



SUPPORTING INFORMATION

**for respective item 2.1
MATERIAL CHANGE OF USE -
DEVELOPMENT PERMIT FOR CHILD CARE
CENTRE - 54-66 OLD BAY ROAD,
DECEPTION BAY - DIVISION 2**

considered at

Coordination Committee Meeting

19 March 2019

SUPPORTING INFORMATION

Ref: [A18212546](#), [A18255770](#) & [A18256078](#)

The following list of supporting information is provided for:

ITEM 2.1

MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2

#1 Locality Plan

#2 Zoning Map

#3 Flood Hazard Overlay

#4 Riparian and Wetland Setback Overlay

#5 Proposed Site Plan

#6 Proposed Landscape Plan

#7 Perspective View (from Old Bay Road)

#8 Plans and Documents to be Amended

#9 Submissions (properly made)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 (Cont.)

#1 Locality Plan



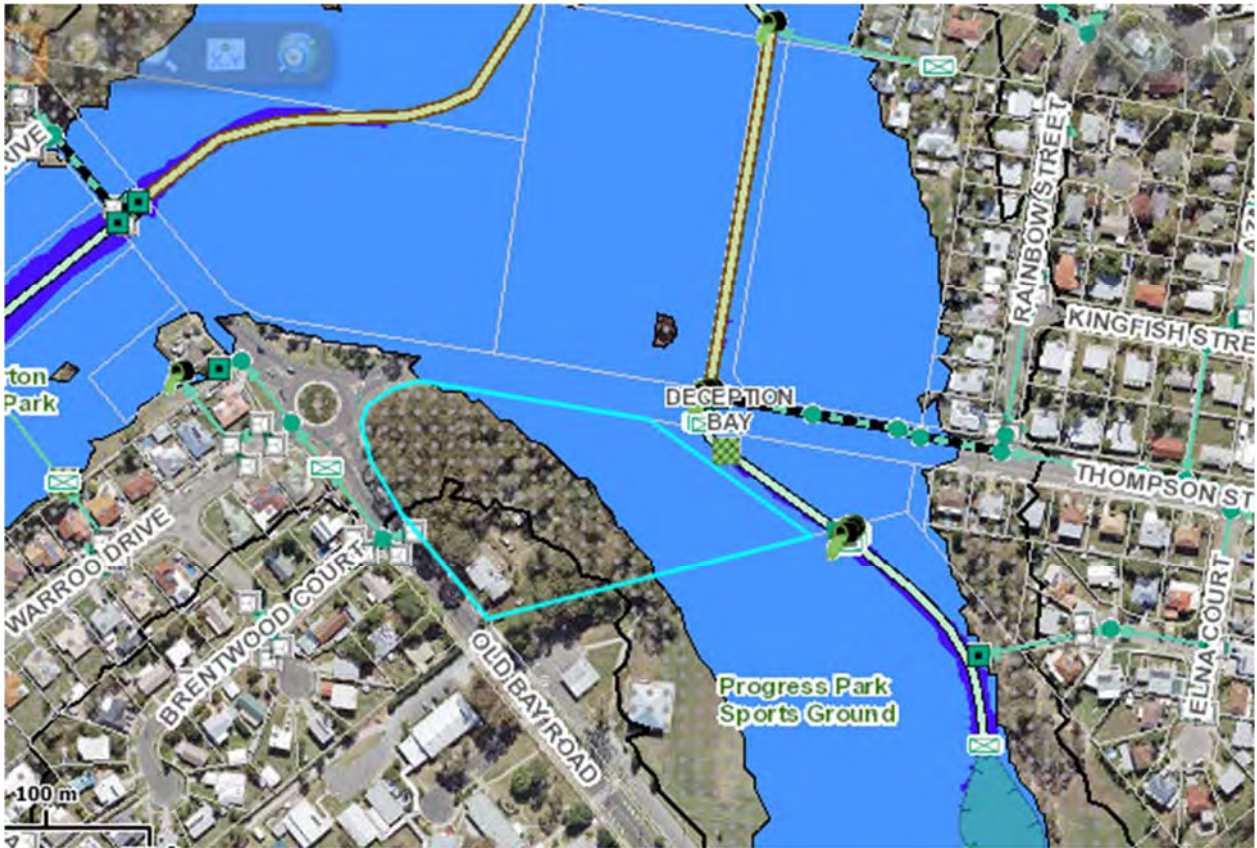
ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 (Cont.)

#2 Zoning Map



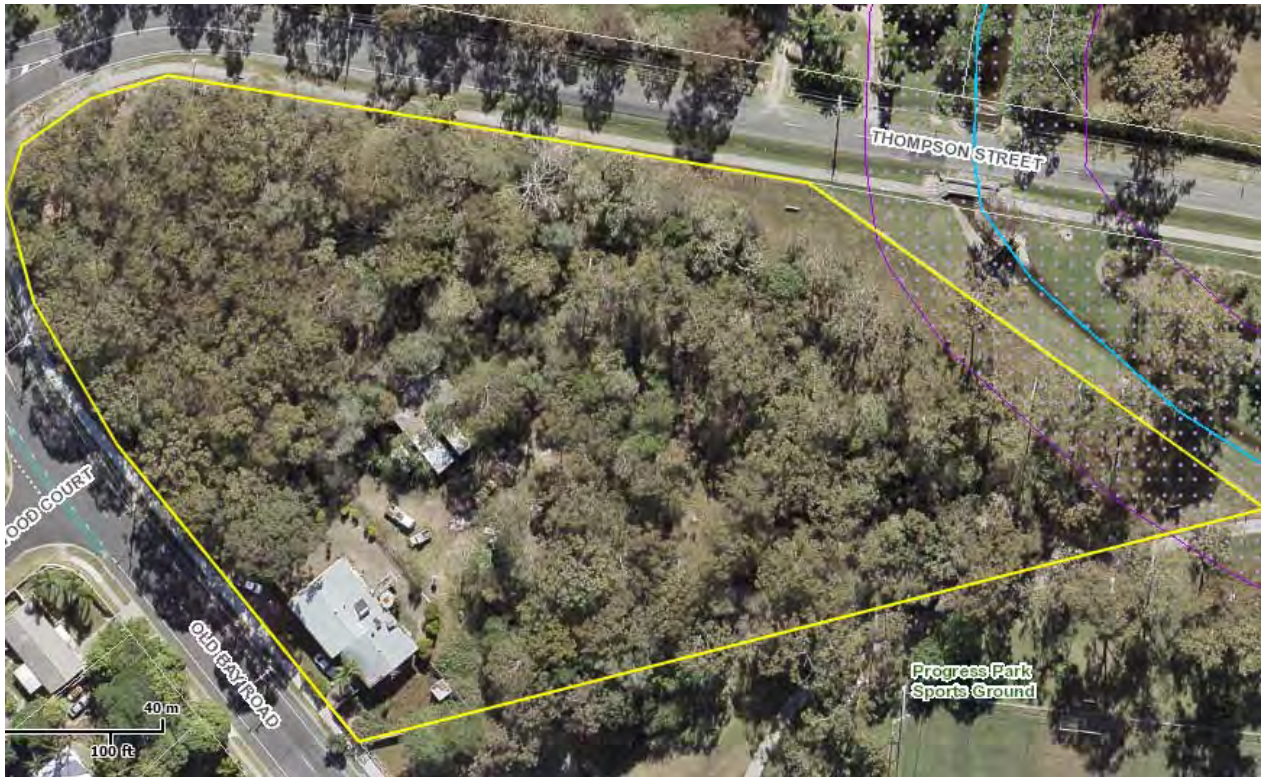
ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 (Cont.)

