Queensland Government

Department of Infrastructure, Local Government and Planning

Our reference: SDA-0416-029516
Council reference: MCU16/0085

16 September 2016

Michael Whittaker
The Chief Executive Officer
Sunshine Coast Regional Council
Locked Bag 72
SUNSHINE COAST MAIL CENTRE QLD 4560
Email: mail@sunshinecoast.qld.gov.au

Attention: Paul Gallagher

Dear Mr. Whittaker

Concurrence agency response—preliminary approval only (with conditions)
Bruce Highway, PALMVIEW QLD 4553
Lots 1 - 3 RP165741; Lot 345 CG5011 and Lot 505 SP235650
(Given under section 285 of the *Sustainable Planning Act 2009*)

The referral agency material for the development application described below was received by the Department of Infrastructure, Local Government and Planning (the department) under section 272 of the Sustainable Planning Act 2009 (the Act) on 02 June 2016.

Applicant details

Applicant name:	Investa Residential Group C/- Project Urban
Applicant contact details:	PO Box 6380 MAROOCHYDORE BC QLD 4558 info@projecturban.com.au

Site details

Street address:	Bruce Highway, PALMVIEW QLD 4553
Lot on plan:	Lot 1 - 3 RP165741; Lot 345 CG5011 and Lot 505 SP235650

SEQ North Region
Level 8, Mike Ahern Building
12 First Avenue
PO Box 1129 Maroochydore QLD 4558

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Local government area: Sunshine Coast Regional Council.

Application details

Proposed development: Preliminary Approval for Material Change of Use – Area Development Application (Harmony Master Planned Area)

Aspects of development and type of approval being sought

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Material Change of Use	Preliminary approval	Vary the effect of the planning scheme for Area A of the Palmview Master Planned Area under the Palmview Structure Plan (see Other Plans Map OPM P5), being the land subject of this Preliminary Approval.	Code Assessment

Referral triggers

The development application was referred to the department under the following provisions of the *Sustainable Planning Regulation 2009*:

Referral trigger
- Schedule 7, Table 3, Item 1—State-controlled road – material change of use
- Schedule 7, Table 3, Item 2—Development impacting on State transport infrastructure (thresholds)
- Schedule 7, Table 3, Item 10—Clearing vegetation – material change of use

Preliminary approval only

Under section 287(1)(c) of the *Sustainable Planning Act 2009*, any development approval given by the assessment manager for the application must be a preliminary approval only.

Conditions

Under section 287(1)(a) of the *Sustainable Planning Act 2009*, the department requires that the conditions set out in **Attachment 1** must be attached to any development approval.

Reasons for decision to impose conditions

Under section 289(1) of the *Sustainable Planning Act 2009*, the department must set out the reasons for the decision to impose conditions. These reasons are set out in **Attachment 2**.

Further advice

Under section 287(6) of the *Sustainable Planning Act 2009*, the department offers advice about the application to the assessment manager—see **Attachment 3**.

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Approved plans and specifications

The department requires that the following plans and specifications set out below and in **Attachment 4** must be attached to any development approval.

Drawing/Report Title	Prepared by	Date	Reference no.	Version
Aspect of development: Preliminary Approval for Material Change of Use – Area Development Application				
Landscape Vision Report	RPS	April 2016	127648_VISIONING	G
OPM P6 - Area Development Plan (Precincts and Sub- precincts) except where amended by the below conditions	RPS	March 2016	22470 - 281 C	Nil
OPM P7 – Area Development Plan (Development and Transport Infrastructure Network Sequencing) except where amended by the below conditions	RPS	March 2016	22470-282C	Nil
Palmview Development – Claymore Rd/Sippy Downs Dr Intersection Upgrades	DTMR	15/09/2016	Nil	Nil
Palmview Development – Pignata Rd Connection Intersection Layout (eastern side of Underpass)	DTMR	15/09/2016	Nil	Nil
Palmview Development – Racecourse Rd Interchange Upgrades	DTMR	15/09/2016	Nil	Nil
Sunshine Coast Regional Council: Bruce Hwy (Brisbane – Gympie)	Queensland Government	3/12/2014	660832	A
Road Hierarchy Plan: Potential Future Bus Routes	DTMR	21 June 2016	Nil	A

A copy of this response has been sent to the applicant for their information.

For further information, please contact Rebecca Taylor, Principal Planning Officer on 3882 8411 or email SEQNorthSARA@dilgp.qld.gov.au and she will be pleased to assist.

Yours sincerely

Steve Conner
Executive Director (Development Assessment Division)

cc: Investa Residential Group Ltd c/- Project Urban, info@projecturban.com.au
The Department of Natural Resources and Mines, vegsouthregion@dnrm.qld.gov.au
The Department of Transport and Main Roads, North.Coast.IDAS@tmr.qld.gov.au

enc: Attachment 1—Conditions to be imposed
Attachment 2—Reasons for decision to impose conditions
Attachment 3—Further advice
Attachment 4—Approved Plans and Specifications

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Your reference: 12202

Attachment 1—Conditions to be imposed

No.	Conditions	Condition timing
Section 242 Preliminary Approval for a Material Change of Use to vary the effect of the planning scheme for Area A of the Palmview Master Planned Area under the Palmview Structure Plan		
Schedule 7, Table 3, Item 1—State-controlled road – material change of use and Schedule 7, Table 3, Item 2—Development impacting on State transport infrastructure (thresholds) — Pursuant to section 255D of the *Sustainable Planning* Act 2009, the chief executive administering the Act nominates the Director-General of the Department of Transport and Main Roads to be the assessing authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
In accordance with approved plans		
1.	The development must be carried out generally in accordance with the following plans: • OPM P6 - Area Development Plan (Precincts and Sub- precincts) prepared by RPS dated March 2016, DWG # 22470 - 281c, unless amended by the below conditions; • OPM P7 – Area Development Plan (Development and Transport Infrastructure Network Sequencing) except where amended by the below conditions; • Palmview Development – Claymore Rd/Sippy Downs Dr Intersection Upgrades prepared by DTMR dated 15/09/2016; • Palmview Development – Pignata Rd Connection Intersection Layout (eastern side of Underpass) prepared by DTMR dated 15/09/2016; and • Palmview Development – Racecourse Rd Interchange Upgrades prepared by DTMR dated 15/09/2016.	At all times.
Impacts on the state-controlled road network		
2.	(a) Where an Infrastructure Agreement under section 670 of the Sustainable Planning Act 2009 has not been entered into with the State of Queensland, the land owner(s) is to undertake and/or contribute to infrastructure works required to mitigate the impact of development arising from the Palmview Structure Plan area on the safety and efficiency of the State-controlled road network. The total amount of the works and monetary contribution to be provided by the land	2(a)(i) – Prior to survey plan endorsement of the first lot created pursuant to this preliminary approval or prior to the

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No.	Conditions	Condition timing
	owner is $23,275,000. This works and monetary contribution is based on a proportional rate of 66.5% of $35,000,000 being the estimated total works/costs required for items (i), (ii) and (iii) that will assist management of the developments impacts on the State-controlled road network. The works/contribution to be undertaken/provided are as follows: (i) Upgrade of the existing signalised intersection at Claymore Road/Sippy Downs Drive intersection to include a second northbound through lane on Claymore Road generally in accordance with DTMR Plan "Palmview Development – Claymore Rd/Sippy Downs Dr Intersection Upgrades" dated 15/09/2016. (ii) Provide a district collector street standard in Area A to connect the development to the Bruce Highway Western Service Road (via Pignata Road and the Bruce Highway/Pignata Road underpass). This work is to include an upgrade of the Bruce Highway/Pignata Road underpass (eastern intersection) from priority to traffic signal control, generally in accordance with DTMR Plan "Palmview Development – Pignata Rd Connection Intersection Layout (eastern side of Underpass)" dated 15/09/2016. (iii) Pay a monetary contribution to the Department of Transport and Main Roads (North Coast District) towards the upgrade of the Caloundra Road and Racecourse Road interchange generally in accordance with DTMR Plan "Palmview Development – Racecourse Rd Interchange Upgrades" dated 15/09/2016). The monetary contribution to be paid is the residual of $23,275,000 (being 66.5% of $35,000,000) once the costs of the works, identified in parts (a)(i) and (ii) of this condition are completed. (b) The total amount of the works and monetary contribution must be indexed based on the Road and Bridge Construction Index, Queensland – Class 3101, published quarterly by the Australian Bureau of Statistics (ABS Cat No.6427, Series ID A2333727L) to the date of payment. (c)The road works must be designed and constructed in accordance with the Department of Transport and Main Roads' Road Planning and Design Manual current at the time the application for road works approval is lodged with the Department of Transport and Main Roads or alternative standard agreed to by the Department of Transport and	commencement of the first use pursuant to the preliminary approval, whichever occurs first. 2(a)(ii) – If a development approval for the development of the 1,064th Equivalent Dwelling occurs before 30 June 2021 then by 30 June 2022; **OR** if a development approval for the development of the 1,064th Equivalent Dwelling occurs after 30 June 2021 then before a development approval for the development of the 1,197th Equivalent Dwelling in the Palmview Master Planned Area. 2(a)(iii) – not later than 3 months after construction of the Southern Road Link commences. 2(b) and (c) – At all times.

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No.	Conditions	Condition timing
	Main Roads. **OR, in lieu of conditions 2(a), 2(b) and 2(c) above:** (d) The applicant must, with any development application for a material change of use or for a reconfiguration of a lot made under this preliminary approval, include a Traffic Impact Assessment Report (TIA), prepared by a suitably qualified and experienced Registered Professional Engineer of Queensland (RPEQ) that: (i) identifies the likely traffic movements, and resulting impacts, arising from that development, or the use of premises as a consequence of that development, (whether in isolation or cumulatively with other development under this preliminary approval) on the safety and operational efficiency of the following items of State-controlled road infrastructure: (A) the Caloundra Road / Racecourse Road interchange; (B) the Dixon Road / Sunshine Motorway interchange; (C) the Sunshine Motorway (between Dixon Road and Kawana Way); (D) the Sippy Downs Drive / Sunshine Motorway interchange; and (E) the Pignata Road underpass / Frizzo Road intersection and associated service roads; (ii) states mitigation strategies or measures for those impacts, including: (A) the provision of infrastructure works and any corresponding required land contributions, proposed to mitigate those impacts; (B) concept layout plans to give effect to those measures; and (C) proposed timing or triggers for the applicant to undertake or provide those measures, based on development sequencing and the acceptable Level of Service (LOS) at the locations listed above; and (D) for the capacity and LOS assessment for the Caloundra Road / Racecourse Road interchange, a road safety audit prepared by	2(d) At the time of lodgement of a subsequent and related development application for a development permit for a material change of use or reconfiguration of a lot. 2(e) In accordance with the timing or triggers identified in the traffic assessment report.

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No.	Conditions	Condition timing
	an independent and suitably qualified and experienced RPEQ, prepared in accordance "Austroads Guide to Road Safety Part 6: Road Safety Audit" (2009); (iii) is prepared in accordance with all current Department of Transport and Main Roads (DTMR) manuals, standards and specifications, including the "Guidelines for Assessment of Road Impacts of Development"; (iv) provides details of the proposed development, including a summary table of assumed land uses and associated traffic generation for each stage of the development, including: (A) all allowable land uses and associated trip rates (average weekday, AM and PM peak hours); and (B) traffic generation estimates for average weekday, AM and PM peak houses, compatible with the Sunshine Coast Regional Council's accepted Equivalent Dwellings (ED); (v) provides reasonable estimation and/or interpretation of external traffic distribution to and from the development site for each stage of the development, in a clear and legible format; (vi) provides transport infrastructure staging plans that are consistent with potential development yields and identify when major transport infrastructure links; and (vii) Identifies and assesses the planned road network, including timing of works, to enable the development to proceed and, if components of the network are assessed to be unsatisfactory, identifies practical measures to achieve an acceptable LOS with or without the proposed development. (e) Where a TIA prepared under condition 2(d) identifies that infrastructure works are required to offset or mitigate the impacts of development, or the use of premises as a consequence of development, the applicant must provide those infrastructure works, and any land in the ownership of the applicant required to accommodate those works, in accordance with the timing or triggers identified in the traffic assessment report.	
3.	The applicant must amend plan: (a) OPM P7 – Area Development Plan (Development and Transport Infrastructure Network Sequencing) prepared by RPS dated March 2016, reference	

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No.	Conditions	Condition timing
	22470-282C to reflect the approach detailed in Condition 2; and (b) The applicant must provide a copy of the amended plan to the Department of Infrastructure, Local Government and Planning.	
Managing Noise Impacts		
4.	Noise attenuation measures to achieve the following noise criteria must be provided: • All facades of an accommodation activity exposed to noise from a state-controlled road meet the following external noise criteria#: (1) ≤ 60 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am ≤40 dB(A)) (2) ≤ 63 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am >40 dB(A)). • Every private open space in an accommodation activity exposed to noise from a state-controlled road meets the following external noise criteria#: (1) ≤ 57 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight ≤45 dB(A)) (2) ≤ 60 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight >45 dB(A)). • Every passive recreation area exposed to noise from a state-controlled road meets the following external noise criteria: (1) ≤ 63 dB(A) L10 (12 hour) free field (between 6 am and 6 pm). • Every habitable room in an accommodation activity (other than a residential building), exposed to noise from a state-controlled road meets the following internal noise criteria#: (1) ≤ 35 dB(A) Leq (1 hour) (maximum hour over 24 hours). • Land for a future anticipated accommodation activity exposed to noise from a state-controlled road meets the following external noise criteria at the building envelope or if the building envelope is unknown, the deemed-to-comply setback distance for buildings stipulated by the local planning instrument or	Prior to submitting the Plan of Survey to the local government for approval for the relevant stage that contain a noise sensitive use, or prior to the commencement of use for the relevant stage, whichever occurs first.

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No.	Conditions	Condition timing
	relevant building regulations#: (1) ≤ 57 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6 am and 12 midnight ≤45 dB(A)) (2) ≤ 60 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6 am and 12 midnight >45 dB(A)).	
5.	Amend the *Supplementary Table of Assessment* section of the *Area Development Approval* to include the attached *Harmony State-controlled Road Amenity Code*.	Prior to the first application for development permit for Building Work, Material Change of use or Reconfiguring a lot, whichever occurs first.
Future bus route		
6.	(a) The roads shown as 'Potential future bus routes' on the Road Hierarchy Plan: Potential Future Bus Routes, as amended in red by DTMR, dated 21 June 2016, must be designed and constructed by the applicant to be in accordance with the Schedule – Code for IDAS, Part 2 – Development Standards of the *Transport Planning and Coordination Regulation 2005* to accommodate a single unit rigid bus of 12.5m in length. (b) Traffic calming devices should not be incorporated into the design and construction of potential future bus routes in accordance with Chapter 2 - Planning and Design, section 2.3.2 - Bus Route Infrastructure (page 6) of the Department of Transport and Main Roads' TransLink Public Transport Infrastructure Manual 2015. The Public Transport Infrastructure Manual 2015 is available at: http://translink.com.au/about-translink/reports-and-publications.	Prior to submitting the Plan of Survey to the local government for approval for the relevant stage, or prior to the commencement of use for the relevant stage, whichever occurs first.
Stormwater management		
7.	(c) Flooding and Stormwater management of the development must ensure no worsening or actionable nuisance to the state transport corridor caused by peak discharges, flood levels, frequency/duration of flooding, flow velocities, water quality, ponding, sedimentation, and scour effects. (d) Any works on the land must not: i. create any new discharge points for stormwater runoff	

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No.	Conditions	Condition timing
	onto the state transport corridor; ii. interfere with and/or cause damage to the existing stormwater drainage on the state transport corridor; iii. surcharge any existing culvert or drain on the state transport corridor; iv. reduce the quality of stormwater discharge onto the state transport corridor, v. caused by peak discharges, flood levels, frequency/duration of flooding, flow velocities, water quality, ponding, sedimentation, and scour effects. (e) RPEQ certification with supporting documentation must be provided to Development Assessment within the Department of Transport and Main Roads, confirming that the development has been designed and constructed in accordance with parts (a) and (b) of this condition.	
8.	Amend the *Supplementary Table of Assessment* section of the *Area Development Approval* to include the attached *Harmony stormwater and drainage impacts on state transport infrastructure state code.*	Prior to the first application for development permit for Material Change of use or Reconfiguring a lot, whichever occurs first or prior to an application for Operational Works associated with bulk earthworks or stormwater management, whichever occurs first.
Fencing		
9.	Fencing sufficient to prevent unauthorised access by people and vehicles must be provided along the site boundary with the state-controlled road.	At all times.
Vehicular access to the state-controlled road		
10.	Direct access is not permitted between the state-controlled road and the subject site other than via the new local road connection to the western service road.	At all times.
Land Requirements		

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No.	Conditions	Condition timing
11.	The setback area shown on: • Sunshine Coast Regional Council: Bruce Hwy (Brisbane – Gympie) prepared by Queensland Government] dated 3/12/2014, drawing No. 660832 and revision A, must be kept free of any permanent buildings, structures and improvements above and below the ground.	At all times
Ground disturbance and de-stabilisation		
12.	(a) The design and construction of any excavation, filling / backfilling / compaction, retaining structures and other works involving ground disturbance must not de-stabilise the state-controlled road or cause similar adverse impacts. (b) RPEQ certification with supporting documentation must be provided to Development Assessment within the Department of Transport and Main Roads, confirming that the development has been designed and constructed in accordance with part (a) of this condition.	(a) At all times. (b) Within 20 business days of the completion of any works.
No.	**Conditions**	
Section 242 Preliminary Approval for a Material Change of Use to vary the effect of the planning scheme for Area A of the Palmview Master Planned Area under the Palmview Structure Plan		
Schedule 7, Table 2, Item 10 - Clearing vegetation: material change of use—Pursuant to section 255D of the *Sustainable Planning Act 2009*, the chief executive administering the Act nominates the Director-General of the Department of Natural Resources and Mines to be the assessing authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following conditions:		
13.	The development must be generally in accordance with the Landscape Vision Report, prepared by RPS Australia East, dated April 2016, reference 127648_VISIONING and revision G.	Prior to the commencement of the use and to be maintained.

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Your reference: 12202

Attachment 2—Reasons for decision to impose conditions

The reasons for this decision are:

- To ensure the development is carried out generally in accordance with the plans of development submitted with the application;
- To ensure access to the state-controlled road network from the site does not compromise the safety and efficiency of the state-controlled road network, and that direct access to the state-controlled road is prohibited where not required;
- To ensure the road works on, or associated with, the state-controlled road network are undertaken in accordance with applicable standards;
- To ensure the development achieves acceptable noise levels by mitigating adverse impacts on the development from noise generated by a state transport corridor;
- To provide, as far as practicable, public passenger transport infrastructure to support public passenger services; and
- To ensure that the impacts of stormwater events associated with development are minimised and managed to avoid creating any adverse impacts on the state-transport corridor.

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Attachment 3—Further advice

General Advice	
1.	**Transport noise corridor:** Mandatory Part (MP) 4.4 of the Queensland Development Code (QDC) commenced on 1 September 2010 and applies to building work for the construction or renovation of a residential building in a designated transport noise corridor. MP4.4 seeks to ensure that the habitable rooms of Class 1, 2, 3 and 4 buildings located in a transport noise corridor are designed and constructed to reduce transport noise. Transport noise corridor means land designated under Chapter 8B of the Building Act 1975 as a transport noise corridor. Information about transport noise corridors is available at state and local government offices. A free online search tool can be used to find out whether a property is located in a designated transport noise corridor. This tool is available at http://www.dsdip.qld.gov.au/about-planning/spp-mapping-online-system.html and allows searches on a registered lot number and/or property address to determine whether and how the QDC applies to the land
2.	**Technical Standards and Publications:** The Department of Transport and Main Roads' technical standards and publications can be accessed at http://www.tmr.qld.gov.au/Business-industry/Technical-standards-publications.aspx
Further development permits, compliance permits or compliance certificates	
3.	**Road works approval:** Road works approval: Under section 33 of the Transport Infrastructure Act 1994, written approval is required from the Department of Transport and Main Roads to carry out road works on a state-controlled road. Please contact the Department of Transport and Main Roads on 5451 7055 or at north.coast.idas@tmr.qld.gov.au to make an application for road works approval. This approval must be obtained prior to commencing any works on the state-controlled road reserve. The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland (RPEQ). Please contact the Department of Transport and Main Roads as soon as possible to ensure that gaining approval does not delay construction.
Managing Noise Impacts	
1.	(1) Guidance for preparing a Road Traffic Noise Assessment Report is detailed within Attachment: Guidance for preparing a Road Traffic Noise Assessment Report. (2) Private open space areas (2nd floor balconies) that do not achieve compliance: Balustrades must be solid, gap-free and continuous for their complete length other than gaps required for drainage purposes which are to comply with the Building Code of Australia. The total area of the soffit above these balconies must be treated with sound absorption material. (3) The receiver heights (building pad levels or finished floor levels) shall not increase by more than 200 mm and/or the effective noise attenuating structure height shall not be reduced by more than 200 mm compared to the assumptions made in the approved Road Traffic Noise Assessment Report.

