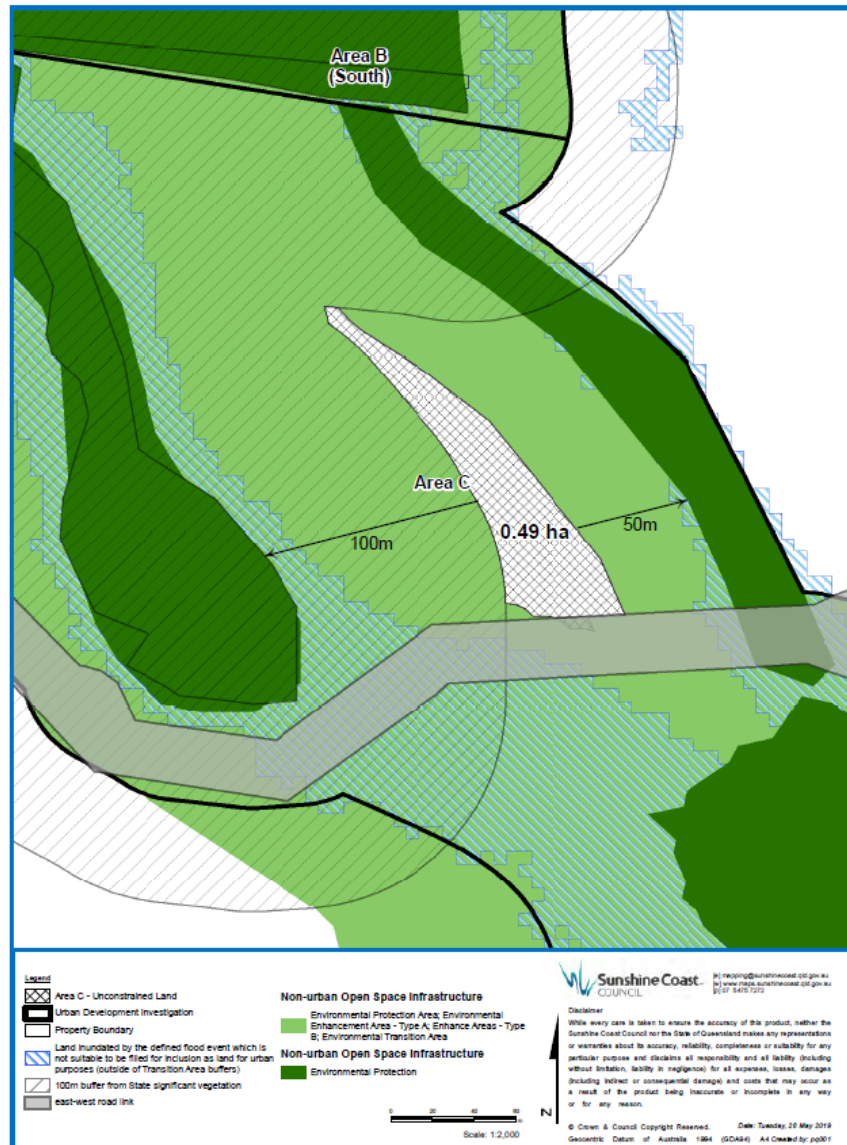
**Figure 44 Land suitable for development after non-urban open space requirements**

- (i) Community facilities infrastructure  
No additional community facilities would be required.

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## 23.4. Council findings for Investigation Area C

- (a) The necessary infrastructure that is particularly relevant to Investigation Area C includes the non-urban open space infrastructure and the road infrastructure as specified in section 23.3, and results in an area of less than 0.49 hectares (**Figure 45**) which could be considered for urban development.



**Figure 45 Investigation Area C Land Suitable for Urban Development excluding Road Reserve and other necessary infrastructure**