#3 Flood Hazard Overlay



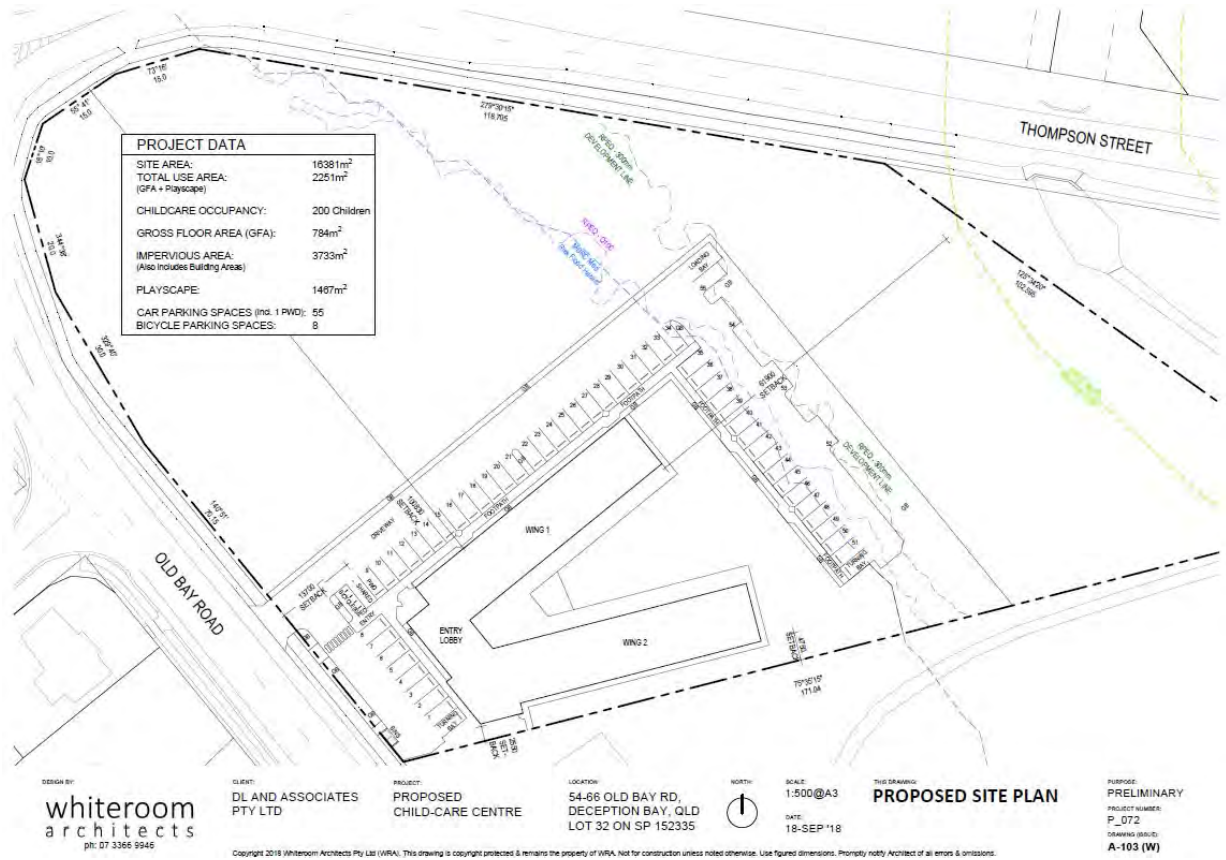
ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 (Cont.)

#4 Riparian and Wetland Setback Overlay



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 (Cont.)

#5 Proposed Site Plan



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 (Cont.)

#6 Proposed Landscape Plan



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 (Cont.)

#7 Perspective View (from Old Bay Road)



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)
#8 Plans and Documents to be Amended



Material Change of Use for
Proposed Child-care Centre
at
54-66 Old Bay Road, Deception Bay, QLD 4508
Lot 32 on SP152335
for
DL and Associates Pty Ltd

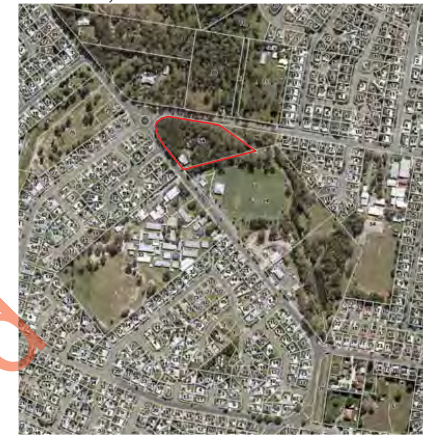
PREPARED BY

whiteroom
architects
ph: 07 3366 9946

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



1 LOCALITY MAP (GOOGLE)
SCALE:



2 2017 AERIAL IMAGERY
SCALE:



3 MBRC-ZONES & PRECINCTS
SCALE:

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

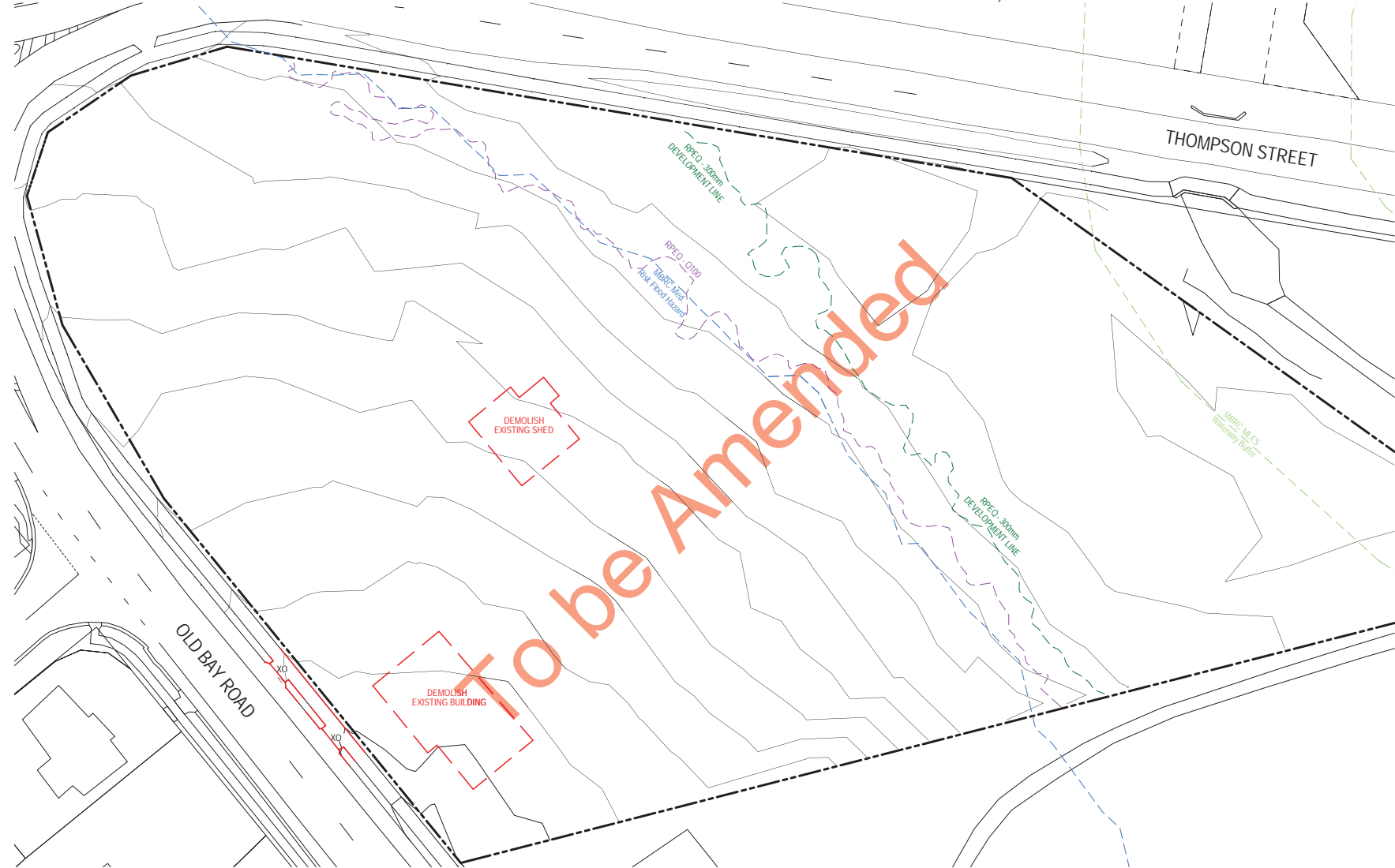


SCALE:
NTS
DATE:
18-SEP '18

THIS DRAWING:
SITE LOCALITY PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-101 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
 architects
 ph: 07 3366 9946

CLIENT:
 DL AND ASSOCIATES
 PTY LTD

PROJECT:
 PROPOSED
 CHILD-CARE CENTRE

LOCATION:
 54-66 OLD BAY RD,
 DECEPTION BAY, QLD
 LOT 32 ON SP 152335



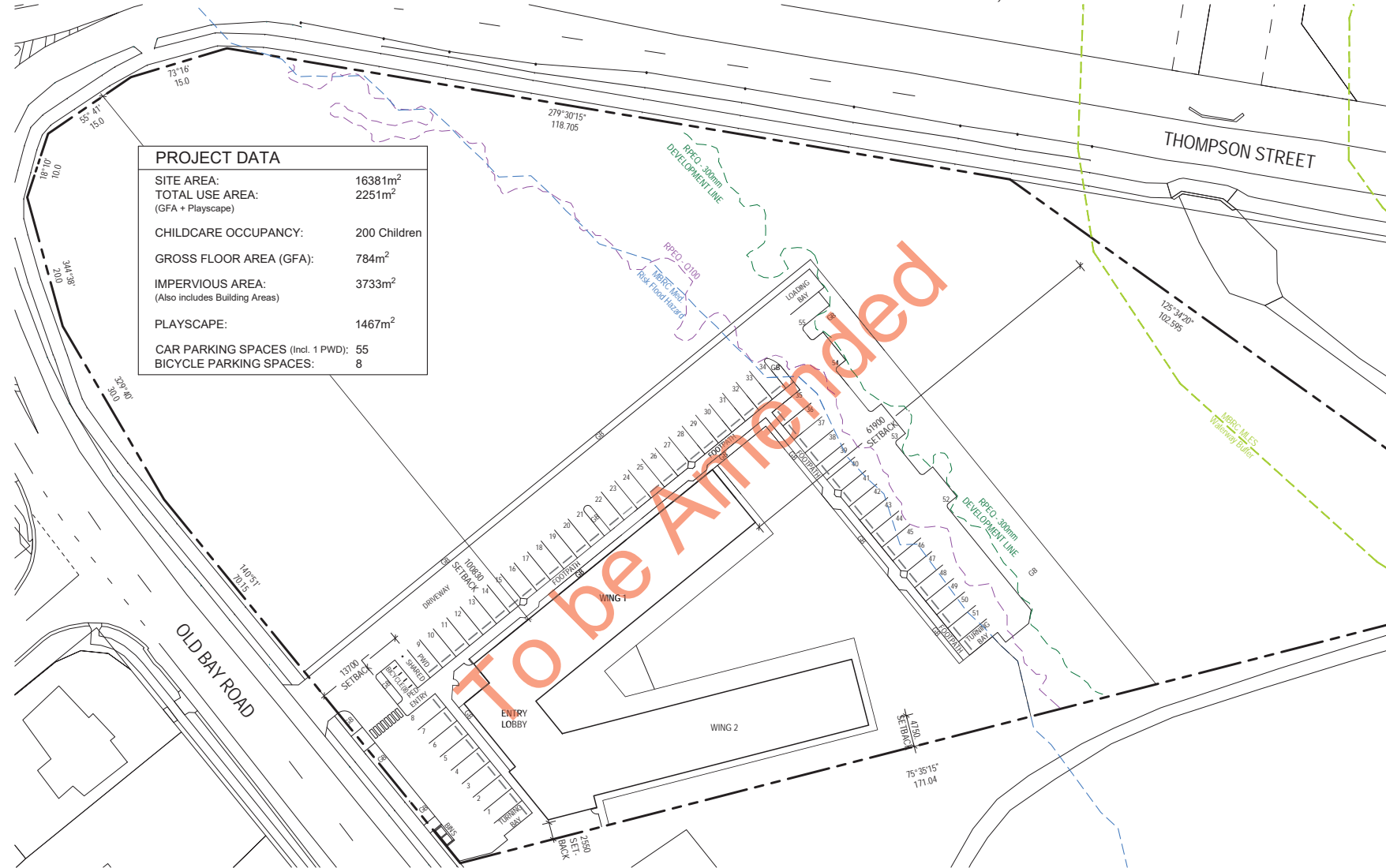
SCALE:
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 DATE:
 18-SEP '18