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Attachment 4—Approved plans and specifications

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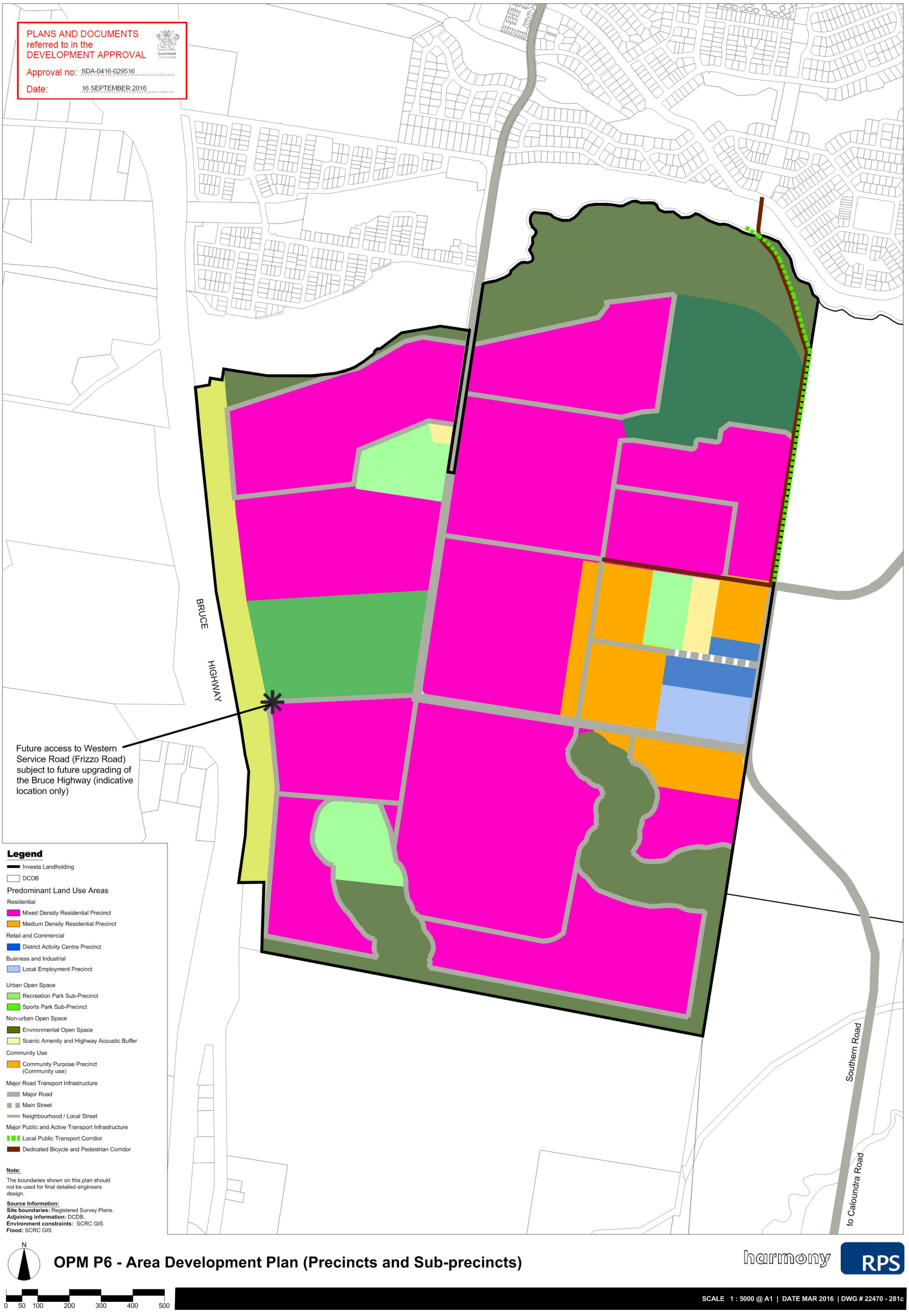
PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL
Approval no: SDA-0416-029516
Date: 16 SEPTEMBER 2016
BRUCE HIGHWAY
Future access to Western Service Road (Frizzo Road) subject to future upgrading of the Bruce Highway (indicative location only)
Southern Road
to Caloundra Road
Legend
Investa Landholding
DCDB
Predominant Land Use Areas
Residential
Mixed Density Residential Precinct
Medium Density Residential Precinct
Retail and Commercial
District Activity Centre Precinct
Business and Industrial
Local Employment Precinct
Urban Open Space
Recreation Park Sub-Precinct
Sports Park Sub-Precinct
Non-urban Open Space
Environmental Open Space
Scenic Amenity and Highway Acoustic Buffer
Community Use
Community Purpose Precinct (Community use)
Major Road Transport Infrastructure
Major Road
Main Street
Neighbourhood / Local Street
Major Public and Active Transport Infrastructure
Local Public Transport Corrdior
Dedicated Bicycle and Pedestrian Corridor
Note:
The boundaries shown on this plan should not be used for final detailed engineers design.
Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.
Environment constraints: SCRC GIS
Flood: SCRC GIS
N
OPM P6 - Area Development Plan (Precincts and Sub-precincts)
harmony
RPS
0 50 100 200 300 400 500
SCALE 1 : 5000 @ A1 | DATE MAR 2016 | DWG # 22470 - 281c

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Queensland Government

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BRUCE HIGHWAY

Future access to Western Service Road (Frizzo Road) subject to future upgrading of the Bruce Highway (indicative location only)

Southern Road

to Caloundra Road

Legend

- Investa Landholding
- DCDB

Classification of Major Road Transport Infrastructure

- Claymore Road Link
- Springhill drive / University Way Link
- Southern Road Link
- Southern Road Link Upgrade
- Major Transit Station

Major transport infrastructure elements	Relative sequence of provision of infrastructure	Description of sequencing of development and the major transport infrastructure elements
Claymore Road Link	1	This link is provided before any development is carried out in the Palmview Master Planned Area.
Southern Road Link	2	This link is provided before the earlier of the following:- (a) the traffic volumes using Claymore Road (measured immediately south of the Sippy Creek crossing) exceed 22,000 vehicle movements per business day over a continuous 30 day period; or (b) a development approval for the development of the 4,000th Equivalent Dwelling in the Palmview Master Planned Area.
Springhill Drive/ University Way Link	3	This link is provided:- (a) after the provision of the following:- (i) Claymore Road Link; (ii) Southern Road Link; and (b) before a development approval for the development of the 5,000th Equivalent Dwelling in the Palmview Master Planned Area.
Southern Road Link Upgrade	4	This link is provided before a development approval for the development of the 6,500th Equivalent Dwelling in the Palmview Master Planned Area.
Western Service Road Access via Pignata Road	5	The local road network in Area A is to be planned to accommodate a future district collector street to the Western Service Road.

Note:

The boundaries shown on this plan should not be used for final detailed engineers design.

Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.
Environment constraints: SCRC GIS
Flood: SCRC GIS

N

0 50 100 200 300 400 500

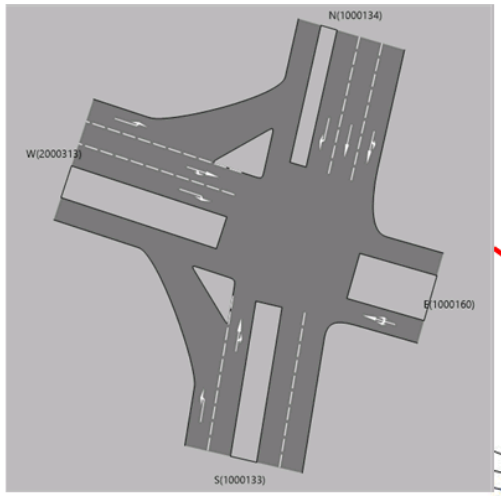
OPM P7 - Area Development Plan (Development & Transport Infrastructure Network Sequencing)

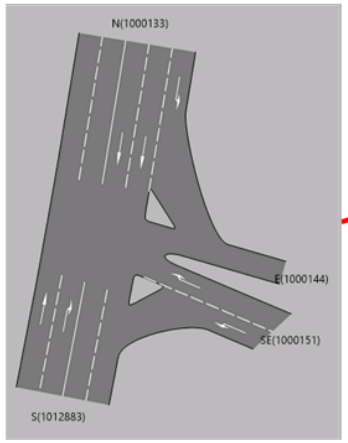
harmony RPS

SCALE 1 : 5000 @ A1 | DATE MAR 2016 | DWG # 22470 - 282c

Palmview Development - Racecourse Rd Interchange Upgrades

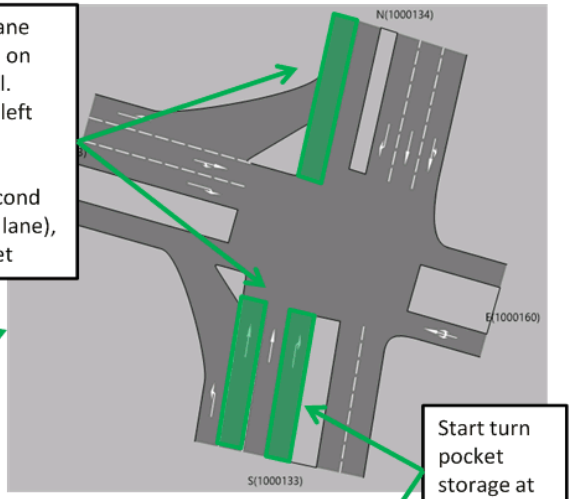
Current Layout



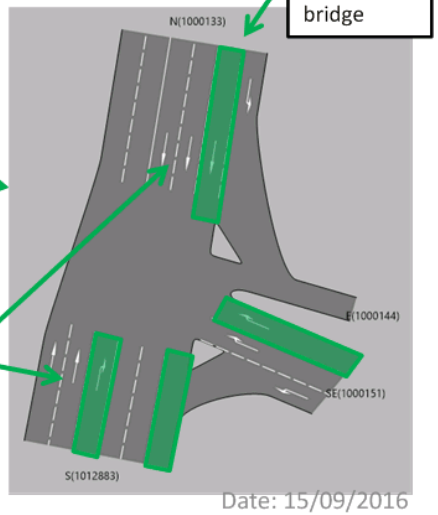


Proposed Layout

Short departure lane (200m incl. taper) on northern side (incl. reconstruction of left turn slip lane on southern side to accommodate second stand-up through lane), and new RT pocket



Start turn pocket storage at bridge



Short departure lane (200m incl. taper) on southern side (incl. reconstruction of left turn slip lane on northern side and third stand-up through lane), and new RT pockets* on southern and eastern approaches

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

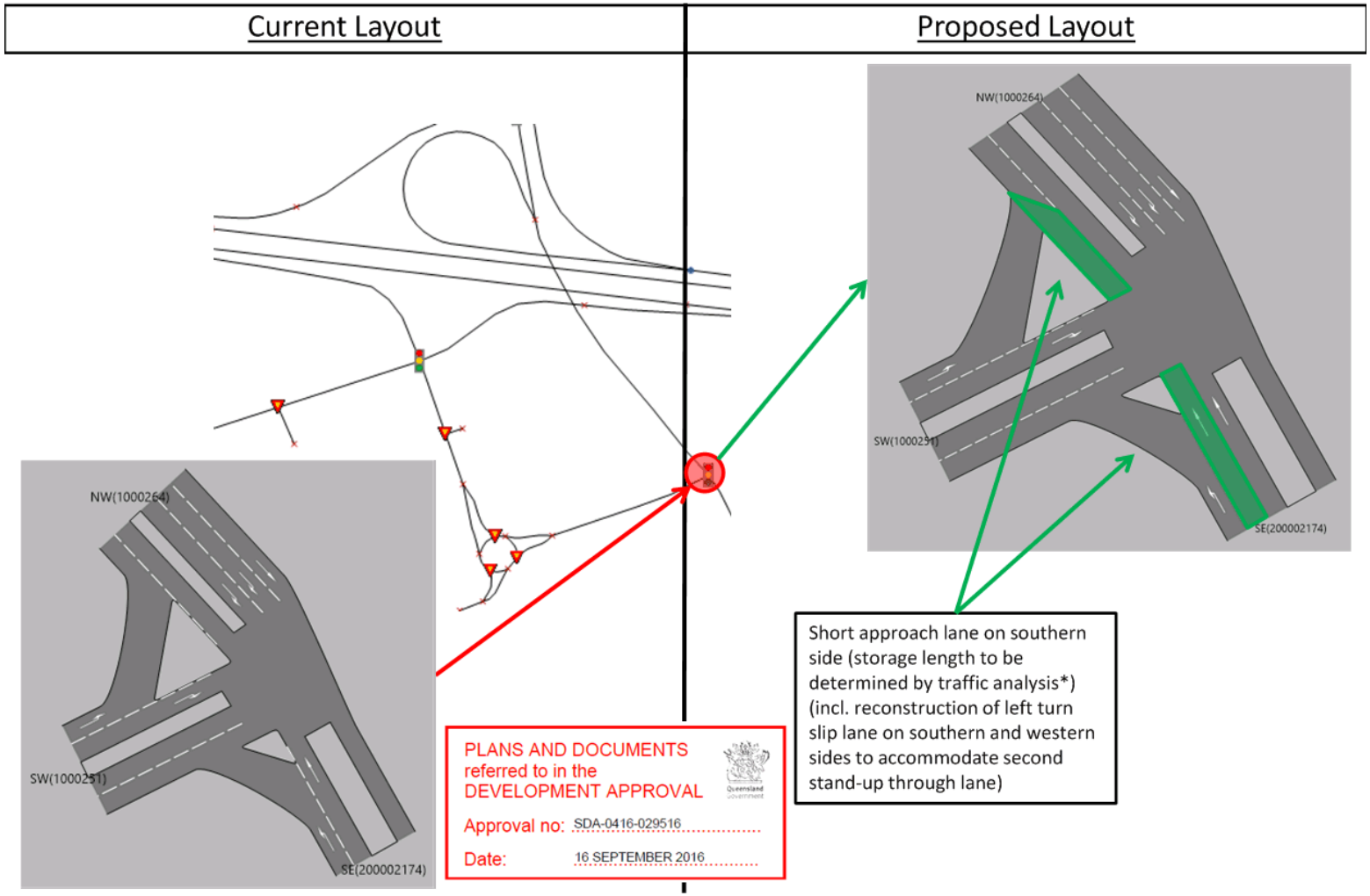
Approval no: SDA-0416-029516

Date: 16 SEPTEMBER 2016

* Traffic analysis to be undertaken by developer as part of detailed design development for the works

Date: 15/09/2016

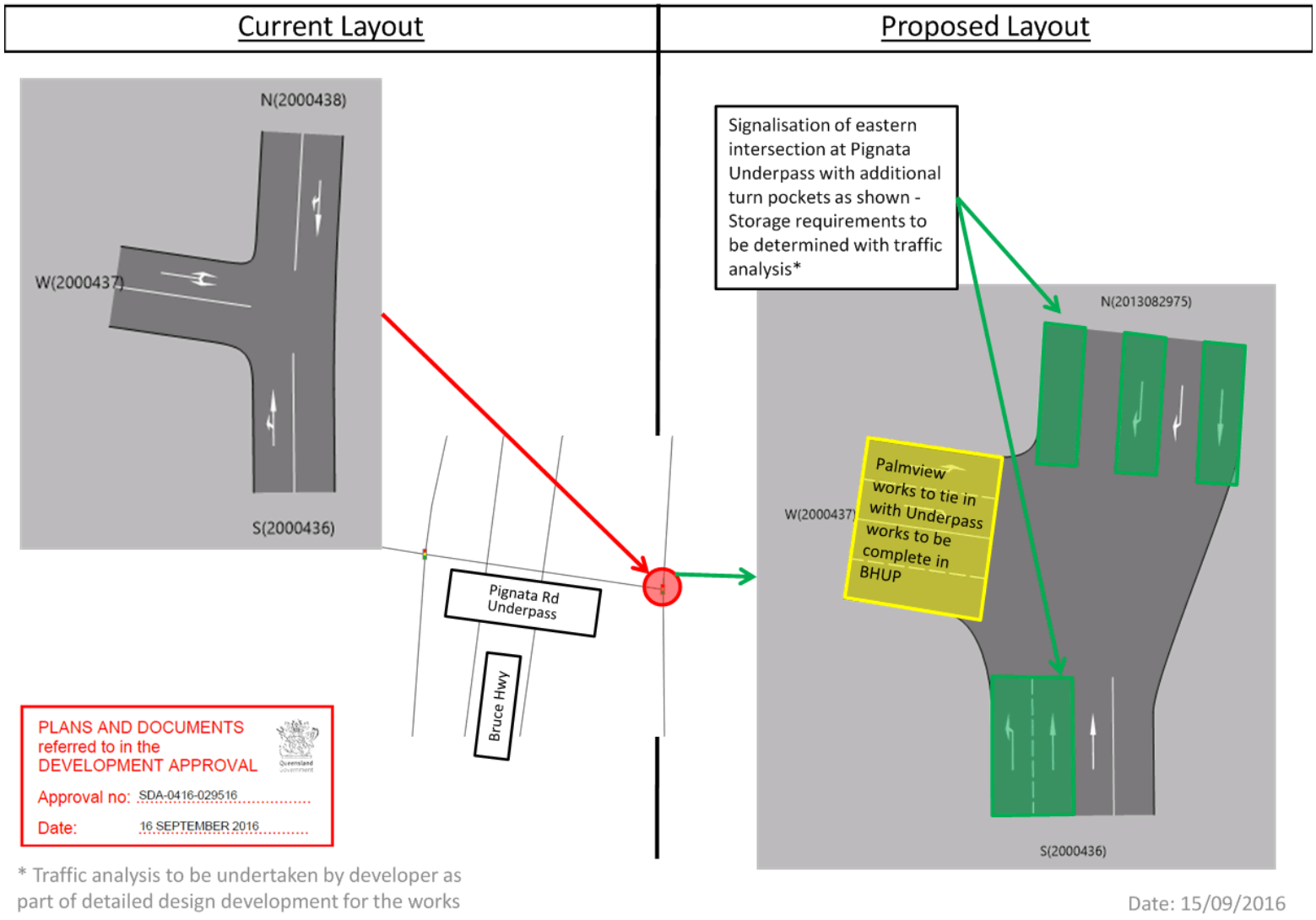
Palmview Development - Claymore Rd / Sippy Downs Dr Intersection Upgrades



* Traffic analysis to be undertaken by developer as part of detailed design development for the works

Date: 15/09/2016

Palmview Development - Pignata Rd Connection Intersection Layout (eastern side of Underpass)



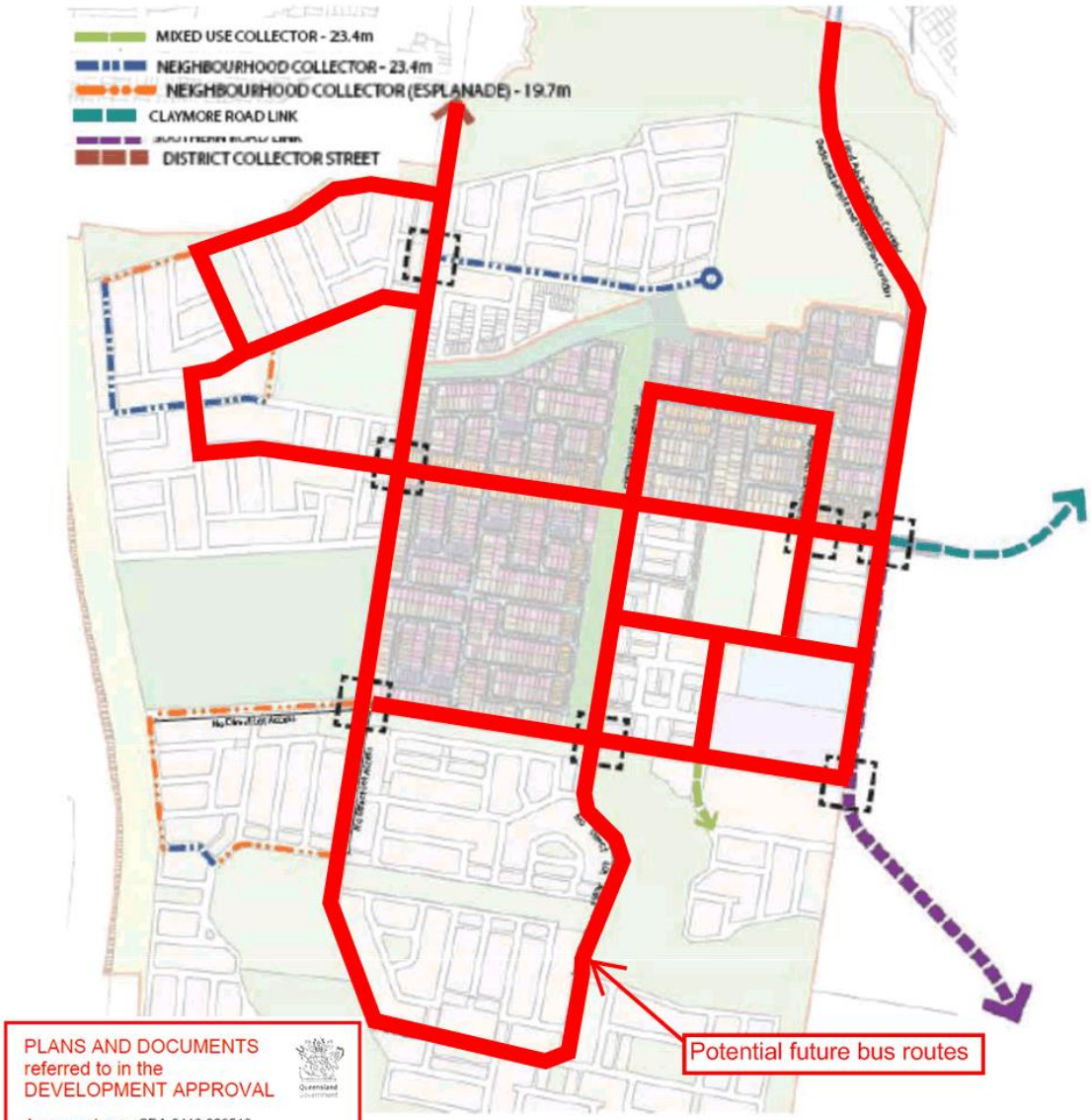
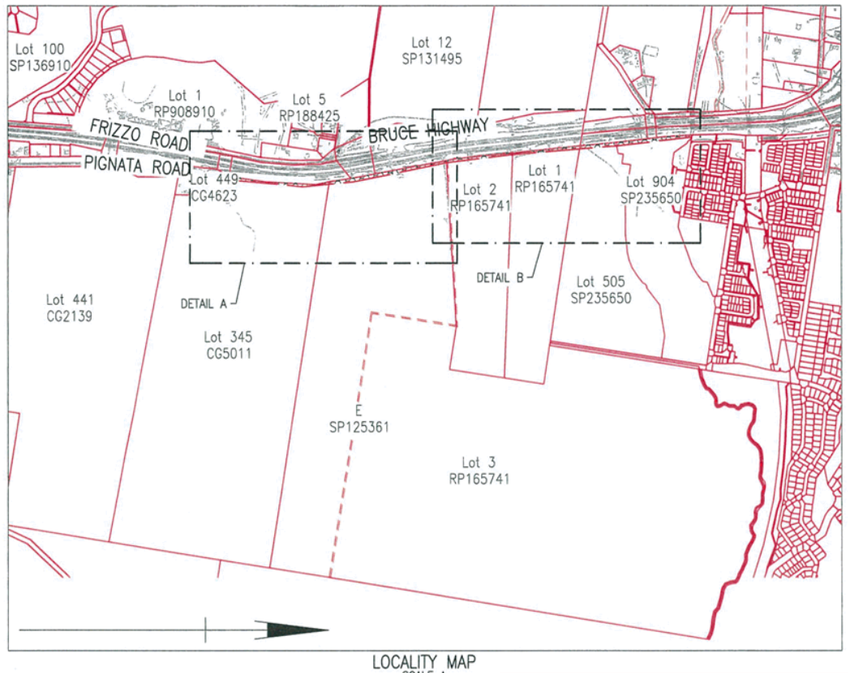