## 24. Investigation Area C Assessment

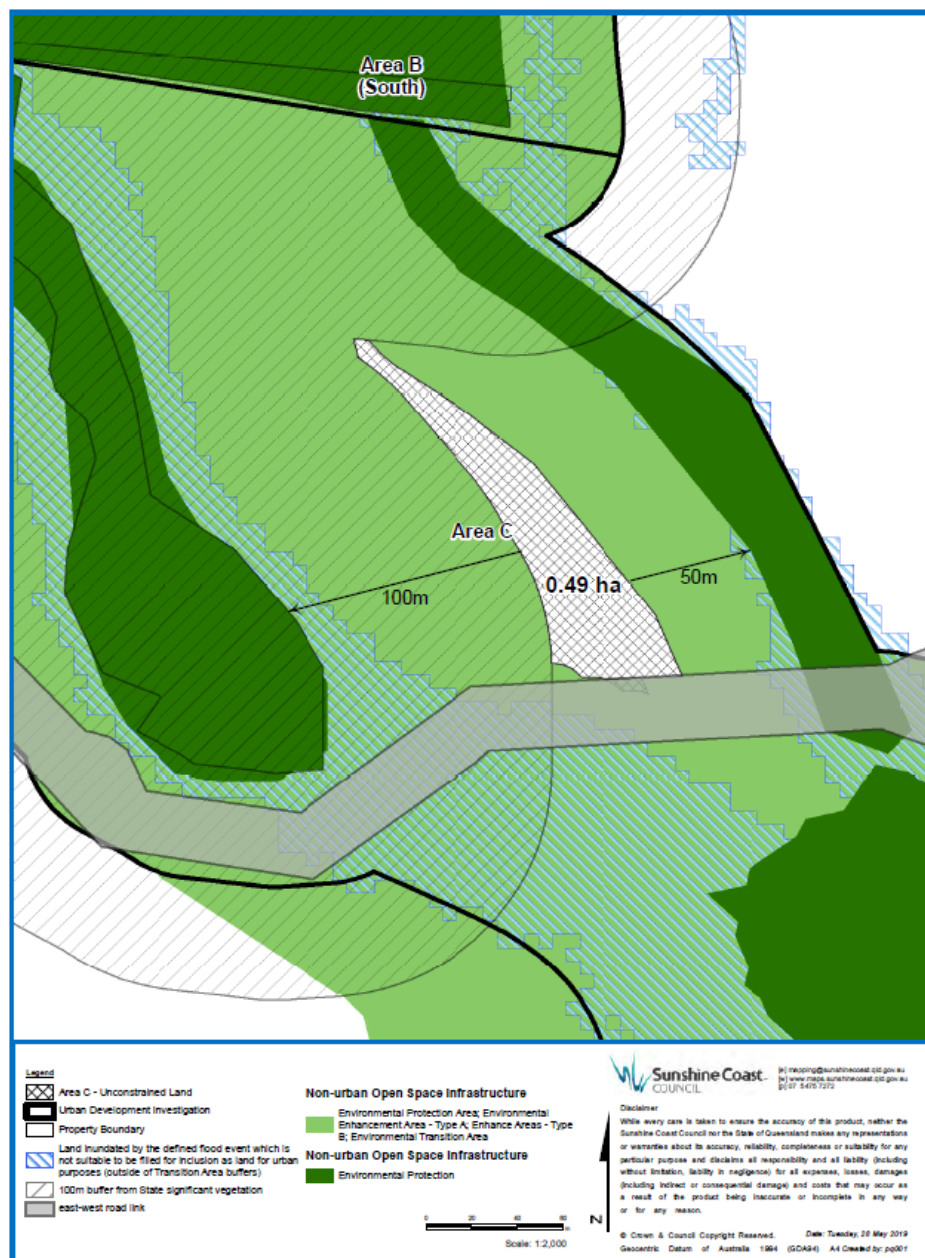
### 24.1. Land suitable for urban development for Investigation Area C

- (a) There appears to be an area that is not an ecologically important area and which is not a flood hazard area and is therefore suitable for urban development.
- (b) This area will need to be modified to ensure that the flood impacts currently identified on the boundary of the site are eliminated and that any impacts associated with urban stormwater runoff are managed within the development footprint.

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## 24.2. Necessary infrastructure to service the land for urban development for Investigation Area C

- (a) Council has assessed the necessary infrastructure to service the land for urban development, as discussed in section 23.3 above.
- (b) Such assessment has determined that the necessary infrastructure that is particularly relevant to Investigation Area C includes the non-urban open space infrastructure and the road infrastructure as specified in section 23.3, and results in an area of less than approximately 0.49 hectares which could be considered suitable for urban development.



**Figure 46 Investigation Area C land suitable for urban development subject to other necessary infrastructure**



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**24.3. Council findings for Investigation Area C**

- (a) The area shown in **Figure 46** is the area that Council has determined is suitable for urban development subject to the provisions identified in section 23.2 and 23.3.
- (b) While not part of this technical assessment, the resulting land deemed suitable for urban development is isolated and poorly shaped and does not meet other assessment provisions included in the Palmview Structure Plan.

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# Attachment 1 List of Relevant Materials

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**Attachment 2 Landowner's Documents**

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**Attachment 3 Peer Review Reports**

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**Attachment 4 Peer Review Report Representations**

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**Attachment 5      Response to Peer Review Report  
Representations**

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**Attachment 6      Consultation Report**

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**Attachment 7      State Ecologically Important Area  
Determination**

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**Attachment 8 Council Flood Hazard Assessment**

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