THIS DRAWING:
**EXISTING/DEMO
 SITE PLAN**

PURPOSE:
 PRELIMINARY
 PROJECT NUMBER:
 P_072
 DRAWING (ISSUE):
A-102 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



PROJECT DATA	
SITE AREA:	16381m ²
TOTAL USE AREA: (GFA + Playscape)	2251m ²
CHILDCARE OCCUPANCY:	200 Children
GROSS FLOOR AREA (GFA):	784m ²
IMPERVIOUS AREA: (Also includes Building Areas)	3733m ²
PLAYSCAPE:	1467m ²
CAR PARKING SPACES (Incl. 1 PWD):	55
BICYCLE PARKING SPACES:	8

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

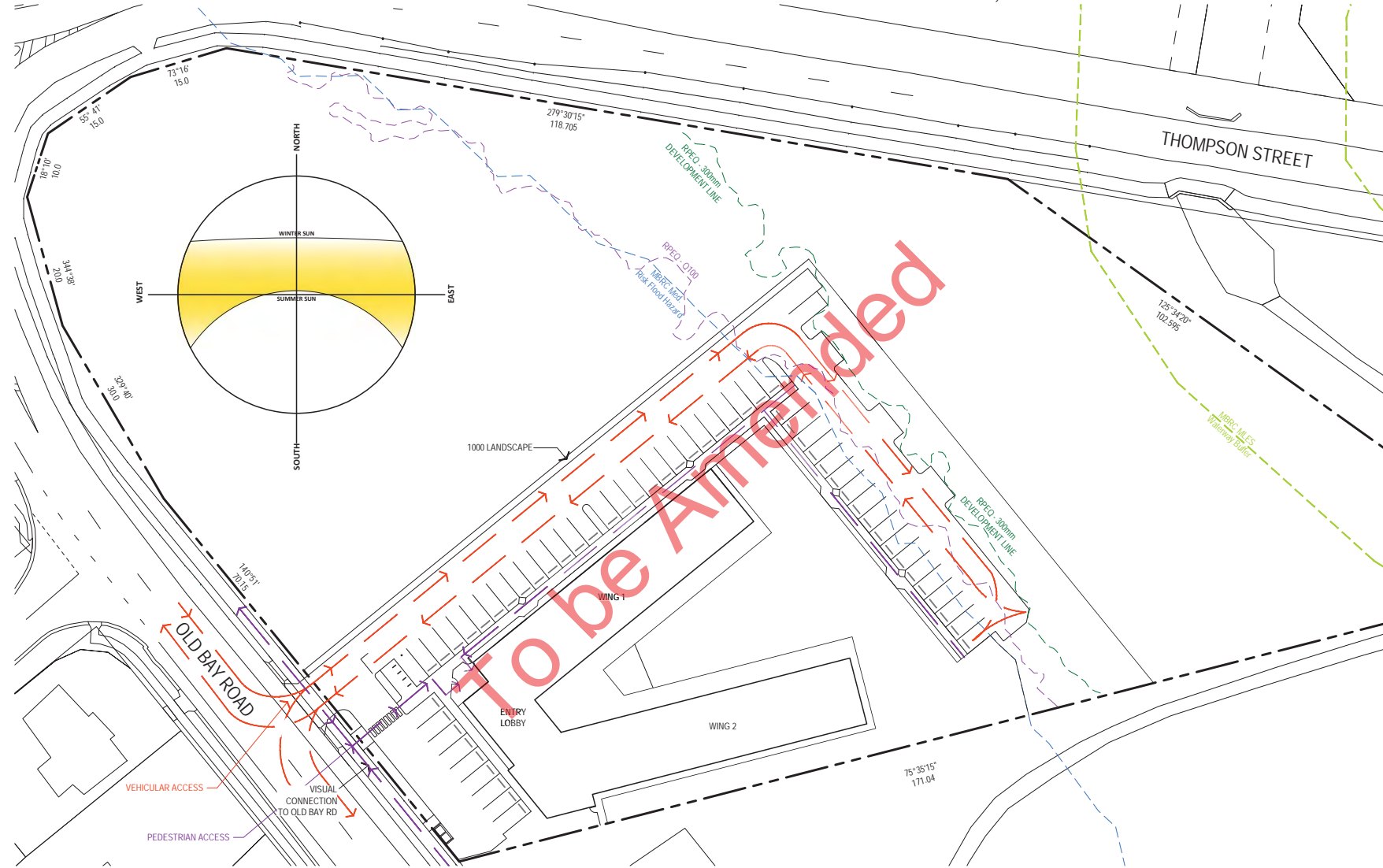
NORTH:
SCALE:
1:500@A3
DATE:
18-SEP '18

THIS DRAWING:
PROPOSED SITE PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-103 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