Figure 6: Road Hierarchy Plan

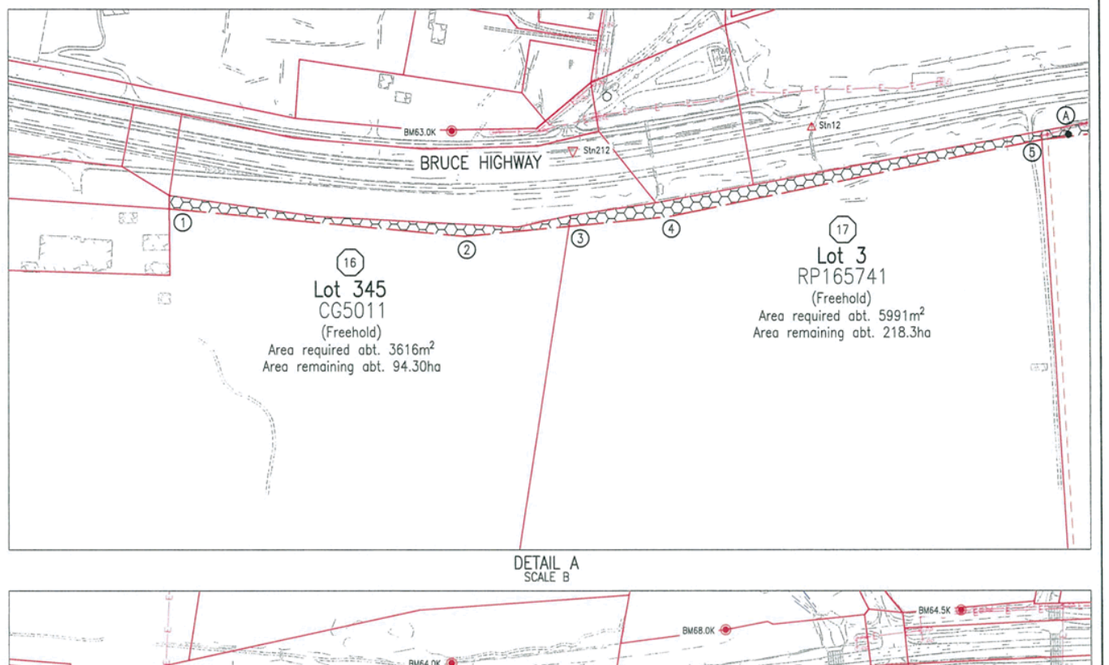
PLAN AMENDED BY DTMR: 21 JUNE 2016

Road Hierarchy Plan: Potential Future Bus Routes: Amended by DTMR 21 June 2016 (Revision A)

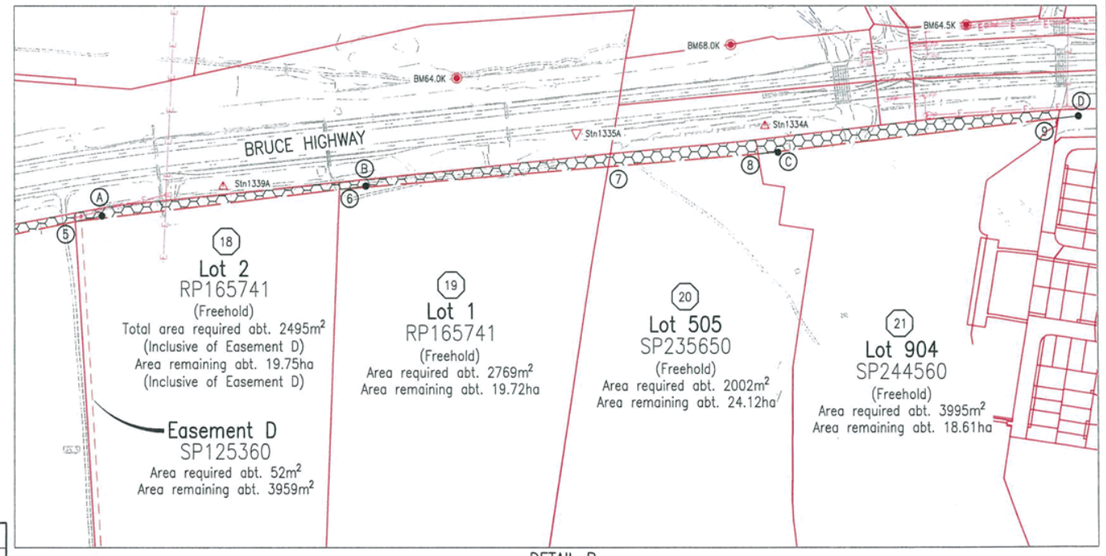
Parish of Mooloolah
County of Canning



LOCALITY MAP
SCALE A



DETAIL A
SCALE B



DETAIL B
SCALE B

SETOUT POINTS

POINT NO.	COORDINATES EASTING	COORDINATES NORTHING
A	504764.368	7042400.621
B	504734.471	7042666.491
C	504700.819	7043081.510
D	504664.932	7043383.105

LEGEND

(1) File Reference
(A) Set Out Points
(1) New Boundary Points

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL
Queensland Government
Approval no: SDA-0416-029516
Date: 16 SEPTEMBER 2016

SURVEY STATIONS

POINT	TYPE	COORDINATES EASTING	COORDINATES NORTHING	COMBINED SCALE FACTOR
BM63.0K	–	504760.709	7041779.425	0.99959028
Stn212	Spkt	504781.035	7041902.114	0.99958981
Stn12	Spkt	504757.587	7042142.731	0.99958952
Stn1339A	Peg	504734.796	7042523.104	0.99958942
BM64.0K	–	504626.370	7042758.172	0.99958868
Stn1335A	–	504681.826	7042878.989	0.99958961
BM68.0K	–	504593.014	7043034.580	0.99959038
Stn1334A	–	504674.445	7043068.611	0.99959023
BM64.5K	–	504573.534	7043272.442	0.99959098

NOTES

1. Coordinates of points on boundaries are only to be used by the cadastral surveyor to locate the actual boundary location.

NEW BOUNDARY POINTS

POINT NO.	COORDINATES EASTING	COORDINATES NORTHING	REMARKS
1	–	–	On corner
2	504866.543	7041792.906	
3	–	–	On bdy on line 2 – 4
4	504847.051	7041997.343	
5	–	–	On bdy on line 4 – A
6	–	–	On bdy on line 5 – B
7	–	–	On bdy on line 6 – C
8	–	–	On bdy on line 7 – C
9	–	–	On bdy on line 8 – D

21	SP244560	904	Freehold Area Required For Transport (Road)	abt. 3995m²	abt. 18.61ha
20	SP235650	505	Freehold Area Required For Transport (Road)	abt. 2002m²	abt. 24.12ha
19	RP165741	1	Freehold Area Required For Transport (Road)	abt. 2769m²	abt. 19.72ha
18	RP165741	2	Freehold Area Required For Transport (Road) (Area includes abt. 52m² of Easement D SP125360)	abt. 2495m²	abt. 19.75ha
17	RP165741	3	Freehold Area Required For Transport (Road)	abt. 5991m²	abt. 218.3ha
16	CG5011	345	Freehold Area Required For Transport (Road)	abt. 3616m²	abt. 94.30ha
File Ref.	Plan No.	Lot No.	Tenure And Purpose Of Requirement	Area Reqt.	Area Rem.

File Reference And Resumption Details — Area Required Shown Thus

Cadastral Map — Parish of Mooloolah — County of Canning

Survey Data	
Datum	GDA94 (MGA ZONE 56)
Horiz. Datum	
Height Datum	AHD (DERIVED)
Survey Books	MR 91504

Scales
A 0 100 200 300 400m
B 0 25 50 75 100m
Dimensions in metres except where shown otherwise. Areas in hectares (ha) or square metres (m2).

SUNSHINE COAST REGIONAL COUNCIL
BRUCE HWY (BRISBANE – GYMPIE)
Auxiliary drawings: 660819 – 660846

Drawing	Reqmts.	TMR Review	Resumption Requirements Approved
B.DAUTH	D.DAHL		
Checked D.DAHL	Checked M.MOODIE	Date: 3/12/14	30/12/14

Queensland Government

Job No.	280/10A/1
Resumption Plan No.	R2–1376
Drawing No.	660832 A
Series Number	RP–14 of 28

MRR_Resumption (06/13)

A Original Issue A1 — Revisions/Descriptions | Ref | Certification | Date | Microfiled

CAD FILES N:\AU\Birtinya\Projects\41\23312\CADD\(10A)_BRUCE_HWY\801_Caloundra_Road_to_Sunshine_Motorway\AutoCAD\Drawings\RP-660832.dwg
Working drawings

Last Modified :- Nov 28, 2014 - 12:29pm XREFS :- X_DRES.dwg ; X_SSCO.DWG ; X_PUP.dwg ; X_S_PHOTOGRAMMETRY.dwg ; X_S.dwg ; X_C_SURVEY_STATIONS.dwg

SDA-0416-029516

Harmony State-controlled Road Amenity Code

Harmony State-controlled Road Amenity Code

This code regulates sensitive uses to ensure that state transport operations and infrastructure are protected from development on nearby land that may lead to operational constraints on the state's transport system and to protect the community from significantly adverse impacts on health, wellbeing and quality of life resulting from environmental emissions (noise and vibration) generated by nearby state transport operations and infrastructure. This code is applicable:-

a) for the assessment of any development application on land within the Noise Buffer detailed on *Land Use Structure – Transport Noise Corridor Overlay* that are defined as a *sensitive use* or creation of lots that sensitive uses are proposed. or

b) prior to lodgement of the Local Ecological and Landscape Protection and Rehabilitation Plan is to occur with Council or within 6 months of the approval of the ADA. The plan is to be informed by a Road Traffic Noise Assessment Report detailing the potential impacts on the development site from noise emissions from the state-controlled road.

Purpose

The purpose of the code is to regulate sensitive development to:

(1) ensure that state transport operations and infrastructure are protected from development on nearby land that may lead to operational constraints on the state's transport system

(2) protect the community from significantly adverse impacts on health, wellbeing and quality of life resulting from environmental emissions (noise and vibration) generated by existing and future state transport operations and infrastructure.

Editor's note:

(1) Guidance for preparing a Road Traffic Noise Assessment Report is detailed within Attachment: Guidance for preparing a Road Traffic Noise Assessment Report.

(2) Private open spaces areas (2nd floor balconies) that do not achieve compliance Balustrades must be solid, gap-free and continuous for their complete length other than gaps required for drainage purposes which are to comply with the Building Code of Australia. The total area of the soffit above these balconies must be treated with sound absorption material.

(3) The receiver heights (building pad levels or finished floor levels) shall not increase by more than 200 mm and/or the effective noise attenuating structure height shall not be reduced by more than 200 mm compared to the assumptions made in the approved Road Traffic Noise Assessment Report.

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Table 1: Building Work, Material Change of use or Reconfiguring a lot

Managing noise impacts from transport corridors state code	
Performance outcomes	**Acceptable outcomes**
PO1 Development involving a noise sensitive use achieves acceptable noise levels for residents and visitors by mitigating adverse impacts on the development from noise generated by a state-controlled road.	**AO1.1** All facades of an accommodation activity exposed to noise from a state-controlled road meet the following external noise criteria#: (3) ≤60 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am ≤40 dB(A)) (4) ≤63 dB(A) L_{10} (18 hour) facade corrected (measured L_{90} (8 hour) free field between 10 pm and 6 am >40 dB(A)). **And**
	AO1.2 Every private open space in an accommodation activity exposed to noise from a state-controlled road meets the following external noise criteria#: (5) ≤57 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight ≤45 dB(A)) (6) ≤60 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight >45 dB(A)). **And**
	AO1.3 Every passive recreation area exposed to noise from a state-controlled road meets the following external noise criteria#: (7) 63 dB(A) L_{10} (12 hour) free field (between 6 am

	and 6 pm). **And**
	AO1.4 Every habitable room in an accommodation activity (other than a residential building), exposed to noise from a state-controlled road meets the following internal noise criteria#: (8) ≤35 dB(A) L_{eq} (1 hour) (maximum hour over 24 hours). ***Note:*** *Noise levels from a state-controlled road are to be measured in accordance with AS1055.1–1997 Acoustics – Description and measurement of environmental noise.* *Editor's note: Habitable rooms of residential buildings located within a transport noise corridor must comply with the Queensland Development Code MP4.4 Buildings in a transport noise corridor, Queensland Government, 2010. Transport noise corridors are mapped on the Department of Infrastructure, Local Government and Planning's State Planning Policy Interactive Mapping System.* **OR**
	AO1.5 Comply with the recommendations outline within a *Traffic Noise Assessment Report* approved by the Department of Transport and Main Roads and Council. ***Editor's note:*** *(1) Guidance for preparing a Road Traffic Noise Assessment Report is detailed within Attachment: Guidance for preparing a Road Traffic Noise Assessment Report.* *(1) Private open spaces areas (2nd floor balconies) that do not achieve compliance Balustrades must be solid, gap-free and continuous for their complete length other than gaps required for drainage purposes which are to comply with the Building Code of Australia. The total area of the soffit above these balconies must be treated with sound absorption material.* *(2) The receiver heights (building pad levels or finished floor levels) shall not increase by more than 200 mm and/or the effective noise attenuating structure height shall not be reduced by more than 200 mm compared to the assumptions made in the approved Road Traffic Noise Assessment Report.*
PO2 Development involving land where a future anticipated accommodation activity is made exempt or self-assessable development under a local planning instrument is to achieve acceptable noise levels for residents and visitors by mitigating adverse impacts on the development site from noise	**AO2.1** Land for a future anticipated accommodation activity exposed to noise from a state-controlled road meets the following external noise criteria at the building envelope or if the building envelope is unknown, the deemed-to-comply setback distance for buildings stipulated by the local planning instrument or relevant

generated by a state-controlled road or a type 1 multi-modal corridor.	building regulations#: (1) ≤57 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6 am and 12 midnight ≤45 dB(A)) (2) ≤60 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6 am and 12 midnight >45 dB(A)). **OR**
	AO2.2 Comply with the recommendations outline within a Traffic Noise Assessment Report approved by the Department of Transport and Main Roads and Council. ***Editor's note:*** *(1) Guidance for preparing a Road Traffic Noise Assessment Report is detailed within Attachment: Guidance for preparing a Road Traffic Noise Assessment Report.* *(2) Private open spaces areas (2nd floor balconies) that do not achieve compliance Balustrades must be solid, gap-free and continuous for their complete length other than gaps required for drainage purposes which are to comply with the Building Code of Australia. The total area of the soffit above these balconies must be treated with sound absorption material.* *(3) The receiver heights (building pad levels or finished floor levels) shall not increase by more than 200 mm and/or the effective noise attenuating structure height shall not be reduced by more than 200 mm compared to the assumptions made in the approved Road Traffic Noise Assessment Report.*
Noise barriers or earth mounds	
PO3 Noise barriers or earth mounds erected to mitigate noise from transport operations and infrastructure are designed, sited and constructed to: (3) maintain safe operation and maintenance of state transport infrastructure (2) minimise impacts on surrounding properties (3) complement the surrounding local environment (4) maintain fauna movement corridors where appropriate	**AO2.1** Where mitigating noise associated with state-controlled road, noise barriers and earth mounds are designed, sited and constructed in accordance with Chapter 7 Integrated Noise Barrier Design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of Transport and Main Roads, 2013 and Department of Transport and Main Roads technical specifications.

 # Editor's note:

(1) To Demonstrate compliance with the acceptable outcomes, it is recommended a noise assessment report, certified by an RPEQ be provided. Guidance for preparing a Road Traffic Noise Assessment Report is detailed within Attachment: Guidance for preparing a Road Traffic Noise Assessment Report.

(2) Private open spaces areas (2nd floor balconies) that do not achieve compliance Balustrades must be solid, gap-free and continuous for their complete length other than gaps required for drainage purposes which are to comply with the Building Code of Australia. The total area of the soffit above these balconies must be treated with sound absorption material.

(3) The receiver heights (building pad levels or finished floor levels) shall not increase by more than 200 mm and/or the effective noise attenuating structure height shall not be reduced by more than 200 mm compared to the assumptions made in the approved Road Traffic Noise Assessment Report.

Glossary of terms

Accommodation activity means any of the following:
(1) caretaker's accommodation

(2) community residence

(3) dual occupancy

(4) dwelling house

(5) dwelling unit

(6) multiple dwelling

(7) relocatable home park

(8) residential care facility

(9) resort complex

(10) retirement facility

(11) rooming accommodation

(12) short-term accommodation

(13) tourist park

Habitable Room see the Building Code of Australia.
Editor's note: Habitable room means a room used for normal domestic activities, and includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom but excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

Passive recreation area means an area used for passive recreation such as a park, playground or walking track. This term does not include drainage reserves or channels, landscape buffer strips, environmental areas or corridors, or conservation areas or corridors.

Private open space means an outdoor space for the exclusive use of occupants of a building.

Residential building means a class 1, class 2, class 3 or class 4 building as defined in the Building Code of Australia.

Sensitive development means development for any of the following:
(1) an accommodation activity

(2) an educational establishment

(3) a child care centre

(4) a hospital.

State-controlled road see the Sustainable Planning Regulation 2009, schedule 26.
Editor's note: State-controlled road means:
(1) a state-controlled road within the meaning of the Transport Infrastructure Act 1994, schedule 6, or

(2) State toll road corridor land.

Editor's note: See DA mapping system—SARA layers.

QUEENSLAND GOVERNMENT

Attachment:
Guidance for preparing a Road Traffic Noise Assessment Report

The Road Traffic Noise Assessment Report must:

a) Include the requirements detailed in section 4.5, Chapter 4 of the *Road Traffic Noise Management: Code of Practice* and in addition to these requirements, address the following:
- A description of the subject site should be provided including real property description/s and a locality plan;
- The description of the proposed development should include the nominated setback distances for building facades (noise sensitive locations), proposed lot numbers (if applicable) and layout plans incorporating site detail and contour survey and earthworks (cut and fill) information to clarify the existing topography and proposed finished levels;
- Road traffic noise model input data includes, but is not limited to, road levels on Australian Height Datum (AHD), pavement surface type and average annual daily traffic (AADT) including the percentage of commercial vehicles, vehicle speed and growth rate for the base year and the ten year traffic horizon from the estimated time of completion of the development being:
  - for applications for Reconfiguring a Lot, from when the local government approves the plan of survey; and
  - for applications for a Material Change of Use, from when a final inspection certificate or certificate of classification is obtained, or from when the use commences, whichever occurs first;
- The layout plan showing the length, height and location of all existing and recommended noise attenuation treatment options, should also include:
  - the maximum height above proposed finished ground levels in Reduced Levels (RLs) on AHD of any proposed noise attenuation structures, which are required to meet the department's noise criteria;
  - the maximum height above proposed finished ground levels in RLs on AHD of any proposed noise attenuation structures, which are required to meet the department's noise criteria for the ground level (first storey) of any noise sensitive receiver (if different from above);
  - the maximum height above proposed finished ground levels in RLs on AHD of any proposed noise attenuation structures which are required to meet the department's noise criteria for the first floor level (second storey) of any noise sensitive receiver;
  - if the proposed noise attenuating structure(s) include/s an earth mound/s, the footprint extent of any earth mound/s; and
  - the layout of the proposed development.

The acoustical assessment undertaken as part of the Road Traffic Noise Assessment Report must take the following into account:

a) For reconfiguration proposals, or a section 242 preliminary approval for a material change of use affecting a local planning instrument, the assumed location of residential building facades is to be the minimum setback distance required under the *Queensland Development Code* or as varied by the relevant local government planning scheme for detached and duplex housing. For other noise sensitive uses, the assumed facade location is to be as per the relevant planning scheme. In these situations, a 'facade correction' of 2.5dB(A) should be added to the free field measurement of 1 metre from the assumed facade to determine the facade corrected noise level.

[redacted]

b) The receptor height used in the acoustical assessment should be 1.5 metres above the finished floor level/s. In the case of multi-level buildings, all floor levels are to be assessed. For residential reconfigurations, where the finished floor level is not known, the receptor heights should be assumed at 1.8 metres and 4.6 metres above an assumed building pad level, for the ground and first floors (first and second storey) respectively. It is essential that both low and high-set residential buildings be considered in the assessment.

c) Noise measurements and monitoring should be conducted on a typical working day. Measurements taken during school holidays or on the weekend will need to be justified with vehicle classification count data recorded on the day of the noise measurement for the nearby road segment.

d) The department considers that noise barriers such as noise fences and/or earth mounds are the primary forms of noise attenuation treatment. Noise attenuation treatments should comply with the department's standards, which are available at:
http://www.tmr.qld.gov.au/Business-industry/Technical-standards-publications.aspx, namely:
- *Road Traffic Noise Management: Code of Practice*
- Standard Drawings Road Manual – Part 13, Noise Barriers
  - 1605 – steel post – Timber planks
  - 1606 – steel posts – Plywood panels
  - 1607 – universal beam posts – Plywood panels
  - 1608 – universal beam posts – Concrete panels – Steel panels
- Standard Specifications and associated Technical Standards
  - MRS04 & MRTS04 – General Earthworks
  - MRS15 & MRTS15 – Noise Fences
  - MRS16 & MRTS16 – General Requirements Landscape and Revegetation Works
  - MRS16B & MRTS16B – Vegetation Ground Works
  - MRS16C & MRTS16C – Vegetation Works
  - MRS16D & MRTS16D – Hardscape Works
  - MRS16E & MRTS 16E – Establishment and Monitoring Works
- *Road Landscape Manual.*

Noise barriers constructed of treated timber palings, posts and rails must be in accordance with Standard Specification MRS15 and Technical Standard MRTS15.

e) The *Queensland Development Code Mandatory Part 4.4 - Buildings in Transport Noise Corridors* (QDC MP4.4) addresses road traffic noise for residential development within Transport Noise Corridors (TNC) for habitable rooms of Class 1, 2, 3 and 4 buildings at the building works stage. QDC MP4.4 is only considered an acceptable means of achieving the department's internal criteria. The primary concern of the department in relation to road traffic noise impacting on residential development relates to noise levels at building facades and in open space and recreation areas.

f) It is recommended that a map be provided which shows the QDC MP4.4 noise categories (0-4) that would apply to the site as a result of any proposed noise barriers. This will inform subsequent development

[redacted]

applications for building works over the land. This map should show the contours aligning to the L_{A10} (18hr) noise category levels identified in Table 1, Schedule 3 of QDC MP4.4, these being namely, 58 dB(A), 63 dB(A), 68 dB(A) and 73 dB(A).

Please contact the Road Planning & Design section of the department's Engineering & Technology Division on telephone number 3066 8237 should you have any queries about the Road Traffic Noise Assessment Report and associated acoustical assessment.

[redacted]

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Harmony Stormwater and Drainage Impacts on

State Transport Infrastructure State Code

Harmony stormwater and drainage impacts on state transport infrastructure state code

This code is applicable for the assessment of any development application on land contained within the Harmony development site for Operational Works, Material Change of use or Reconfiguring a lot.

Purpose

The purpose of the code is to ensure that stormwater events, including peak discharges, flood levels, frequency/duration of flooding, flow velocities, water quality, ponding, sedimentation and scour effects associated with development are minimised and managed to avoid creating any adverse impacts on a state transport corridor.

This will be achieved through:

(1) ensuring the protection of the infrastructure assets from damage, any reduction in asset life or increased maintenance costs (whole of life cycle costs)

(2) a no worsening of impacts or actionable nuisance on state transport infrastructure and state transport corridors

(3) maintaining the efficiency of the stormwater infrastructure in state transport corridors to manage water quality and natural overland flows

(4) ensuring stormwater discharge only occurs at a lawful point of discharge.

Editor's note:

(4) To Demonstrate compliance with the acceptable outcomes, it is recommended a Flooding and Stormwater management plan, certified by an RPEQ be provided. Guidance for preparing a Flooding and Stormwater management plan is detailed within Attachment: Guidance for preparing a Flooding and Stormwater management plan.

(5) The fraction impervious shall not increase compared to the assumptions made in the approved Flooding and Stormwater management plan.

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Table 1: All Development

Harmony Stormwater and drainage impacts on state transport infrastructure state code	
Performance outcomes	**Acceptable outcomes**
Stormwater and drainage management	
PO1 Flood and Stormwater management for the development must ensure there is no worsening of, and no actionable nuisance in relation to peak discharges, flood levels, frequency or duration of flooding, flow velocities, water quality, ponding, sedimentation and scour effects on an existing or future state transport corridor for all flood and stormwater events that exist prior to development, and up to a 1 per cent annual exceedance probability.	**AO1.1** The development does not result in flooding, stormwater or drainage impacts or actionable nuisance within an existing or future state transport corridor. *Editor's note:* *(1) To demonstrate compliance with the acceptable outcomes, it is recommended a Flooding and Stormwater management plan, certified by an RPEQ be provided. Guidance for preparing a Flooding and Stormwater management plan is detailed within Attachment: Guidance for preparing a Flooding and Stormwater management plan.* *(2) The fraction impervious shall not increase compared to the assumptions made in the approved Flooding and Stormwater management plan.* **OR**
	A01.2 Comply with the recommendations outline within a stormwater management plan (SMP) approved by the Department of Transport and Main Roads and Council. *Editor's note:* *(1) Guidance for preparing a Flooding and Stormwater management plan is detailed within Attachment: Guidance for preparing a Flooding and Stormwater management plan.* *(2) The fraction impervious shall not increase compared to the assumptions made in the approved Flooding and Stormwater management plan.*
Lawful point of discharge	
PO2 Stormwater run-off and drainage are directed to a lawful point of discharge to avoid adverse impacts on the state transport corridor.	**AO2.1** Where stormwater run-off is discharged to a state transport corridor, the discharge is to a lawful point of discharge in accordance with section 3.4 of Queensland urban drainage manual, Department of Energy and Water Supply, 2013. **OR**

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	AO2.3 Development does not cause a net increase in or concentration of stormwater or floodwater flows discharging onto the state transport corridor during construction or thereafter. **AND**
	AO2.4 Development does not create any additional points of discharge or changes to the condition of an existing lawful point of discharge to the state transport corridor.
Sediment and erosion management	
PO3 Run-off from upstream development is managed to ensure that sedimentation and erosion do not cause siltation of stormwater infrastructure in the state transport corridor.	**AO3.1** Development with a high risk of erosion incorporates erosion and sediment control measures. *Editor's note: For a state-controlled road where a development has a high risk of erosion, an erosion and sedimentation control plan should be provided to support a stormwater management statement or stormwater management plan. Section 1 of the Stormwater guideline for environmentally relevant activities, Department of Environment and Heritage Protection, 2014, defines development considered to have a high risk of erosion.*

Glossary of terms

Annual exceedance probability (AEP) means the probability of exceedance of a given discharge within a period of one year.

Editor's note: AEP is generally expressed as 1 in Y [years]. The terminology of AEP is generally used where the data and procedures are based on annual series analysis.

Lawful point of discharge means a point of discharge designated and controlled by DTMR, or at which discharge rights have been granted by registered easement in favour of DTMR.

State-controlled road see the Sustainable Planning Regulation 2009, schedule 26.

Editor's note: State-controlled road means:

(1) a state-controlled road within the meaning of the Transport Infrastructure Act 1994, schedule 6, or

(2) State toll road corridor land.

Editor's note: See DA mapping system–SARA Layers

State transport corridor means any of the following terms (defined under the Transport Infrastructure Act 1994, Transport Planning and Coordination Act 1994 and Sustainable Planning Regulation 2009):

(1) a state-controlled road

(2) a railway

(3) a public passenger transport corridor

(4) a state-controlled transport tunnel

(5) an active transport corridor.

State transport infrastructure means any of the following terms (defined under the Transport Infrastructure Act 1994, the Transport Planning and Coordination Act 1994 and the Sustainable Planning Regulation 2009):

(1) state-controlled road

(2) busway transport infrastructure

(3) light rail transport infrastructure

(4) rail transport infrastructure

(5) other rail infrastructure

(6) active transport infrastructure.

Upstream development means development located in the opposite direction of water flow from a state transport corridor, nearer to the source of the flow.

Abbreviations

AEP — Annual exceedance probability

DTMR — Department of Transport and Main Roads

RPEQ — Registered Professional Engineer of Queensland

QUEENSLAND GOVERNMENT

Attachment:

Guidance for preparing a Flooding and Stormwater management plan

A RPEQ certified Flooding and Stormwater management plan must address the following:

a) demonstrate that the RPEQ has investigated all matters in accordance with standard industry practice as outlined in the current edition of:
   i. Dept of Energy and Water Supply's *Queensland Urban Drainage Manual*; and
   ii. Dept of Transport and Main Road's *Road Drainage Manual*.

b) demonstrate that the management of flooding and stormwater (quantity and quality) post development can achieve a no worsening impact (on the pre-development condition) in accordance with the above technical standards. Flooding and stormwater management for the proposed development must ensure no worsening or actionable nuisance to the state transport corridor caused by peak discharges, flood levels, frequency/duration of flooding, flow velocities, water quality, ponding, sedimentation, and scour effects.

c) ensure the following are addressed, where applicable:
   i. all relevant legal points of discharge for the development site are identified. No new discharge points for stormwater will be permitted on the state transport corridor;
   ii. the impact of existing or proposed noise barriers on overland flow paths is taken into account;
   iii. overland flow paths are identified and hydraulic conveyance is maintained on the site as part of the proposed development;
   iv. flood storage capacity is maintained on the site as part of the proposed development;
   v. adverse impacts from sheet flow on the transport infrastructure are prevented;
   vi. the proposed development does not cause a concentration of stormwater (including floodwater) flows discharging on the state transport corridor land during construction or thereafter;
   vii. retaining structures, filling/excavation, landscaping, construction activities or any other works to the land have been designed to include provision for drainage so as not to adversely impact on the state transport corridor;
   viii. the proposed development does not impede or interfere with any drainage, stormwater or floodwater flows from the state transport corridor;
   ix. stormwater or floodwater infrastructure have been designed to maintain the structural integrity of the state transport infrastructure;
   x. existing stormwater drainage infrastructure on the state transport corridor is not interfered with or damaged by the proposed development such as through concentrated flows, surcharging, scour or deposition;
   xi. the quality of stormwater discharging onto the state transport corridor is not reduced through erosion and sedimentation.

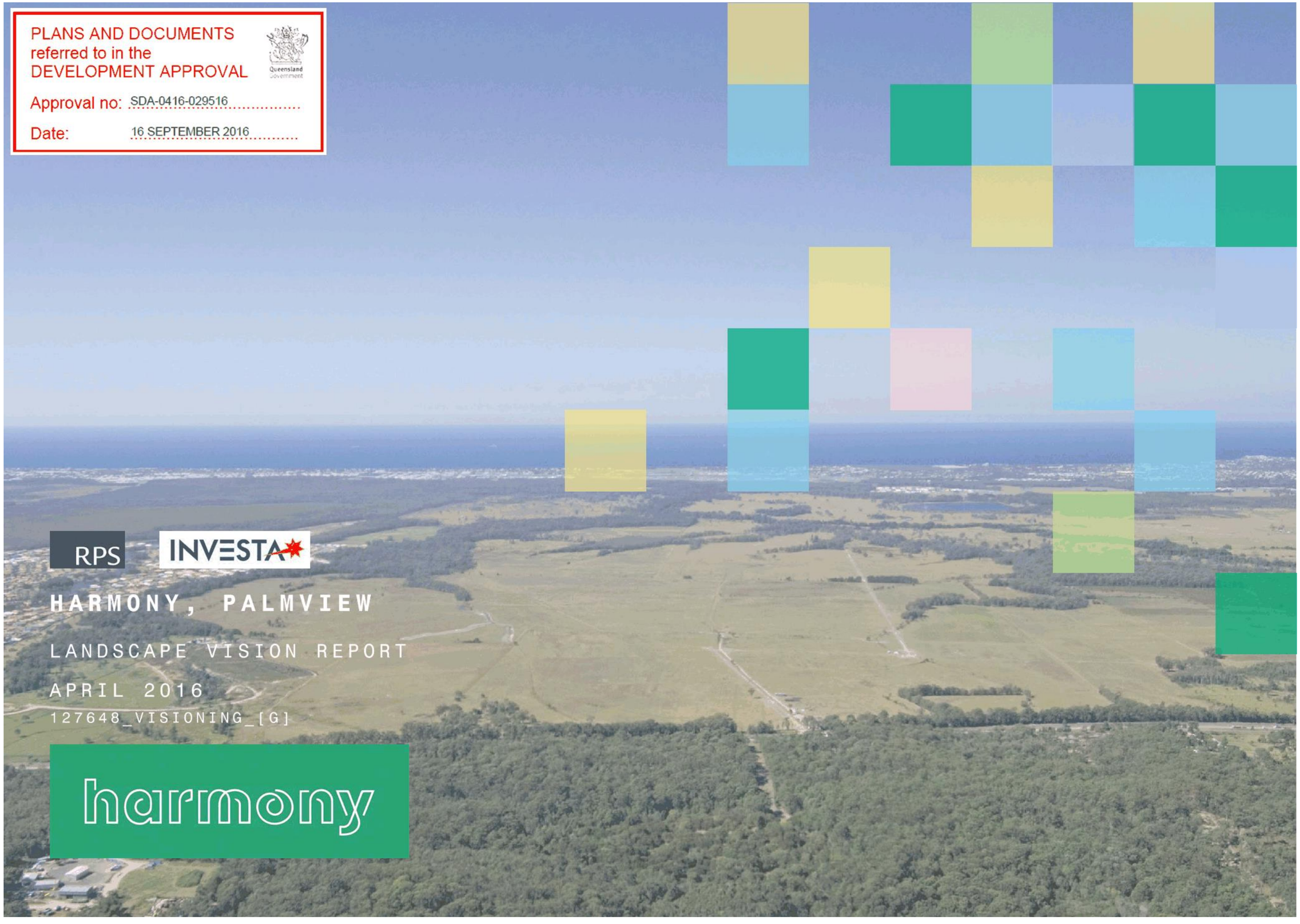
d) include details, layout plans and supporting calculations and modelling of the mitigation measures proposed to address any potential stormwater impacts (including flooding impacts) of the proposed development.

e) incorporate appropriate hydrological and hydraulic analysis including:
   i. calculation of flood peak discharges and flood peak levels for the site and surrounding area which exist prior to the development for all flood and stormwater events up to a 1% Annual Exceedance Probability (AEP). This should include at least the following flood and stormwater events: 50%, 20%, 10%, 5%, 2% and 1% AEP (equivalent to 2, 5, 10, 20, 50 and 100 year ARI events);
   ii. calculation of flood peak discharges and flood peak levels for the site and surrounding area after the development has occurred for all flood and stormwater events up to a 1% Annual Exceedance Probability (AEP). This should include all events calculated in e)i) above;

[redacted]

f) clearly demonstrate and subsequently recommend that the development provides mitigation measures to reduce flooding, stormwater and drainage impacts to meet acceptable levels;
g) include an erosion and sediment control plan for the development site in accordance with Chapter 13 of the *Road Drainage Manual*, Department of Transport and Main Roads.

[redacted]



RPS INVESTA

HARMONY, PALMVIEW

LANDSCAPE VISION REPORT

APRIL 2016

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harmony

harmony

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Investa

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contents

introduction

This document presents the neighbourhood design and landscape vision for this exciting Harmony masterplan area. The proposal focuses on creating a diverse, compelling and sustainable community.

The neighbourhood design and landscape masterplan defines a number of guiding principles which are a response to the embedded characteristics of the site and the stated objectives of the Structure Plans, Planning Scheme and Infrastructure Agreement.

The purpose of this document is to provide an overall framework, capable of being reviewed over time, with which detailed applications commonly adhere to and build upon.

The detailed information forms the framework for the mixed density residential component, of approximately 1130 dwellings, within the initial neighbourhood of Harmony.

This neighbourhood will eventually include medium density residential, local employment, community purpose land, regional recreation park, Town park and the district activity centre

context

The site is located on the Sunshine Coast approximately seven kilometres from the coastline. The site is highly connected to regional destinations. The centre of Maroochydore is approximately 12 kilometres north. Brisbane is 90 Kilometres to the south and the Sunshine Coast hinterland is 20 kilometres to the west. Sippy Creek runs along the north boundary, the Bruce Highway along the western perimeter and the Palmview Conservation Park borders the southern edge of the development.

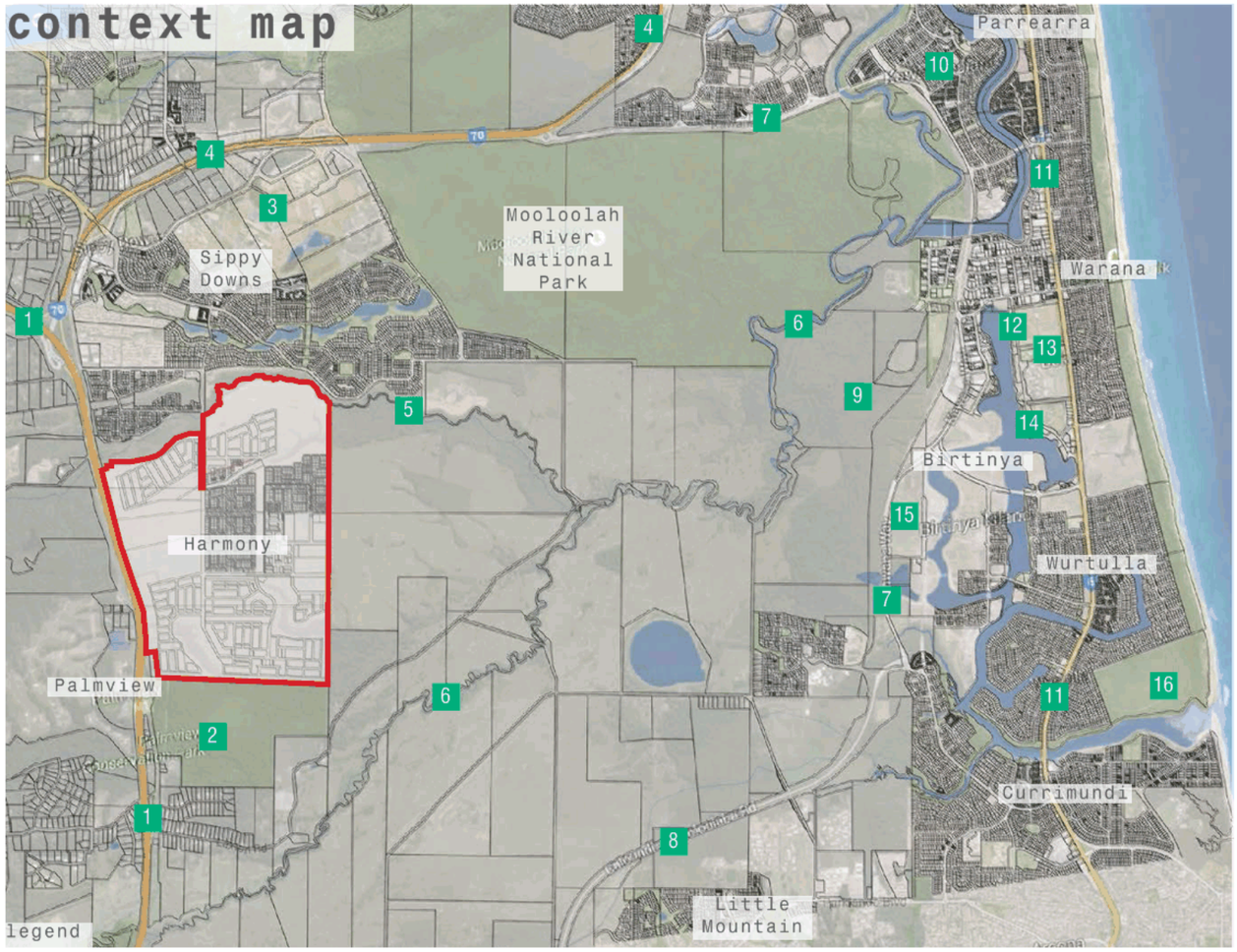
Key neighbouring facilities:

- To the north include the University of the Sunshine Coast with major trans it station, Sippy Downs Town centre
- To the east include Sunshine Coast University Hospital, Kawana Waters Business village, Kawana Town Centre, Britinya Wetlands, Mooloolah River and Mooloolah River National Park.

The site is a generally flat cleared rural grassed field with a band of existing vegetation along the northern boundary and three vegetated corridors that punctuate the site in the north east, south east and south west corners.

A farm currently occupies the site and is used for grazing cattle.

context map



1 Bruce Highway
2 Palmview Conservation Park
3 University of the Sunshine Coast
4 Sunshine Motorway
5 Sippy Creek
6 Mooloolah River
7 Kawana Way
8 Caloundra-Mooloolaba Road
9 Birtinya Wetlands
10 Kawana Island
11 Nicklin Way
12 Kawana Business Village
13 Sunshine Coast Stadium
14 Kawana Town Centre
15 Sunshine Coast Hospital
16 Currimundi Lake Conservation Park

vision

The harmony vision is to produce an authentically Sunshine Coast community - a true Sunshine Coast living, embracing all that's great about the Sunny Coast.

It will be a community of compact, distinct, well connected, walkable and thoughtfully designed neighbourhood that provide a safe, pleasant and friendly place to live.

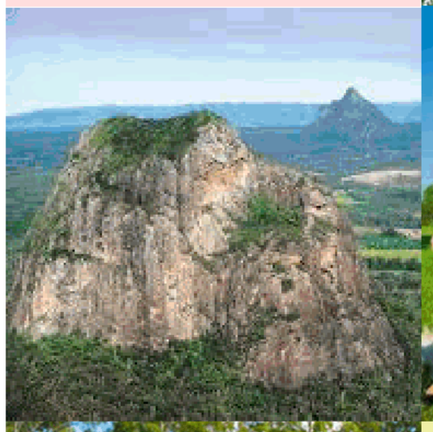
The project endeavours to establish an integrated and responsive community, drawing on the physical iconography (Lush hinterland, sparkling ocean and backdrop of Glasshouse Mountains) and the embedded cultural customs of this coastal region.

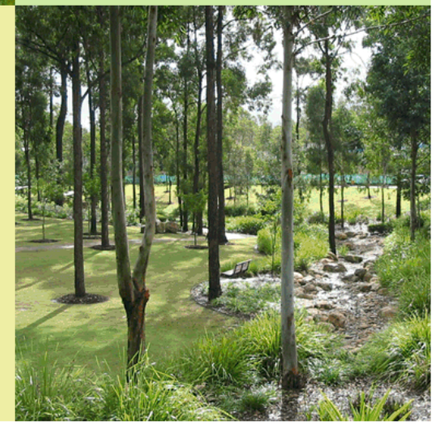
Harmony aims to capture the very essence of the Sunshine Coast, creating a place to feel truly connected to nature, to a vibrant community, to a vast array of local facilities, and to the arts. The community will offer a range of living options, community facilities and recreation experiences.

The development aspires to deliver an amenity-rich landscape with a range of diverse open spaces and distinctive places which facilitate interaction, exploration, promotes an active and healthy lifestyle, generates creativity and fosters a warm and relaxed community.

Harmony is wrapped in the arms of nature, surrounded by reserves and parks that pull right into the community like green ribbons that thread through all the neighbourhoods. Verdant streetscapes and parks will be shaded and coloured with endemic flora from the hinterland to the coastline, punctuated with inspiring public artworks and interpretive trails that tell the stories of the Sunshine Coast.





design principles

A village way of life

A village that comprises a series of high quality integrated residential neighbourhood offering a diverse mix of dwelling options with a legible street, pedestrian, bicycle and open space network.

Create a variety of open space and recreation opportunities that encourage the pursuit of a healthy and active outdoor lifestyle:
- Green leafy streets with well connected pedestrian footpaths to encourage walking
- Interconnected cycle ways and secure bike parking promote sustainable travel modes
- Versatile park facilities that provide for informal personal fitness activities
- Walkable neighbourhood
- Welcoming streetscape.

Create connections with the intrinsic Sunshine Coast artistic community:
- Integrate art
- Provide opportunities for temporary art installations
- Facilitate outdoor studio spaces.