SCALE:
1:500@A3
DATE:
18-SEP '18

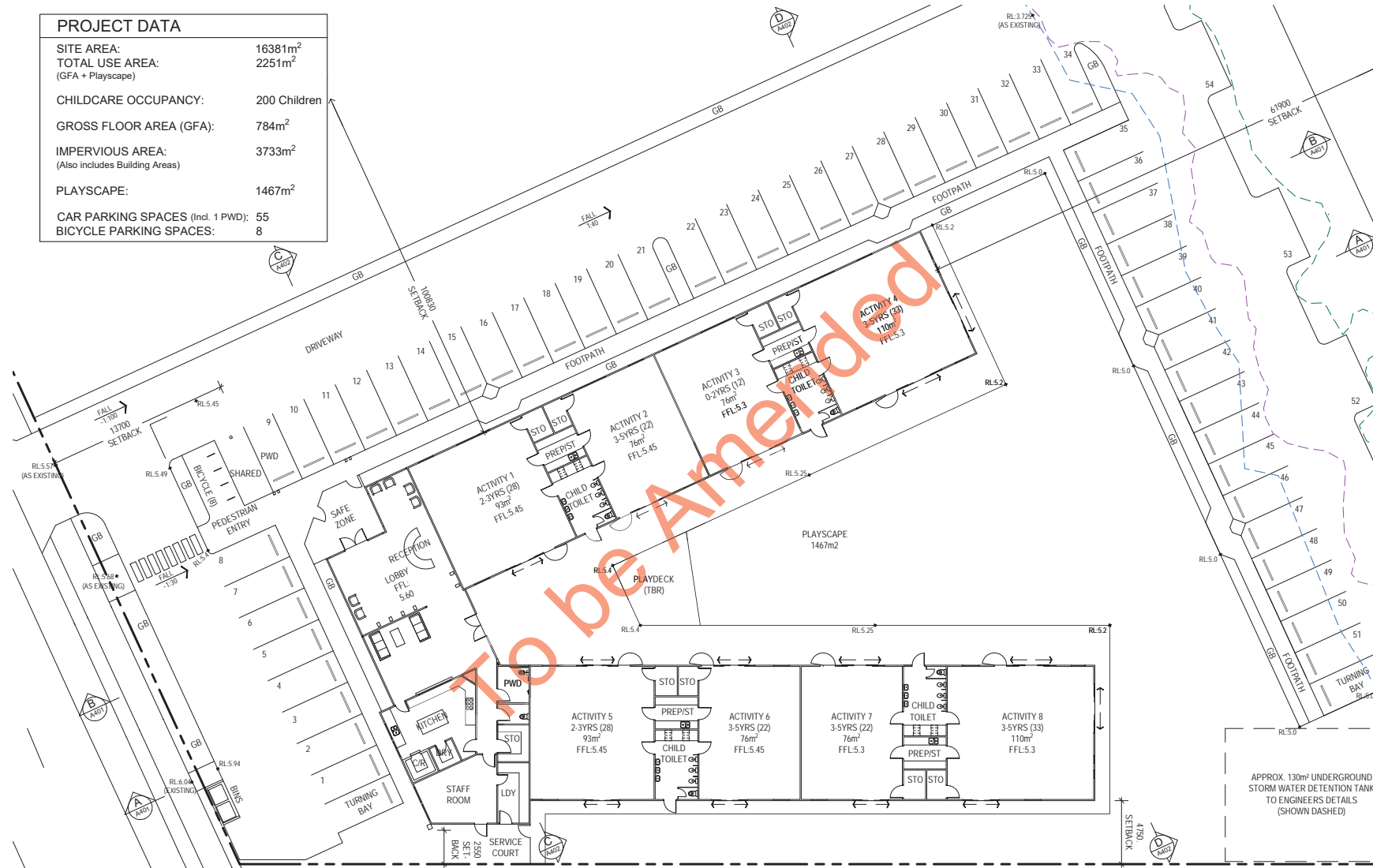
THIS DRAWING:
SITE ANALYSIS PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-104 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PROJECT DATA	
SITE AREA:	16381m ²
TOTAL USE AREA: (GFA + Playscape)	2251m ²
CHILDCARE OCCUPANCY:	200 Children
GROSS FLOOR AREA (GFA):	784m ²
IMPERVIOUS AREA: (Also includes Building Areas)	3733m ²
PLAYSCAPE:	1467m ²
CAR PARKING SPACES (Incl. 1 PWD):	55
BICYCLE PARKING SPACES:	8



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:
SCALE:
1:250@A3
DATE:
18-SEP '18

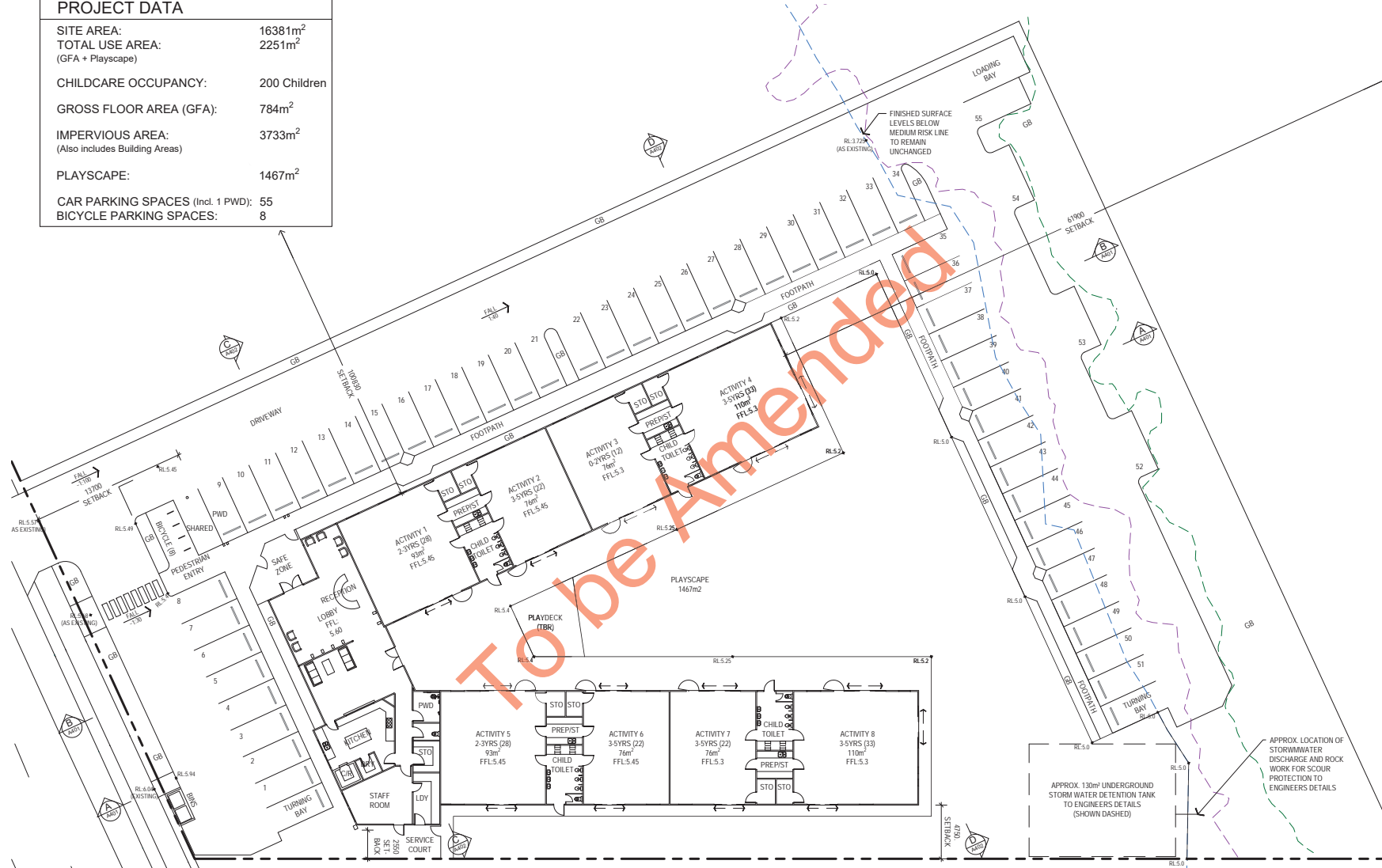
THIS DRAWING:
GROUND FLOOR PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING ISSUE:
A-201 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PROJECT DATA	
SITE AREA:	16381m ²
TOTAL USE AREA: (GFA + Playscape)	2251m ²
CHILDCARE OCCUPANCY:	200 Children
GROSS FLOOR AREA (GFA):	784m ²
IMPERVIOUS AREA: (Also includes Building Areas)	3733m ²
PLAYSCAPE:	1467m ²
CAR PARKING SPACES (Incl. 1 PWD):	55
BICYCLE PARKING SPACES:	8