Authentic Sunshine Coast living

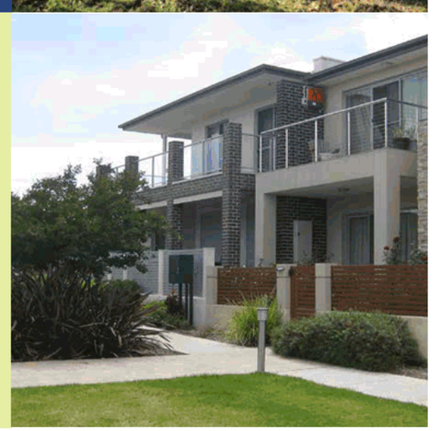
Create a landscape that reinforces the Sunshine Coast identity:
- Relaxed, quiet, slow paced
- Resident community
- Sophisticated, exclusive, human scale
- Creative
- Unspoilt nature, stronger connection to nature
- Intimate.

Inspired by nature

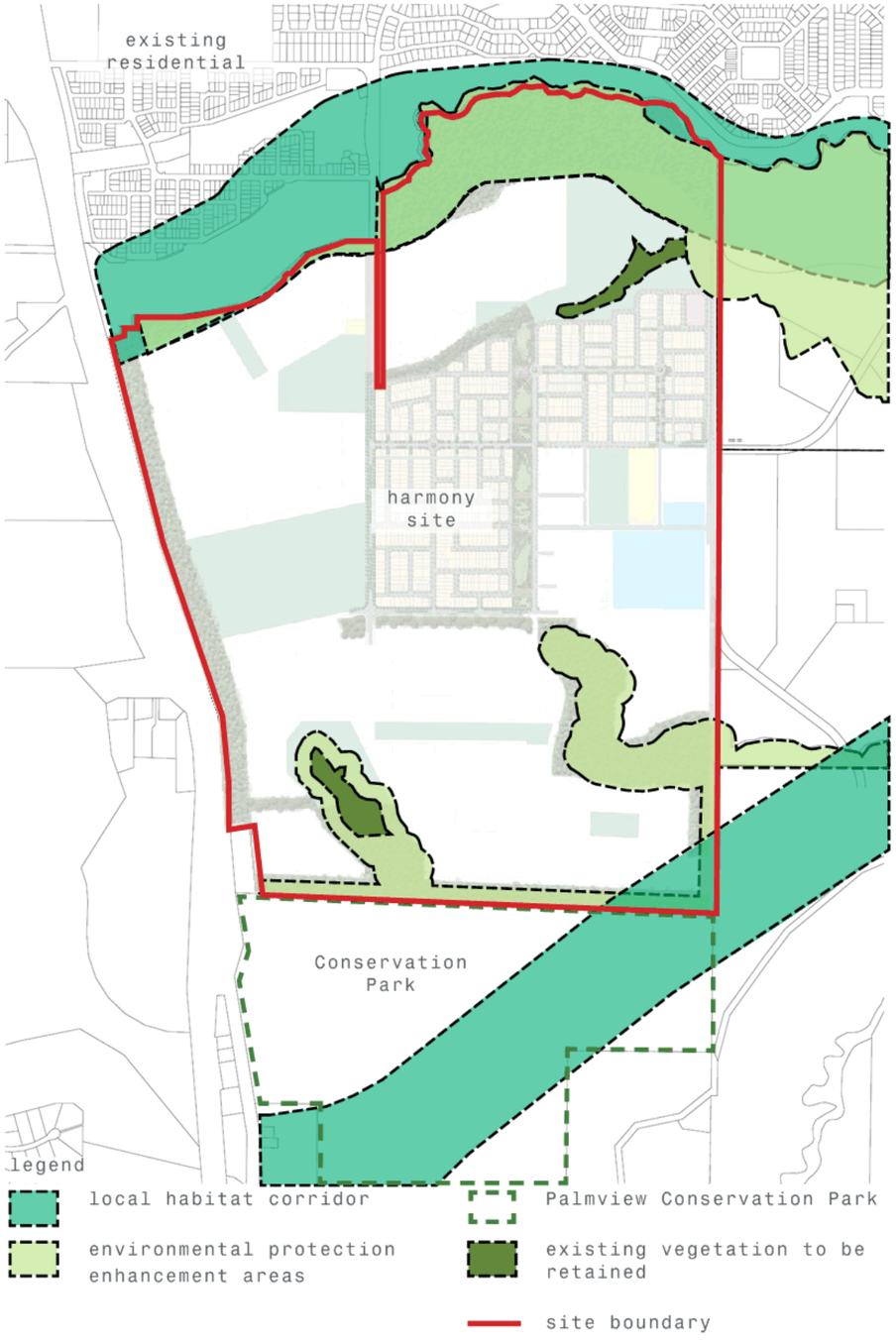
Establish a landscape that draws on the spirit of the sea and hinterland environs:
- Showcase the Sunshine Coasts native flora
- Create a fresh, vibrant, diverse landscape that intertwines the laid back nature of the coast with the free spirited artistic lifestyle of the forest.



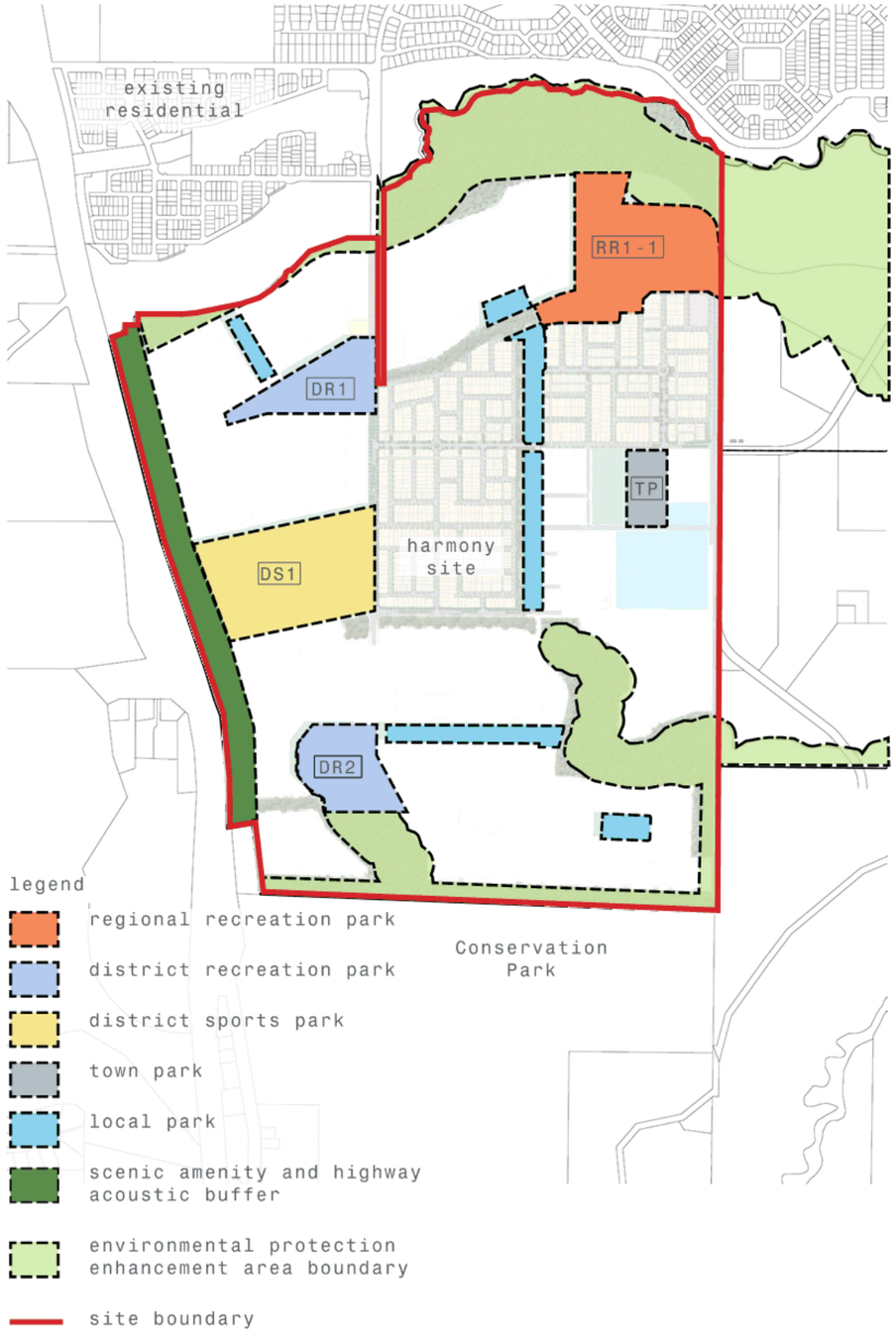


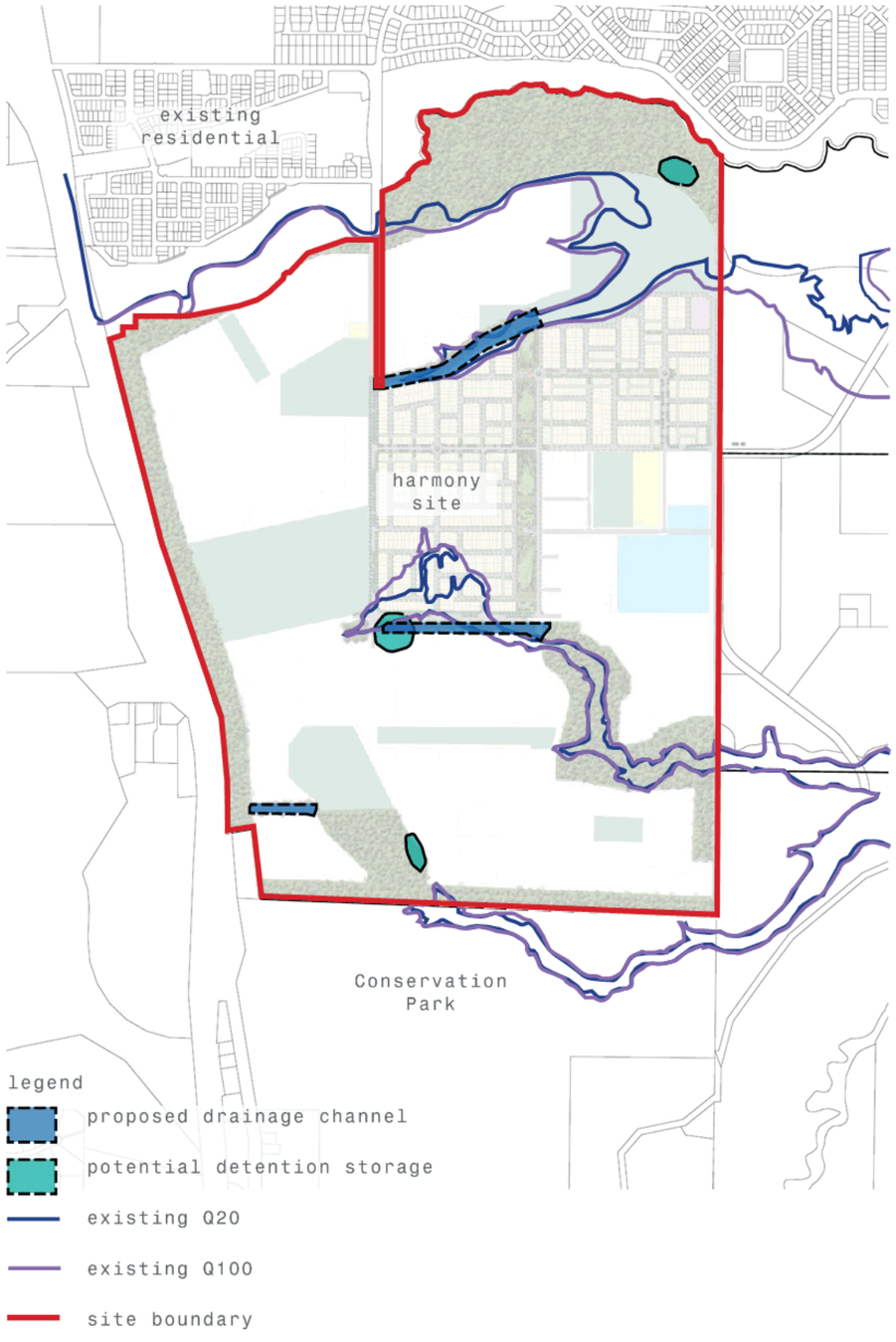
flora and fauna



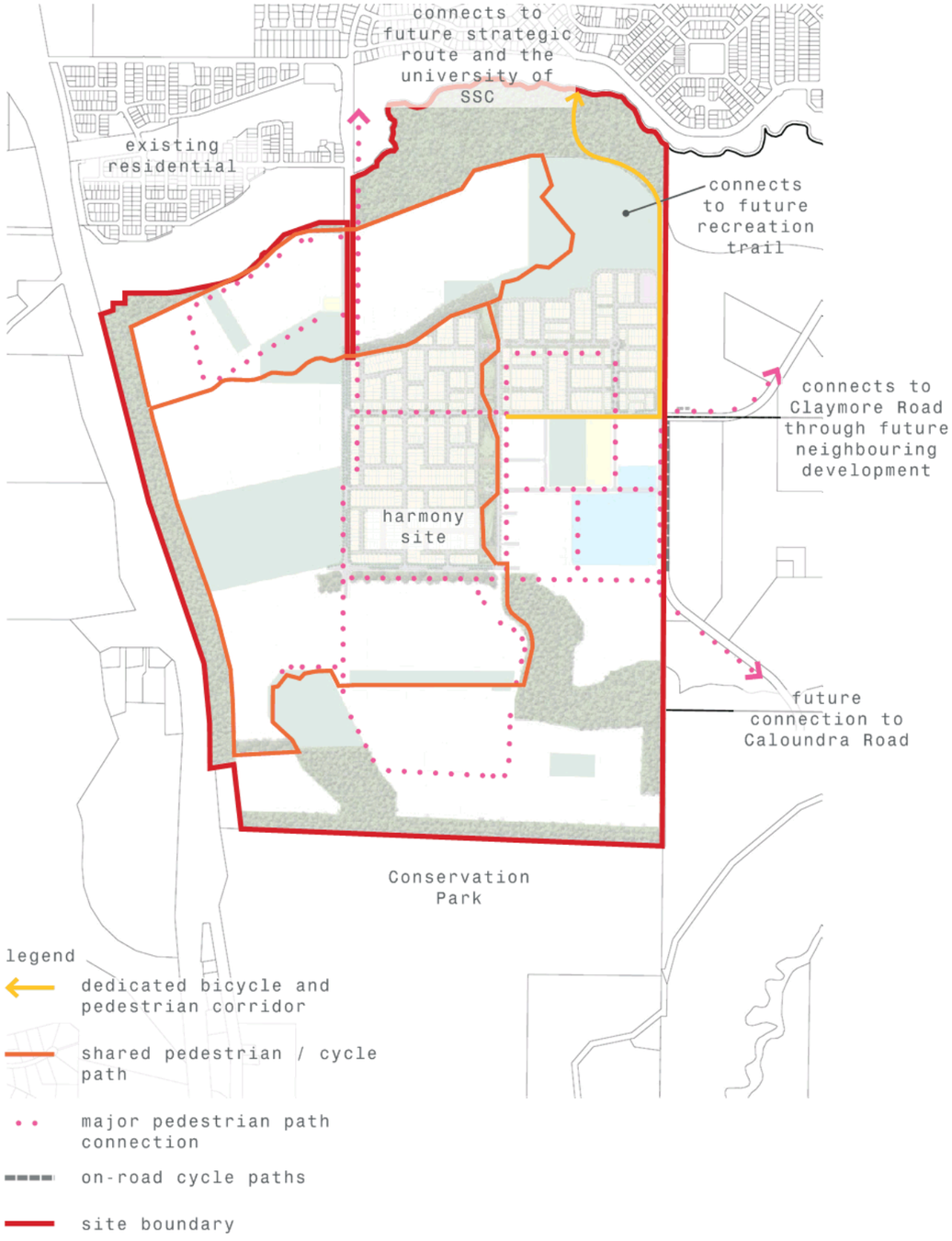
open space



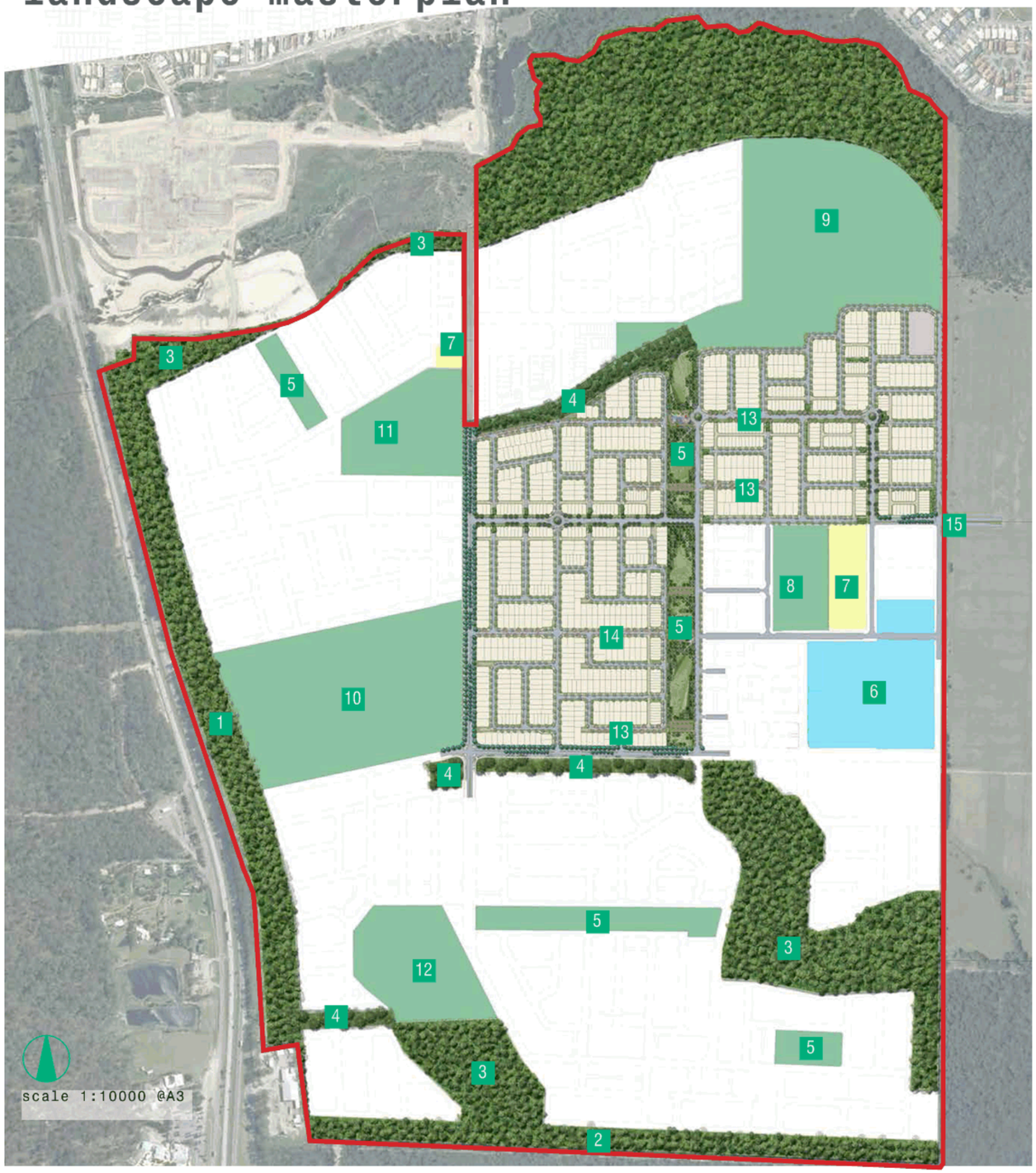
water



circulation



landscape masterplan



A cohesive and inclusive open space network is proposed, that provides a permeable environment allowing people to travel around the development safely and comfortably. Successful car, cycle and walking connections are safe, comfortable, intuitive and easy to use. Incorporating DDA and CPTED principles the design will also provide equitable and equal access on all pathways as well as facilitating driver legibility, minimising the need for excessive signage.

Landscaping elements will be designed for longevity and ease of maintenance. Robust, simple design solutions that respond to and build on the local context will stand the test of time far better that decorative embellishments or add-ons. The use of waterwise, indigenous planting themes across Harmony will provide long term amenity while also minimising ongoing maintenance costs.

Pathways will be made from slip resistant surfaces with neutral colours treatments that minimise pavement marking. Pathways across the site will be in accordance with CPTED requirements and Austroad standards to allow for visual surveillance and clear sightlines. Signage and street furniture elements will be provided to improve amenity and reinforce local character and context.

1. 80m Senic amenity and highway acoustic buffer with 3m wide shared pedestrian and cycle path
2. 50m buffer from significant vegetation
3. State significant vegetation community to be protected, retained and enhanced
4. Vegetated drainage corridor
5. Local Park
6. Town centre
7. Community use
8. Town park
9. Regional recreation park 1
10. District sports park
11. District recreational park 1
12. District recreational park 2
13. Green fingers
14. Primary green finger
15. Harmony entrance

landscape open space strategy

The overall open space strategy seeks to achieve the Sunshine Coast open space strategy vision –'Vibrant, green, diverse – a network of parks, reserves, trails, waterways and community hubs nurturing wellbeing, supporting our economy and protecting our lifestyle and biodiversity'. The 4 major parks are linked by vegetated drainage corridors, acoustic buffer and local parks. A 3m wide shared pedestrian and cycle path connects the parks together achieving minimal road crossing within a 'green' circuit throughout the harmony community. The collection of parks provides a diverse range of settings and opportunities for recreation. The park hierarchy is achieved by park size, embellishments and recreational opportunities. The Regional and District parks are large parks with a wide range of embellishments that encourage longer stays and service the whole of the Harmony community and beyond. The local parks role is to provide a green relief in the urban environment and provide a unique human scale environment for the individual local communities within Harmony.

The Regional Recreational Park (RR1) sits in the north east corner of site. The park is integrated into the Sippy Creek corridor and provides for an active and broad recreational experience with native recreational trails that connect to the proposed regional recreational trail. RR1 Park has the highest number of park embellishments and numerous informal active opportunities. The park also provides for off street parking and amenity facilities which encourage longer stays for a diverse range of users. This park has also integrated WSUD locaed in the environmental transition areas that will encourage and support nature-based recreational experiences.

The District Sports Park (DS1) sits along the western edge of the development and is the 2nd largest park in Harmony. The park accommodates formal sporting and recreation activities through the provision of ovals, courts and circuits. These facilities combined with on site parking and amenity buildings encourage longer stays and reach the wider Sunshine Coast community

The District Recreational Park 1 (DR1) is located to the west of the Major Collector Road and is connected to the RR1 Park by way of a 3m wide shared pedestrian and cycle path that runs along the side of a drainage corridor. The DR1 Park is 5.4 ha in size and is the third largest park in the development. This park functions as a community recreational, social, cultural and leisure space that will also facilitates a community area. This park has also integrated WSUD (located ouside the park footprint area) that will encourage and support nature-based recreational experiences.

landscape open space strategy

The District Recreational Park 2 (DR2) is situated in the south of the development. DR2 is 4.8 ha in size and is the 4th largest park in the development. This park is characterised by existing vegetation and environmental protection enhancement areas. This park functions as a community recreational, social, cultural and leisure space. This park has integrated WSUD located within the environmental transition areas that will encourage and support nature-based recreational experiences. Both district recreational parks have embellishments consistent with the Sunshine Coast Council embellishments standards that encourage longer stays.

The Town Parks role in the network is to provide a green relief within the high density town centre. This space will be the prime location for events, celebrations and community gatherings of a civil and community nature. The park is intended to enable a community facility, and a diverse range of recreational and social spaces.

The Local Parks will provide the facilities and functions that predominantly serve the needs of the local community. The Local Parks will maintain a unique character that reflects the local community's identity and be located within 500m of residents to achieve easy walking distance of residential homes. It is intended the local parks will form a link between the Regional, District and District Sports Park creating an open space network of pedestrian/bikeway systems. All local parks will be embellished in line with the Sunshine Coast embellishments standards reinforcing the parks hierarchy of the harmony community.

The scenic amenity and highway acoustic buffer forms an integral part of the open space network. On top of forming a visual screen and buffer between the harmony residents and the Bruce Highway, this landscape strip also provides a key pedestrian and cycle link along the western edge of the development. A 3m wide shared pedestrian and cycle path is proposed along the edge of the buffer to connect the north and south neighbourhoods while also creating connections to Sippy Creek, DR1, DS1, DR2 and the future recreational trails.

The northern and southern edge of the development is defined by existing vegetation and environmental protection areas. It is proposed that these areas be protected, enhanced and rehabilitated to increase biodiversity, suitability and scenic amenity. Where these areas connect with park land the parks function and embellishments will not adversely affect the environmental protection zones. It is proposed that the parklands further enhance the communities' experience of these environmental areas by implementation of recreational trails, interpretive signage and strong pedestrian and cycle links.

local park strategy

key principles:

1. A number of local parks have been located throughout the development to provide the Harmony community access to a local park that is within 500m of their front door.

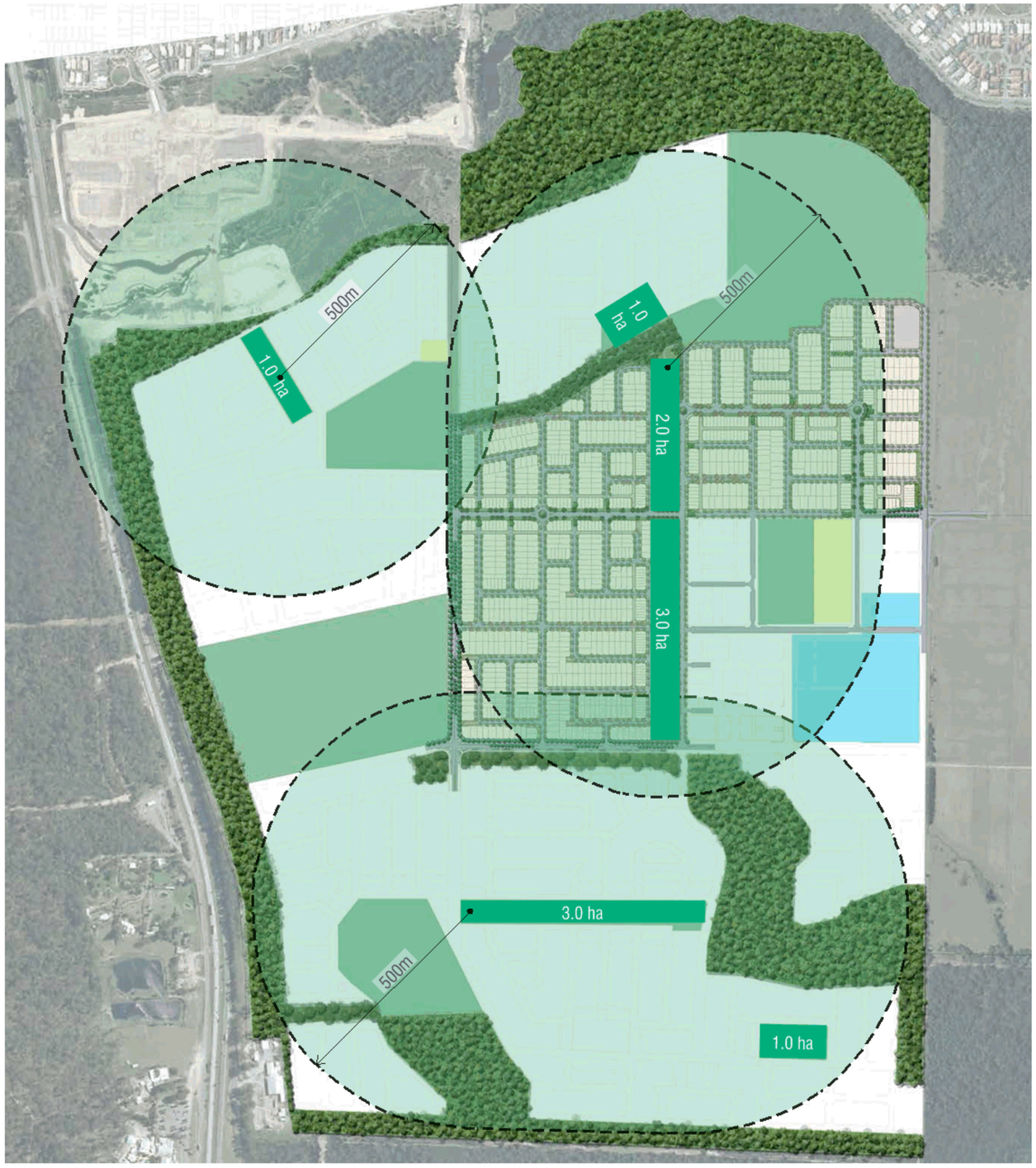
2. The local parks have been located, sized and shaped to create a network of cycle an pedestrian paths that connect all open space within the development.

3. A range of embellishments and diverse landscape settings will ensure the local parks provide informal recreational, social, cultural and leisure activities.

4. Through the use of planting, art, materials and equipment, each local park will have a unique identity that reflects the local communities' character.

5. Provide safe legible connections from residents homes to the local parks.

6. Functional lighting will be provided to ensure safe use during dark periods while amenity lighting will contribute to the ambiance and character of the park.



pedestrian and cycle strategy

key principles:

1. An interconnected network of paths that provide the community with strong connections and links to the whole of the development and the wider Sunshine Coast area is planned.

2. A safe, sustainable and amenity rich landscape that encourages sustainable forms of transport is proposed.

3. A 'green' network of shared cycle and pedestrian paths has been proposed though the local parks, buffers, drainage corridors and wider open space to provide numerous off road cycle ways for safe commutes through the development.

4. Footpaths provided on the majority of the streets promotes a walkable neighbourhood.

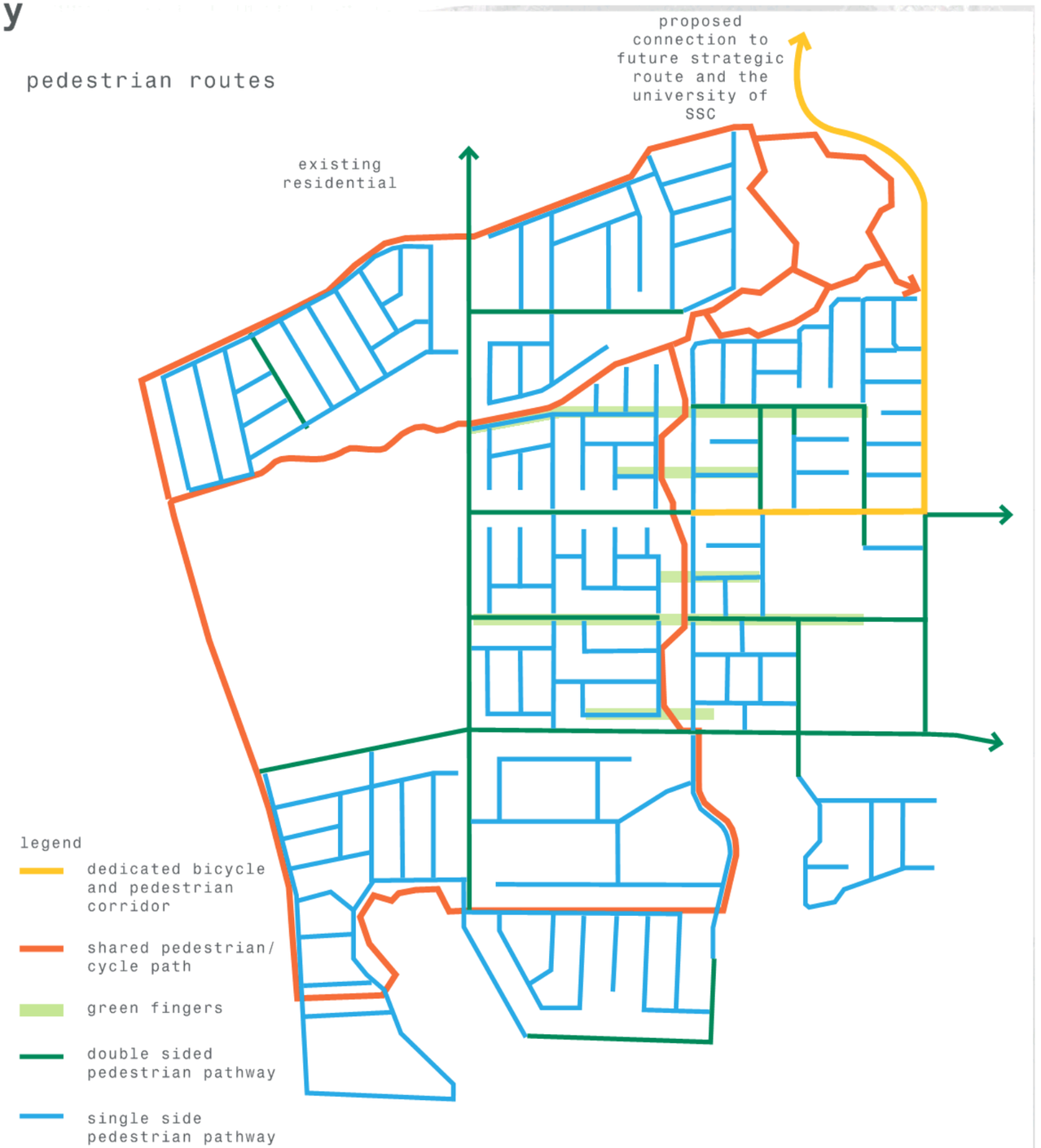
5. Secure cycle parking will be provided in all parks and community hubs to encourage sustainable modes of transport.

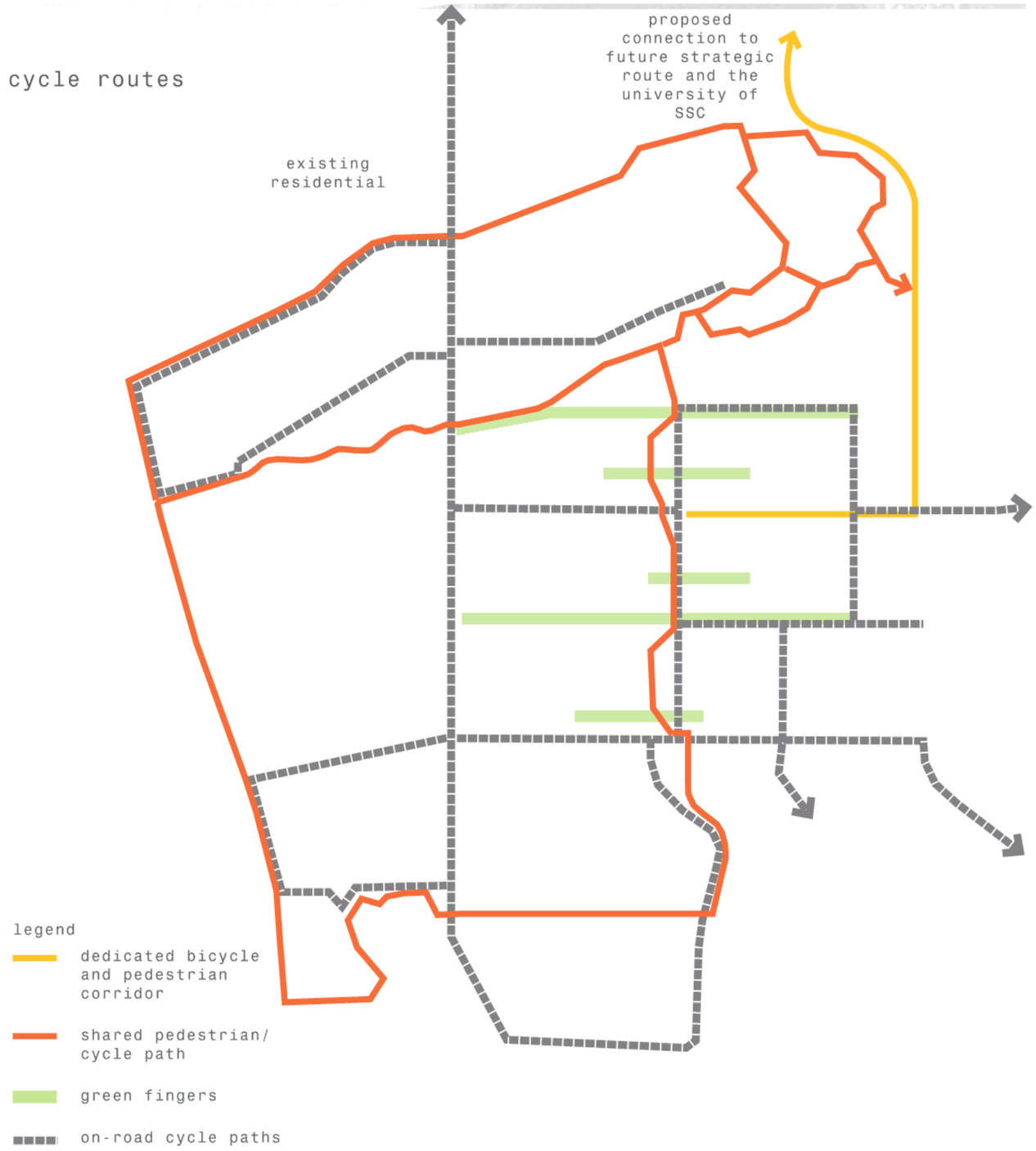
6. Dedicated on road cycle ways are provided on major roads strengthening the Harmony cycle network.

7. A dedicated bicycle and pedestrian corridor is located to the east of the development connecting the site to the wider Sunshine Coast community linking up with proposed future strategic route.

8. Key park streets or 'Green Fingers' have been identified that are embellished with additional planting, feature trees and decorative pavement to enhance pedestrians streetscape experience, strengthen the connection to the park and encourage pedestrian use of the streetscape and parks.

pedestrian routes




cycle routes
proposed connection to future strategic route and the university of SSC
existing residential
legend
dedicated bicycle and pedestrian corridor
shared pedestrian/ cycle path
green fingers
on-road cycle paths

planting strategy

key principles:

1. Proposed mature trees in the streetscape and parks will create a strong green leafy backdrop to the community.

2. Plantings to the streetscape and parks will showcase endemic and local native species of trees, shrubs and groundcovers.

3. Plant material colour will be used strategically to reinforce precincts, compliment built form and reinforce links to the greater Sunshine Coast natural region incorporating foliage from the green of the hinterlands to the coastal blues.

4. Plant species have been chosen from the Sunshine Coast Council (SSC) Open Space Landscape Infrastructure Manual (LIM) Plant Palette and Water By Design Bio-retention Technical Guidelines document. Additional feature species have also been added to the list.

5. All existing trees to be retained are to be protected in accordance with Sections 6 and 8 of the Preliminary Site Setup section of the SCC LIM – Planning for tree protection – construction sites and Protection of trees on construction sites.

6. All new tree stock will be in accordance with AS 2303:2015 Tree Stock for Landscape Use.






plant palette

general tree species


agathis robusta


aracauria cunninghamii


backhousia citriodora


brachychiton acerifolius


elaeocarpus grandis


elaeocarpus eumundi


elaeocarpus reticulatus


flindersia australis


jagera pseudorhus


hibiscus tiliaceus rubra


hymenosporum flavum


lagerstroemia archeriana


lophostemon suaveolens


magnolia little gem


metrosideros excelsa


pandanus


pittosporum rhombifolium


plumeria obtusa


stenocarpus sinuatus


sterculia quadrifida


syncarpia quadrifida


xanthostemon chrysanthus

wsud tree species


acacia floribunda


alectryon coriaceus


banksia integrifolia


callistemon viminalis


elaeocarpus obovatus


lophostemon suaveolens


melaleuca linarifolia


melaleuca quinquenervia


syzygium luehmannii


waterhousia floribunda

plant palette

general shrub and groundcover species

acacia fimbriata 'dwarf' | austromyrtus dulcis | austromyrtus 'blushing beauty' | babingtonia 'dwarf'

wsud shrub and groundcover species

austromyrtus dulcis | babingtonia 'dwarf' | banksia spinulosa 'dwarf'

dianella spp. | hibbertia scandens | grevillea cooroora | leptospermum 'pink cascade'

banksia robur | callistemon spp | carpobrotus glaucescens

lomandra spp | myoporum parvifolium | dwarf syzygium spp | syzygium 'pink cascade'

crinum pedunculatum | juncus usitatus | lomandra spp

syzygium 'tiny trev' | vitex ovata | westringia 'jervis gem' | xanthostemon 'little penda'

melaleuca 'claret tops' | melaleuca thymifolia | xanthorrhoea fulva

streetscape strategy

key principles:

1. Informal clumps of native tree plantings will line the access streets providing shade, relief from glare and a soft aesthetic in the development, to encourage pedestrian use.

2. Main collector streets will be dominated by a more formal approach using key species in an avenue arrangement. Feature trees will be located at the end of key view lines, nodal points and primary activity zones.

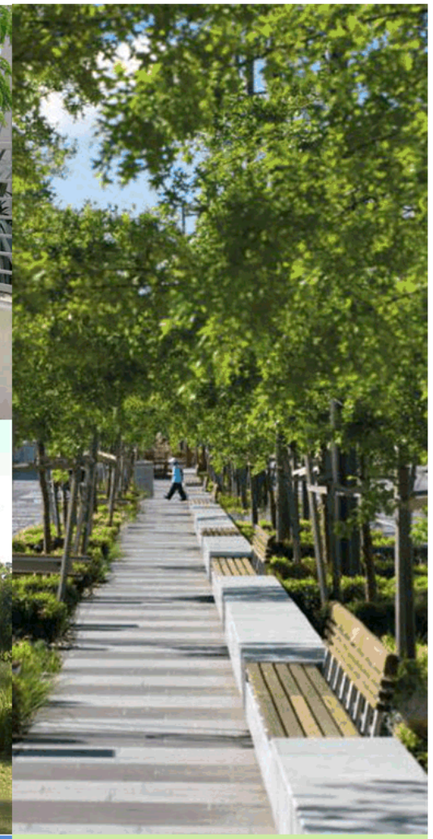
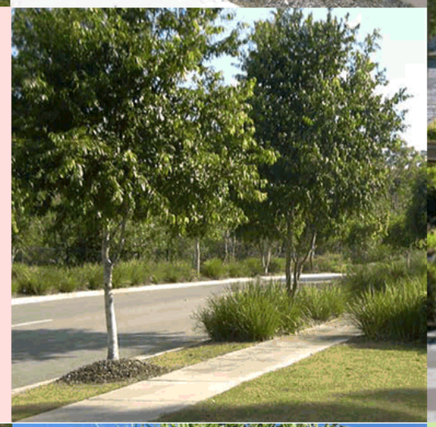
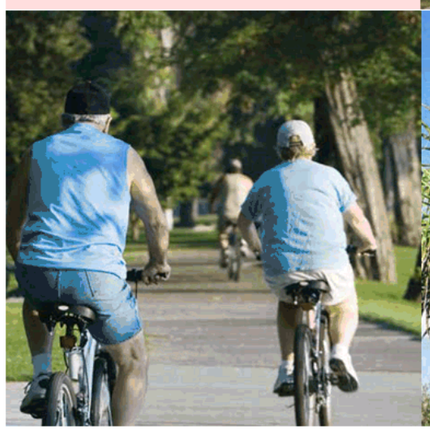
3. Establishing a hierarchy within the streets strengthens wayfinding and reinforces pedestrian and cycle connections through the site.

4. Each precinct will be defined by the use of signature species and unique plantings while a consistent thread of streetscape language will maintain a consistency through the development resulting in a holistic community at Harmony.

5. The front facades of buildings, front courtyards, fences and garden areas are the major source of visual interest to the passer-by and contribute to the public realm outcomes. Fences in particular influence the overall appearance of the neighbourhoods. As an integral part of the neighbourhood emphasis will be placed on design, size and treatment of fences on other barriers. The charactor should always reflect and complement that of the main building.