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

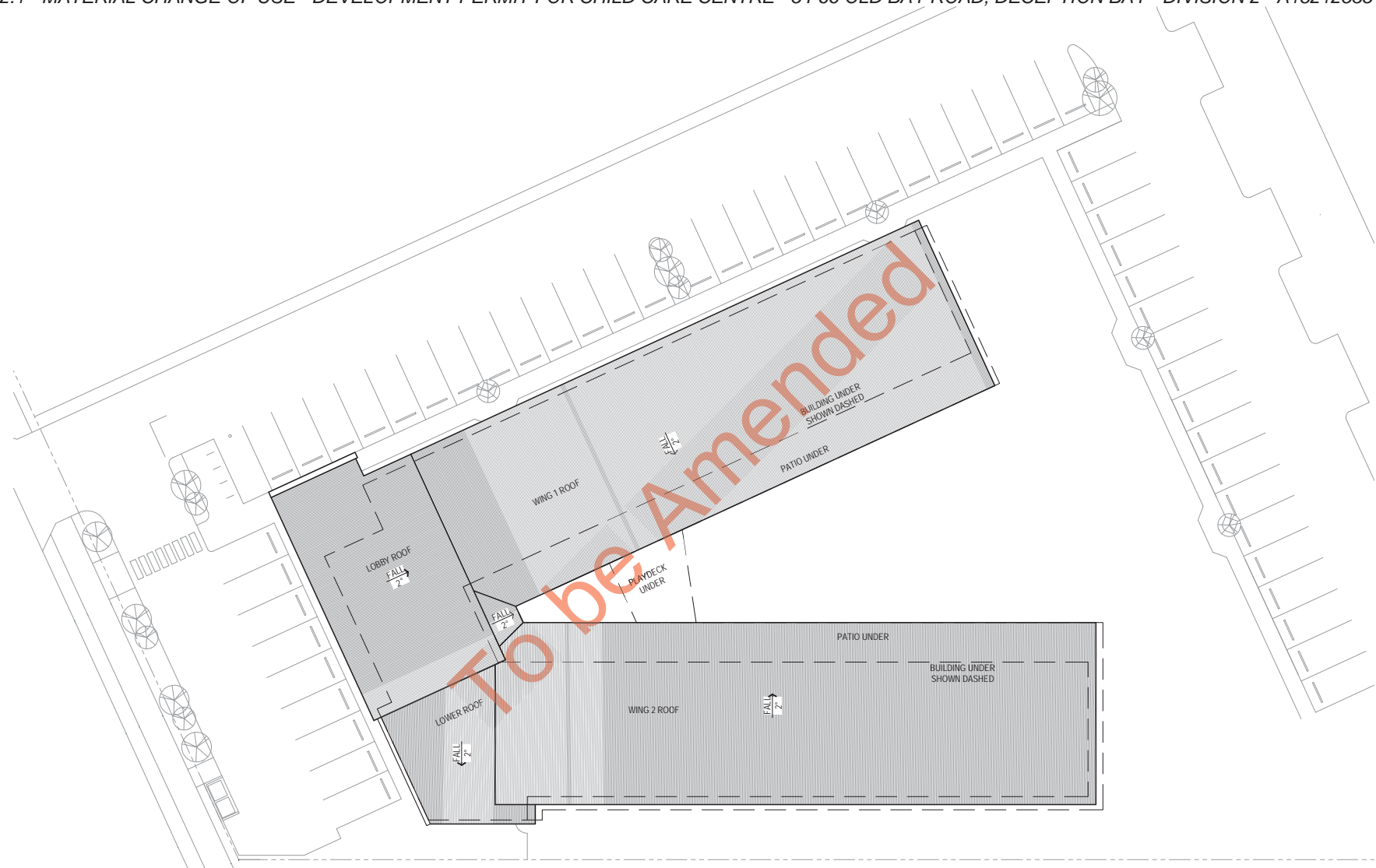


SCALE:
1:300@A3
DATE:
18-SEP '18

THIS DRAWING:
**GROUND FLOOR PLAN
(MACRO)**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-202 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:

whiteroom
architects
ph: 07 3366 9946

CLIENT:

DL AND ASSOCIATES
PTY LTD

PROJECT:

PROPOSED
CHILD-CARE CENTRE

LOCATION:

54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:



SCALE:

1:100@A3

DATE:

18-SEP '18

THIS DRAWING:

ROOF PLAN

PURPOSE:

PRELIMINARY

PROJECT NUMBER:

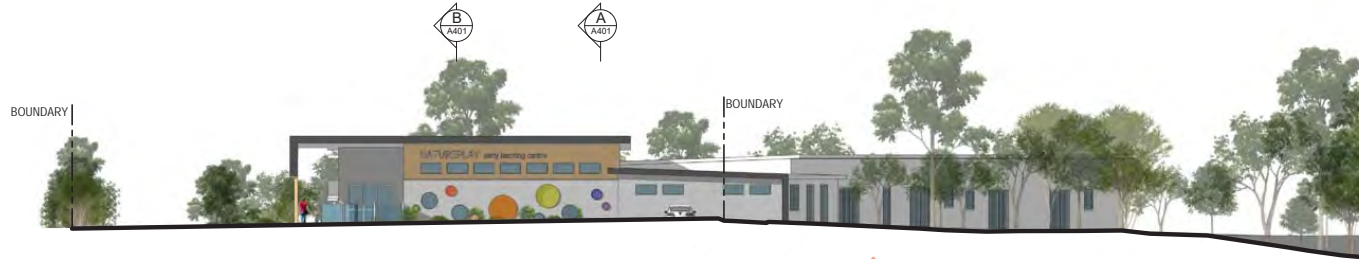
P_072

DRAWING (ISSUE):