6. Park connecting streets or 'Green Fingers' bridge the connection between park and neighbourhood by extending the character and appeal of the park environment into the surrounding streets. These 'Green Fingers' are identified by the use of a park feature tree overlaying the road type tree pallet. Use of groundcover planting and feature pavement reinforce the visual cue and create a way finding element for pedestrians. This pedestrian navigational device is not associated with the road typology but rather another layer of detail to enhance the pedestrian's experience of the local neighbourhood and local park.




preliminary street tree species

District collector
- primary tree - flindersia australis
- secondary tree - xanthostemon chrysathus
- tertiary tree - waterhousia floribundia (WSUD)
- feature tree - aracauria cunninghamii

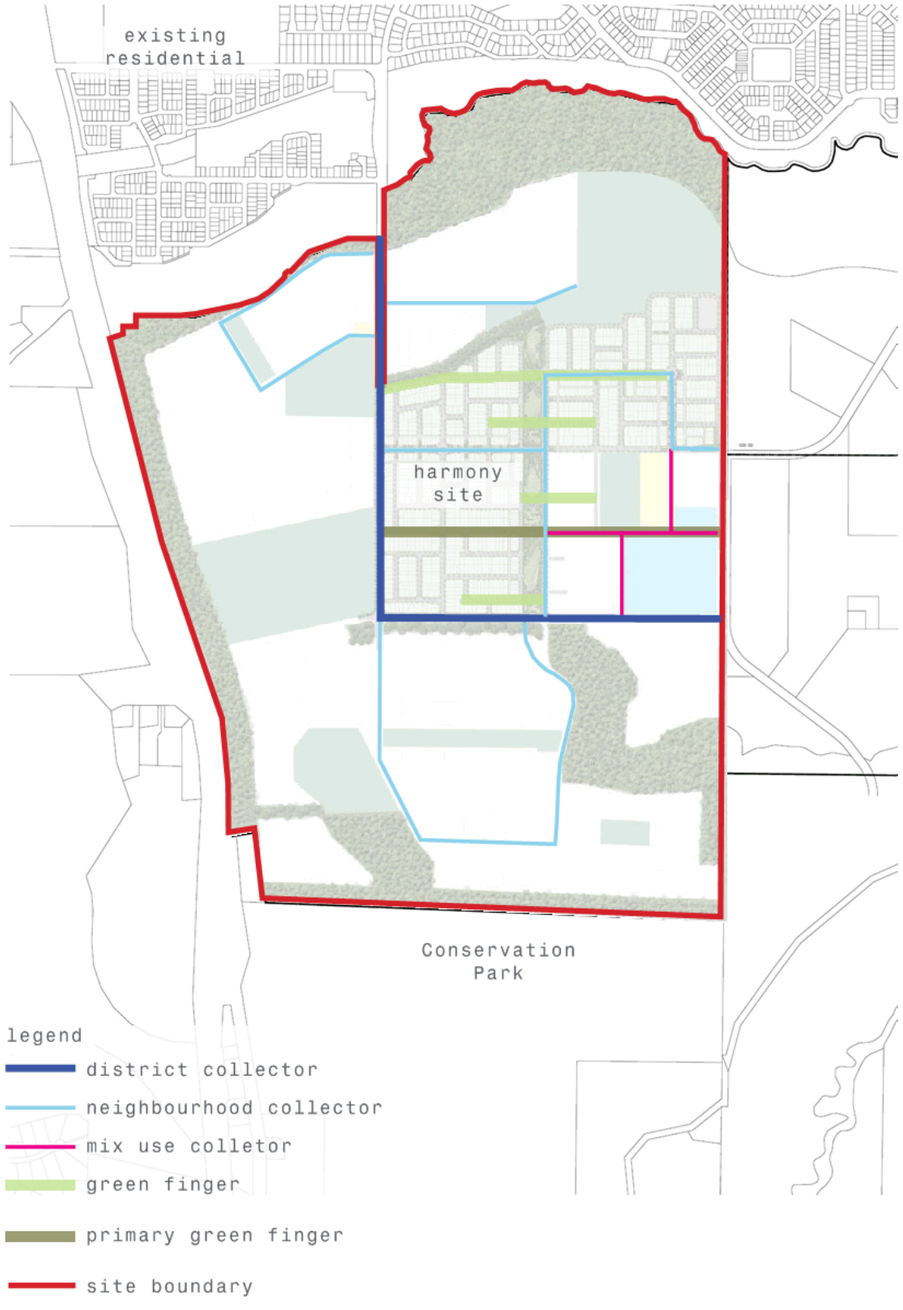
Neighbourhood collector
- primary tree - lophostemon suaveolens
- secondary tree - lagerstromia archeriana
- tertiary tree - waterhousia floribunda (WSUD)
- feature tree - agathis robusta

Mixuse collector
- primary tree - elaeocarpus eumundi
- secondary tree - waterhousia floribundia
- tertiary tree - lophostemon suaveolens (WSUD)
- feature tree - pandanus tectorius

Green Finger
- brachychiton acerifolius
- hibiscus tiliaceus rubra
- stenocarpus sinuatus

Access Streets
- primary tree - alectryon coriaceus
- elaeocarpus obovatus
- secondary tree - lophostemon suaveolens
- backhousia citriodora
- hymenosporum flavum
- xanthostemon chrysanthus
- syzygium luehmannii
- tertiary tree - melaleuca quinquenervia (WSUD)
- melaleuca linarifolia (WSUD)
- banksia integrifolia (WSUD)
- callistemon viminalis (WSUD)
- waterhousia floribundia (WSUD)
- feature tree - pandanus tectorius
- magnolia little gem
- stenocarpus sinuatus
- pittosporum rhombifolium
- lagerstomemia archeriana
- metrosideros excelsa

street tree plan



Informal clumping of endemic tree planting throughout streetscape generates shade reduces glare and creates character and amenity in the community.

1.8m wide concrete footpath to one side of street provides for a safe, comfortable and intuitive pedestrian movement throughout Harmony.

typical streetscape character

green fingers

key principles:

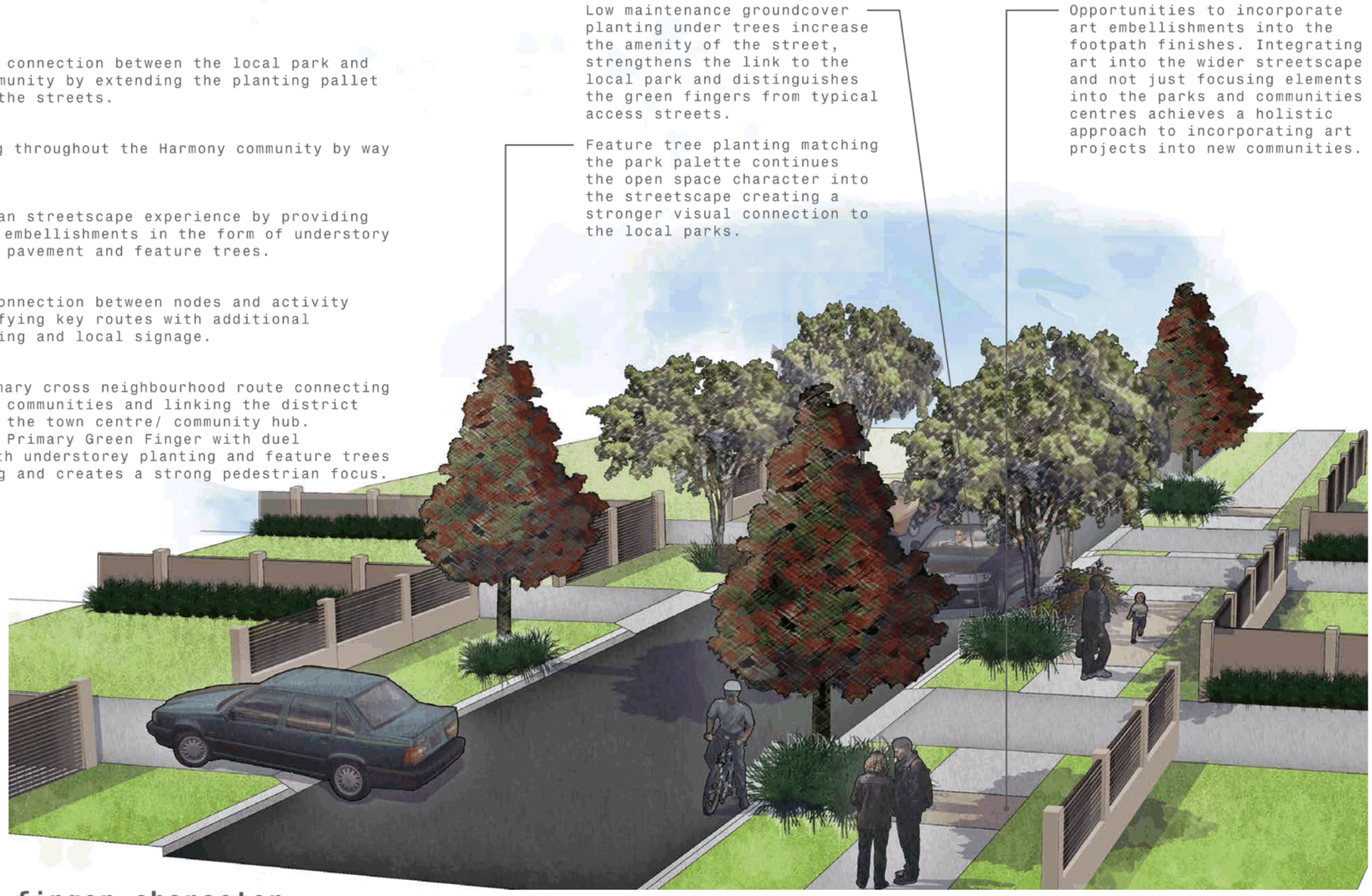
1. Create a stronger connection between the local park and the immediate community by extending the planting pallet of the park into the streets.

2. Aid in way finding throughout the Harmony community by way of visual cues.

3. Enhanced pedestrian streetscape experience by providing additional street embellishments in the form of understory planting, feature pavement and feature trees.

4. Create stronger connection between nodes and activity centres by identifying key routes with additional streetscape planting and local signage.

5. Identifying a primary cross neighbourhood route connecting the east and west communities and linking the district sport fields with the town centre/ community hub. Embellishing this Primary Green Finger with duel pedestrian footpath understorey planting and feature trees aids in wayfinding and creates a strong pedestrian focus.



typical green finger character

Additional footpath added to primary green finger that links the Community Centre to the local park and through to the District Sports Fields. The addition of the primary green finger strengthens the Harmony community network creating a safe, comfortable, attractive and intuitive pedestrian link between the East and West of the development.

Feature tree planting matching the park palette continues the open space character into the streetscape creating a stronger visual connection to the local parks.

Low maintenance groundcover planting under trees increase the amenity of the street, strengthens the link to the local park and distinguishes the green fingers from typical access streets.

Opportunities to incorporate art embellishments into the footpath finishes. Integrating art into the wider streetscape and not just focusing elements into the parks and communities centres achieves a holistic approach to incorporating art projects into new communities.

primary green finger character

streetscape tree location

key principles:

1. Street trees locations will adhere to Sunshine Coast Street Tree Location Guidelines. Where a discrepancy exist between the below principals and those outlined by Sunshine Coast Council the later takes precedent.

2. Trees to be installed a minimum 1m from face of kerb and 0.6m from edge of path.

3. Trees should not be located within 3m of footpath crossover or driveway.

4. Trees should not be located within 15m of either side of a pedestrian crossing.

5. Trees should not be planted within 2.5m of electricity or telephone poles, pillars or fire hydrants.

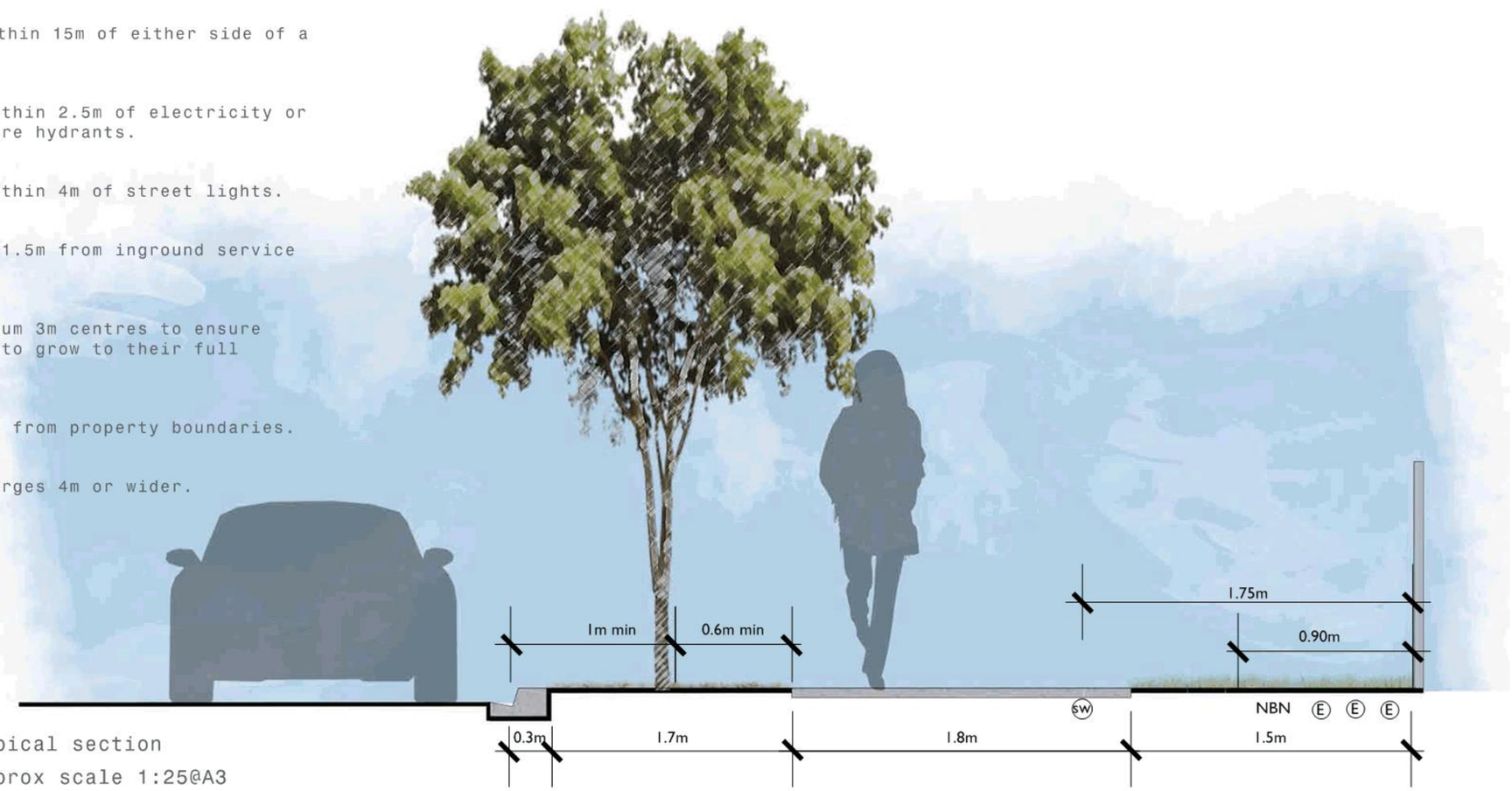
6. Trees should not be planted within 4m of street lights.

7. Trees to be located a minimim 1.5m from inground service locations.

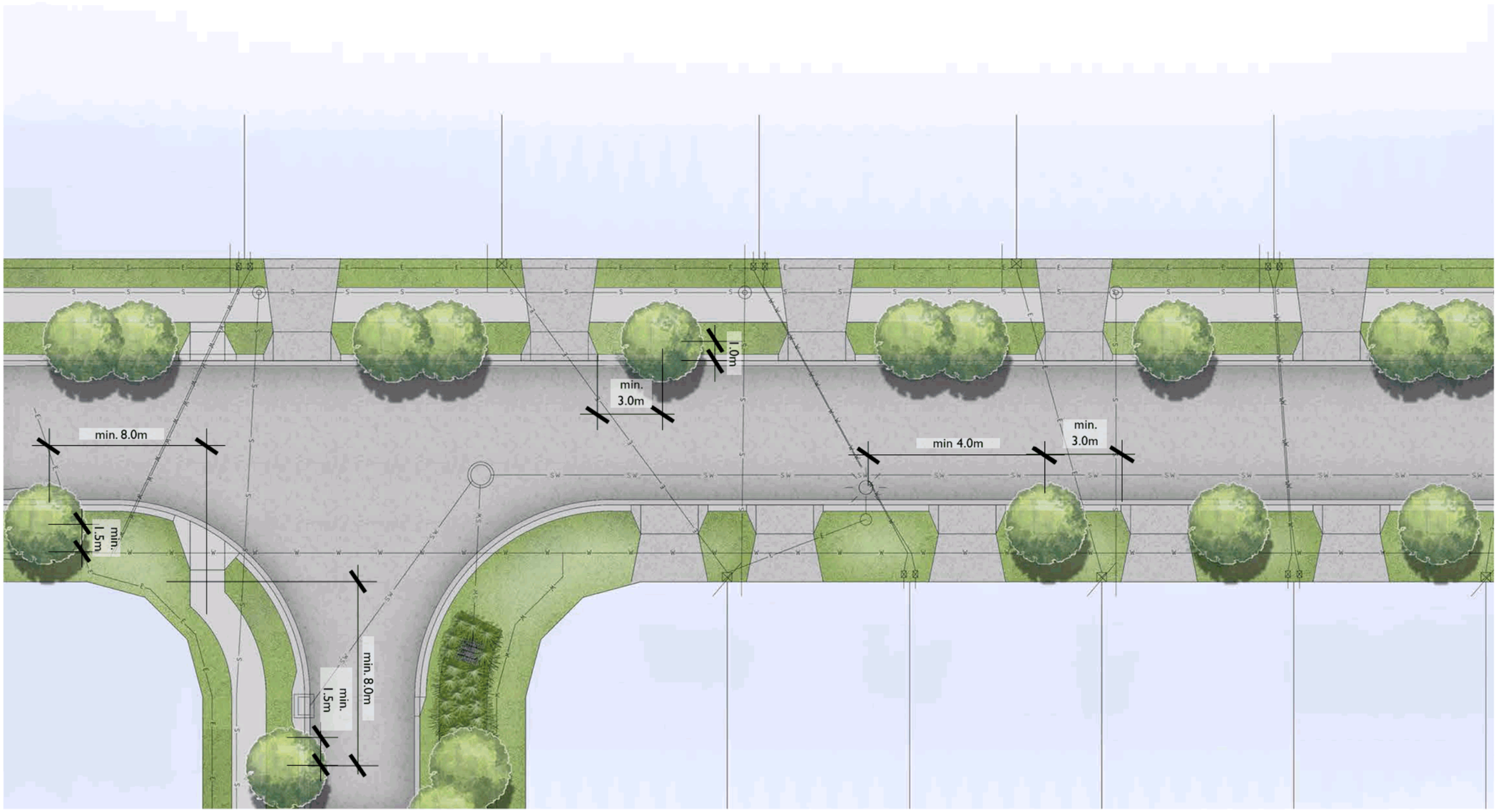
8. Trees to be planted at a minimum 3m centres to ensure species have sufficient space to grow to their full potential.

9. Large trees to be planted away from property boundaries.

10. Trees to be only planted on verges 4m or wider.



typical section
approx scale 1:25@A3



typical plan
approx scale 1:100@A3

materials and finishes

key principles:

1. The selection and use of materials in this development will form a framework for the character and theming of the parks and residential precincts.

2. Local artists and craftspeople will be engaged to assist with the creation of public artworks and landscape elements that interpret the intrinsic vernacular and develop a new, common design language for the cohesion of the community.

3. The palette will take cues from the sandy beaches to the east and the lush hinterland to the west.

4. Where possible, endemic materials will be sourced.

local linear park

key principles:

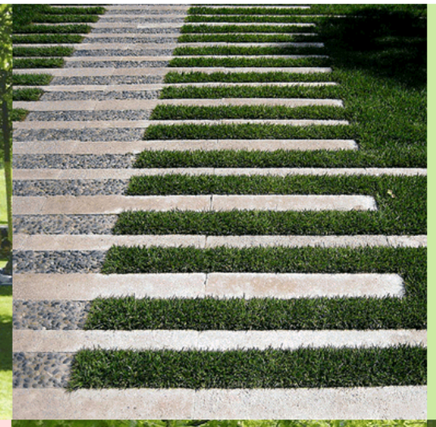
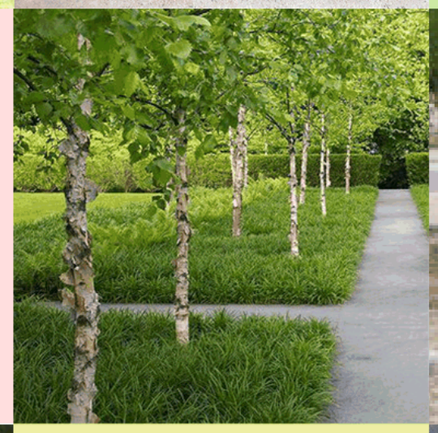
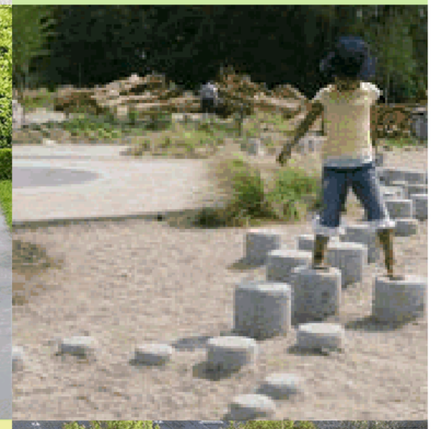
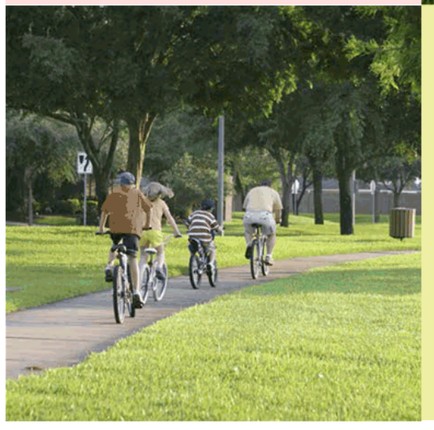
1. The Local Linear park forms a green spine through the development. It connects the proposed regional recreational park to the north to the existing vegetated environmental protection and enhancement corridor to the south.

2. The layout is a contrast from the neighbouring natural parklands. This juxtaposition ensures a diverse range of settings, facilities and opportunities with which the community of Harmony can engage. The parks design encourages social interaction and engagement.

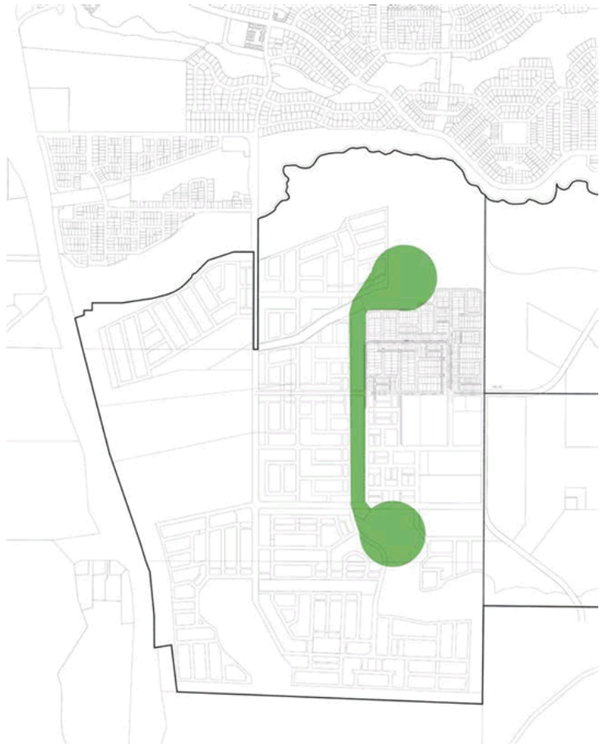
3. High quality facilities with meaningful association to the natural landscape along with integrated public art throughout the site reinforce the sense of place.

4. The park provides a number of formal and informal recreational opportunities providing residents with a variety of activities. Activity nodes and uses are defined by different landscape zones.

5. Park plantings will be selected for both aesthetics and function. Structured planting near entry points, feature areas, and activity nodes generate a legible welcoming landscape.

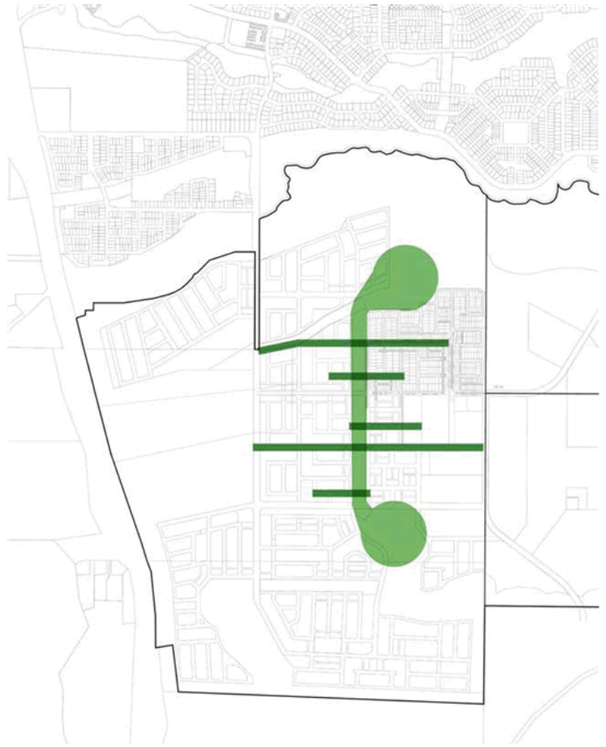







local linear park- linkages



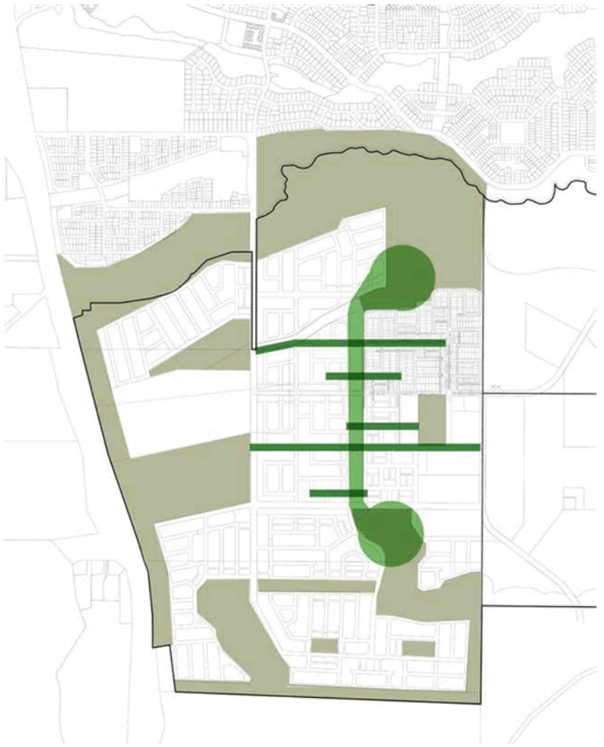
Green Linkage

- Connects the north and south of the development
- Provides a fauna corridor
- Strengthens the habitat network
- Strengthens the cycle and pedestrian connections.



Green Fingers

- Provides residents with connections with side streets and interaction with the park facilities
- Creates a stronger connection to the streetscape
- Is a organisational device helping to break up and delineate activity areas within the park
- Forms key cross park connections
- Defines high use and intense embellishments
- Are focal points at the end of view lines.



Green Network

- A green network of parks, environmental areas and strong green pedestrian links is formed.

local linear park- structure

Schedule 6 of the Infrastructure Agreements describes local parks as: '*primarily used by the community for informal recreation, social, cultural and leisure activities which may provide for other complementary values'*.

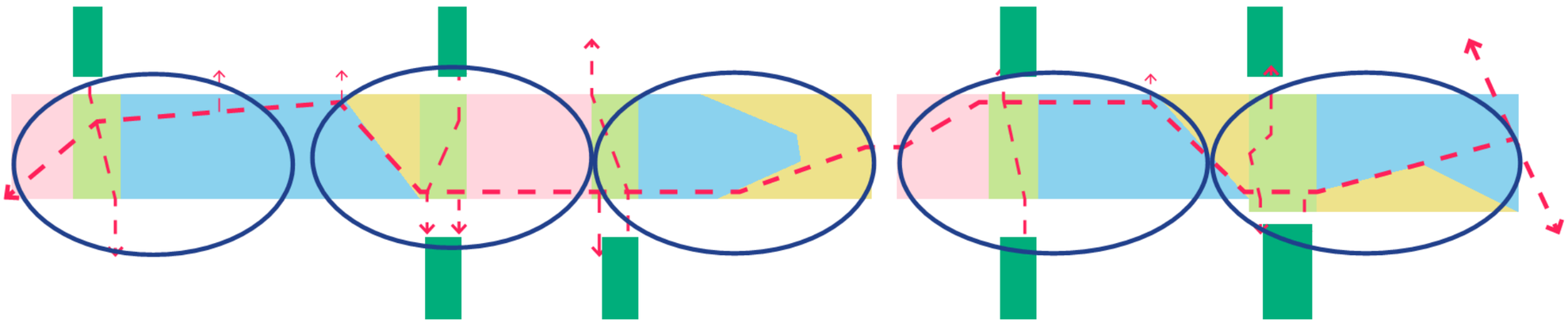
The Local Linear Park is a series of local parks with their own facilities and identities. Each park segment allows for active kick-about, intimate gathering spaces and formalised/informal play. It is intended that the local community that the park segment facilitates will access the diverse range of facilities within 500m from their front door. The embellishments within the local park are low key and are consistent with Sunshine Coast Palmview Structure Plan embellishments standards.

By connecting the parks together, several advantages have been recognised; flora and fauna corridor linking the north remnant vegetation to the south existing vegetation, facilitates Q100 flood flows, creates a strong green pedestrian and cycle circuit throughout the development and provides a lush green amenity spine in the middle of the Harmony community.

The park is designed to take all flood water above Q20. The profile of the park maintains a grade of grater then 1:20 slope from the back of verge then forms a wide shallow overland flow path. This maximises usable space for park embellishments while maintaining and preserving accessible entrances along the total length of the park. In the north the water outflows into the drainage corridor. In the south a pit with protective grates and screen planting with collect the runoff and outflow into the drainage corridor on the southern side of the District Collector. Please refer to Calibre drawings x-15-000256-SK11-SK17 for details.

Legend

- Passive recreation open space
- Active recreation open space
- Intimate gathering space
- Activitiy node (Intensive use and concentration of facilities)
- Major cycle and pedestrian link
- Cross park neighbourhood connections
- Minor street/park access points
- Individual local parks
- Green finger



local linear park - landscape plan

Local Linear Park Narrative

The park is composed of grassed fields, canopy trees, activity nodes and a 3m wide shared pedestrian and cycle path that zigzags its way along the park connecting the north and south of the development. A series of green fingers cut across the park and extend into the neighbourhood streets defining primary entrance points and activity nodes. A grid of trees march across the park, reminiscent of the neighbouring forested hinterland. The 'urban forest' clears to circumscribe kick-about areas and informal picnic grassed nodes and intensify at the 'green fingers' identifying key park facility locations. Grassed decisive mounds cut along the edges of the grassed meadows forming enclosure, screening from the roads and providing viewing embankments for spectators of the kick-about spaces. On street WSUD devises have been integrated into the park edge to form a consolidated design language and homogeneous landscape character.

scale 1:1250 @A3

Legend

01 green fingers
02 formal and informal play elements paired with picnic shelters and drinking fountains
03 3m wide shared pedestrian / cycle path
04 picnic shelter
05 feature turf mounds
06 kick-about field
07 intimate gathering space
08 passive open space
09 terraced lots access path
10 drainage corridor buffer planting
11 exercise/fitness facilities, outdoor studio opportunities, seating and structured planting

scale 1:1250 @A3

wsud strategy

key principles:

1. Devices which manage and improve the quality of stormwater will be incorporated in the streetscape.

2. Bio-basins will be designed for functionality, safety and maintenance.

3. It is intended that the devices be landscaped to resemble 'garden beds' and integrated into the streetscape.

4. End of line devices are co-located with District and Regional Recreational parks.

5. The WSUD devices will not impede the embellishments of the parks or impact the functions of the park. It is intended that these devices are integrated into the parks environs and form an integral part of the park that provides amenity and interest.

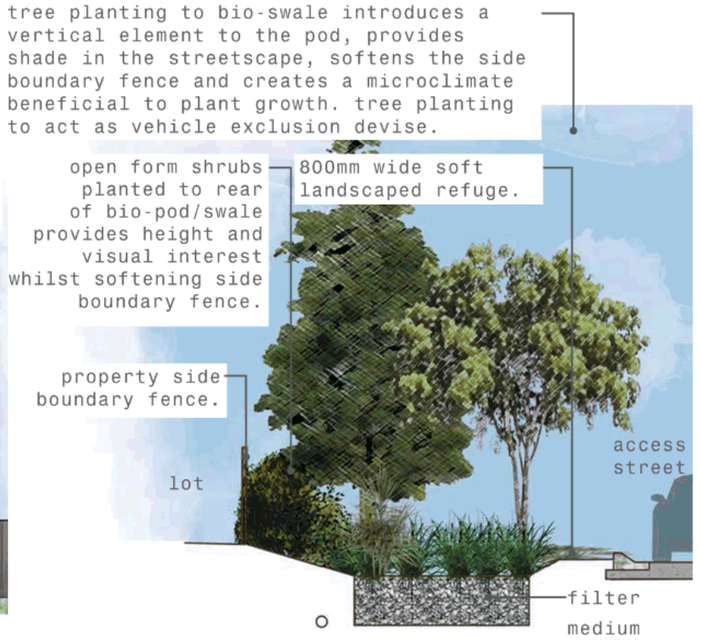
6. Devices will be designed so they comply with CEPTED principles and do not block key sightlines or reduce access into the parks.

7. End on line devices will be confined to the environmental transition areas within the non-urban open space network.

The following plan, section and elevation sketch shows a typical landscape treatment of a streetscape biopod.

elevation

approx scale 1:100@A3



section

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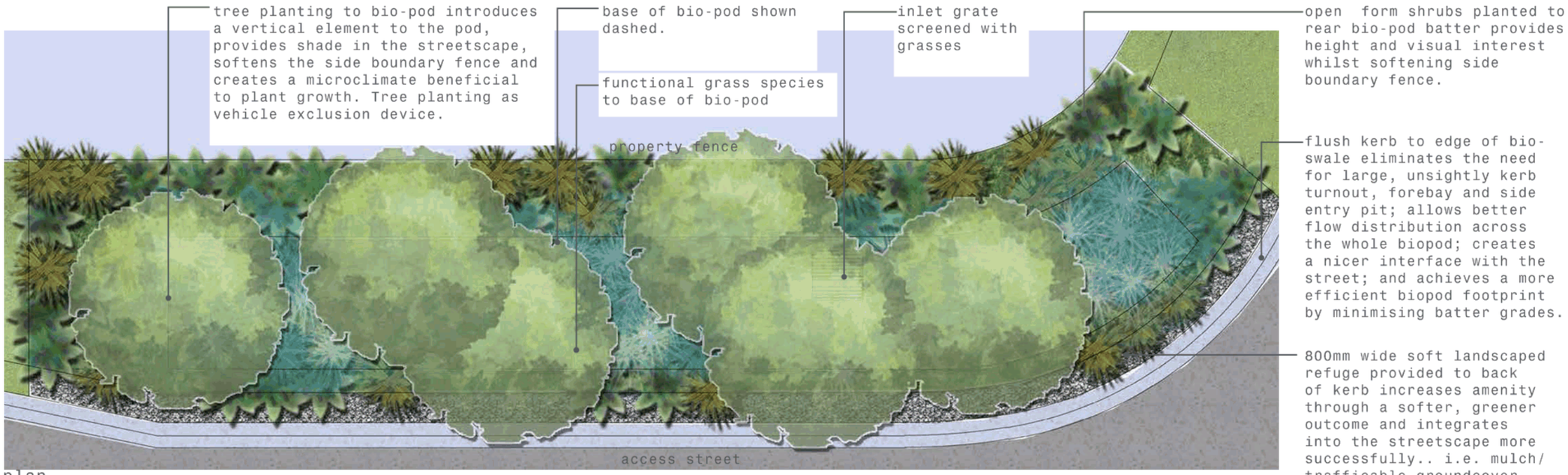


plan

approx scale 1:100@A3

regional recreation park-RR1-1

Key principles:

1. Provide a diverse set of facilities that accommodates informal recreation, social, cultural and leisure activities.

2. Ensure strong pedestrian and cycle links to the wider Harmony community. Encouraging sustainable modes of transport and enhancing the connections to the open space.

3. Integrate and celebrate the WSUD elements providing additional amenity and enhancement for the community to enjoy.

4. Develop an informal parkland setting that embodies the intrinsic values of the Sunshine Coast area.

5. Create a unique identity that establishes a hierarchy with the suite of parklands.

6. Extend the landscape character of the existing vegetate corridor into the park to create a stronger connection to the local flora and fauna.

7. Contribute to the landscape amenity and local biodiversity of the area by protecting and enhancing the existing vegetated corridor.

8. Integrate art into the landscape to add another dimension for the community to engage with.

district recreation park 1-DR1

Key Principles:

1. Provide a diverse set of facilities that accommodates informal recreation, social, cultural and leisure activities.

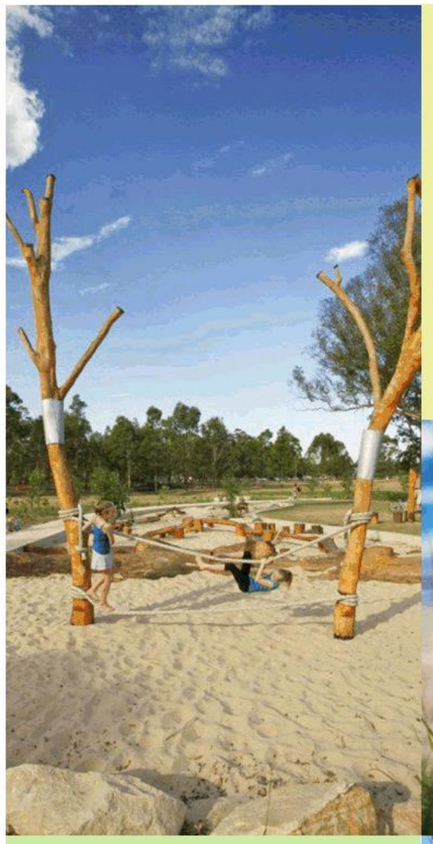
2. Ensure strong pedestrian and cycle links to the wider Harmony community.

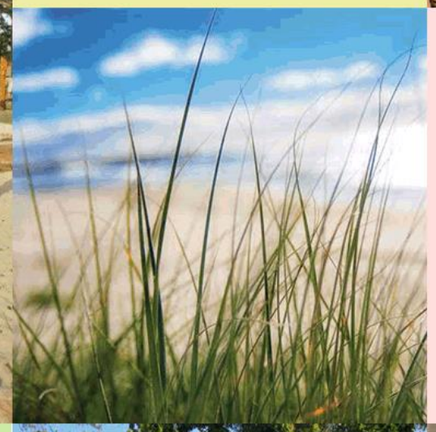
3. Integrate and celebrate the WSUD elements providing additional amenity and enhancement for the community to enjoy.

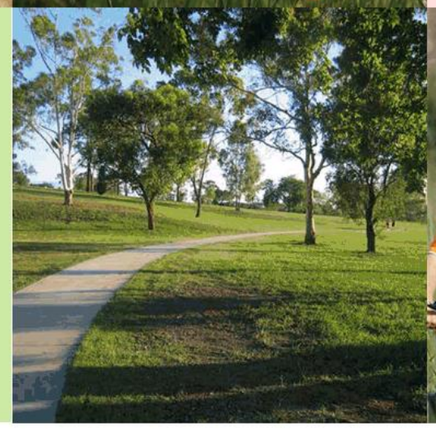
4. Deliver a memorable parkland entrance plaza that consolidates and highlights the key embellishments within the park.

5. Develop an informal parkland setting that embodies the intrinsic values of the Sunshine Coast area.

6. Facilitate integration of a future proposed community area within the edge of the park.







district recreation park 2-DR2

key principles:

1. Protect and enhance the neighbouring existing vegetated corridor.

2. Extend the landscape character of the existing vegetate corridor into the park to create a stronger connection to the local flora and fauna.

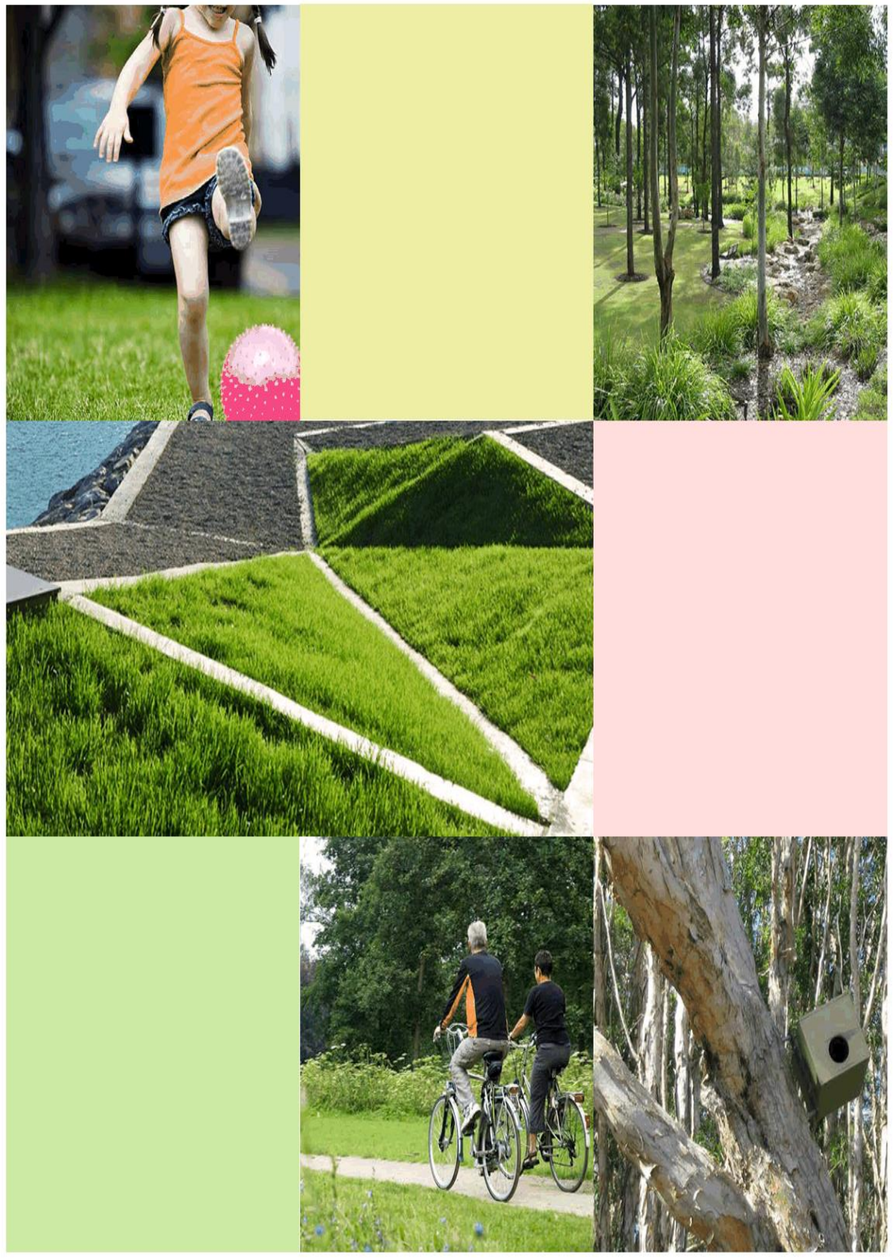
3. Provide a diverse set of facilities that accommodates informal recreation, social, cultural and leisure activities.

4. Ensure strong pedestrian and cycle links to the wider Harmony community.

5. Integrate and celebrate the WSUD elements providing additional amenity and enhancement for the community to enjoy.

6. Deliver a memorable parkland entrance plaza that consolidates and highlights the key embellishments within the park.

7. Develop an informal parkland setting that embodies the intrinsic values of the Sunshine Coast area.



district sports park-DS1

key principles:

1. Provide facilities for formal sporting and active recreation.

2. Cater for sporting events and sports clubs.

3. Ensure strong pedestrian and cycle links to the wider Harmony community.

4. Accommodate a diverse range of facilities for family groups attending sporting events.

5. Contribute to the landscape amenity and local biodiversity of the area.