A-211 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



1 WEST ELEVATION (STREET)
SCALE 1:250



2 NORTH ELEVATION
SCALE 1:250

To Be Amended

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



SCALE:
1:250@A3
DATE:
18-SEP '18

THIS DRAWING:
**WEST & NORTH
ELEVATIONS**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-301 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



1 EAST ELEVATION
SCALE 1:250



2 SOUTH ELEVATION
SCALE 1:250

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



NORTH:
SCALE:
1:250@A3
DATE:
18-SEP '18

THIS DRAWING:
**EAST & SOUTH
ELEVATIONS**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-302 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



To be Amended

*ARTISTS IMPRESSION
(NOT TO SCALE)

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



SCALE:
NTS
DATE:
18-SEP '18

THIS DRAWING:
**BUILDING
PERSPECTIVES 1**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-303 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



To be Amended

*ARTISTS IMPRESSION
(NOT TO SCALE)

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



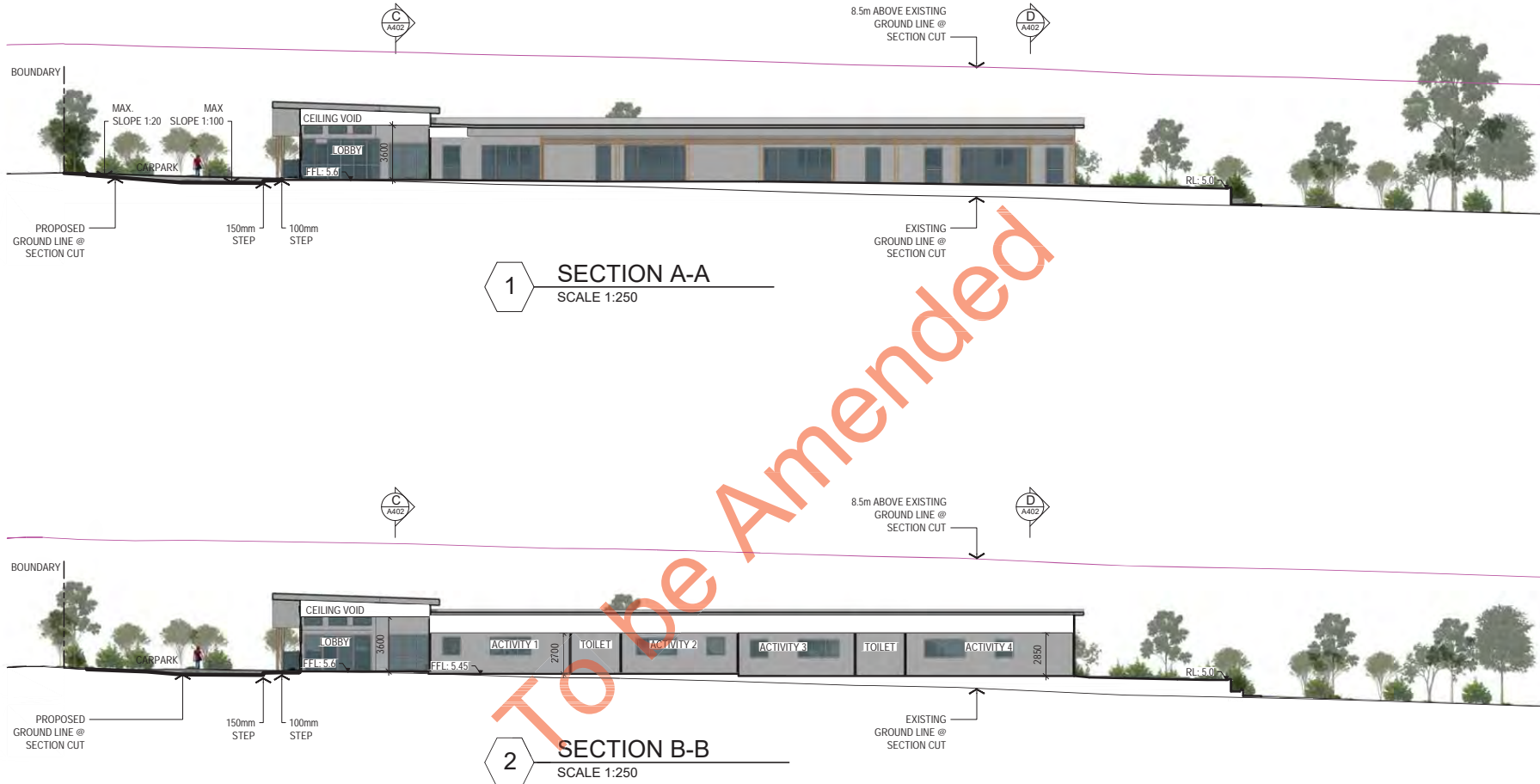
SCALE:
NTS
DATE:
18-SEP '18

THIS DRAWING:
**BUILDING
PERSPECTIVES 2**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-304 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

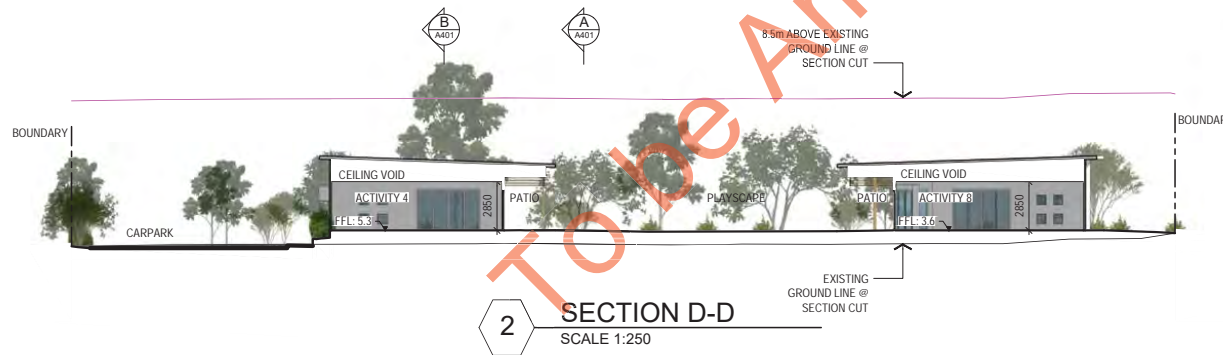
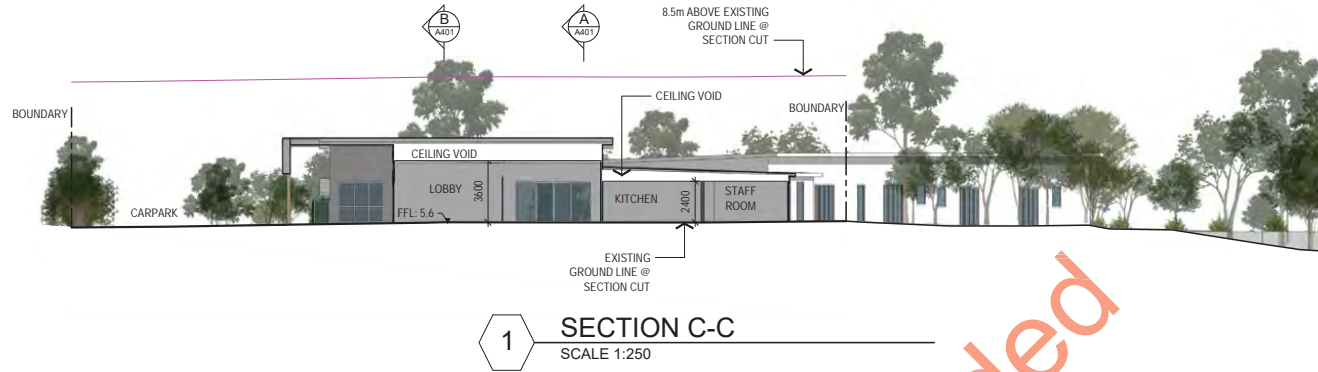
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SCALE:
1:250@A3
DATE:
18-SEP '18

THIS DRAWING:
SECTIONS 1

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-401 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

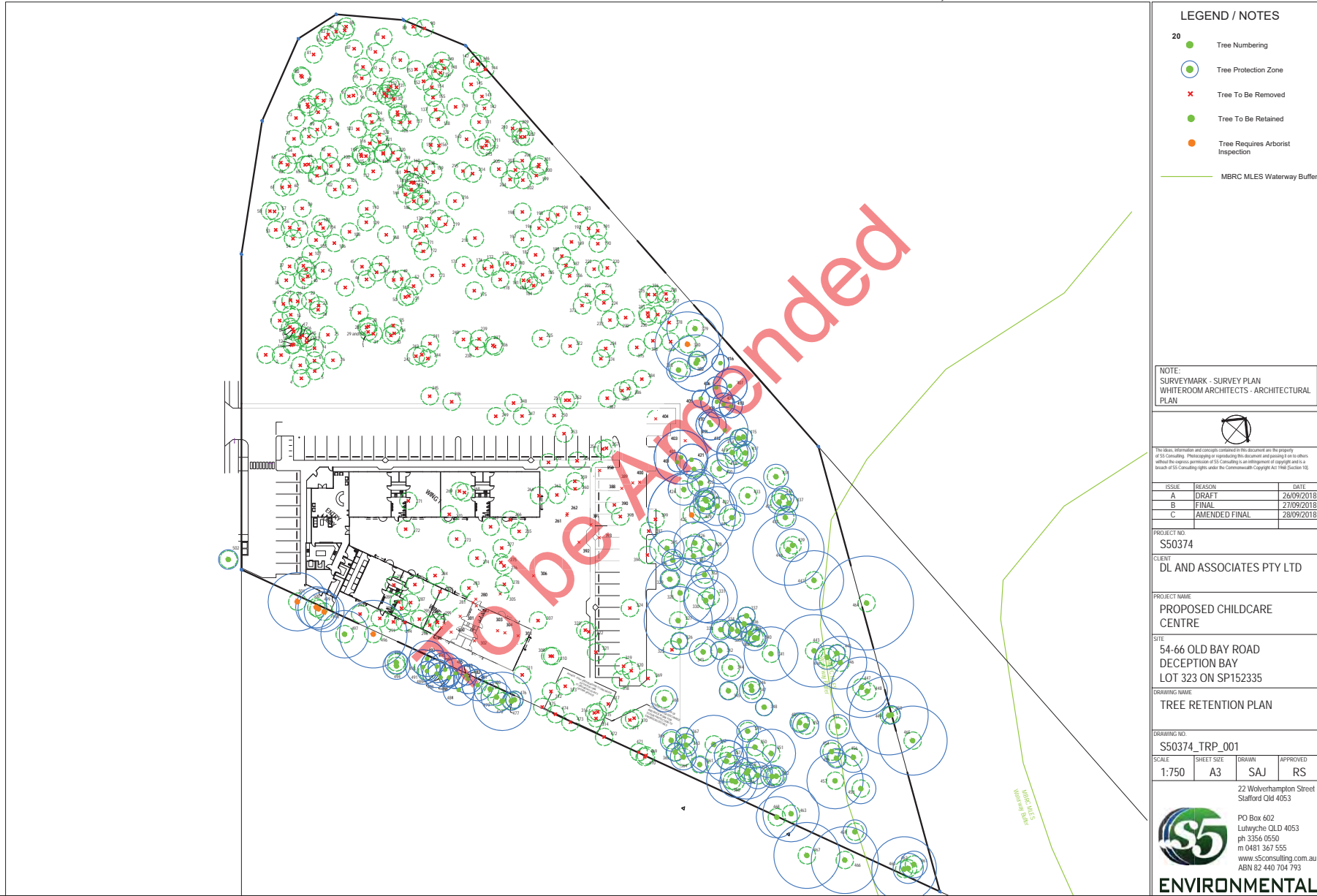
LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:
SCALE:
1:250@A3
DATE:
18-SEP '18

THIS DRAWING:
SECTIONS 2

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-402 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



LEGEND / NOTES

- 20 ● Tree Numbering
- Tree Protection Zone
- ✕ Tree To Be Removed
- Tree To Be Retained
- Tree Requires Arborist Inspection
- MBRC MLES Waterway Buffer

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL PLAN

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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	22/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT
DL AND ASSOCIATES PTY LTD

PROJECT NAME
PROPOSED CHILDCARE CENTRE

SITE
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME
TREE RETENTION PLAN

DRAWING NO.
S50374_TRP_001

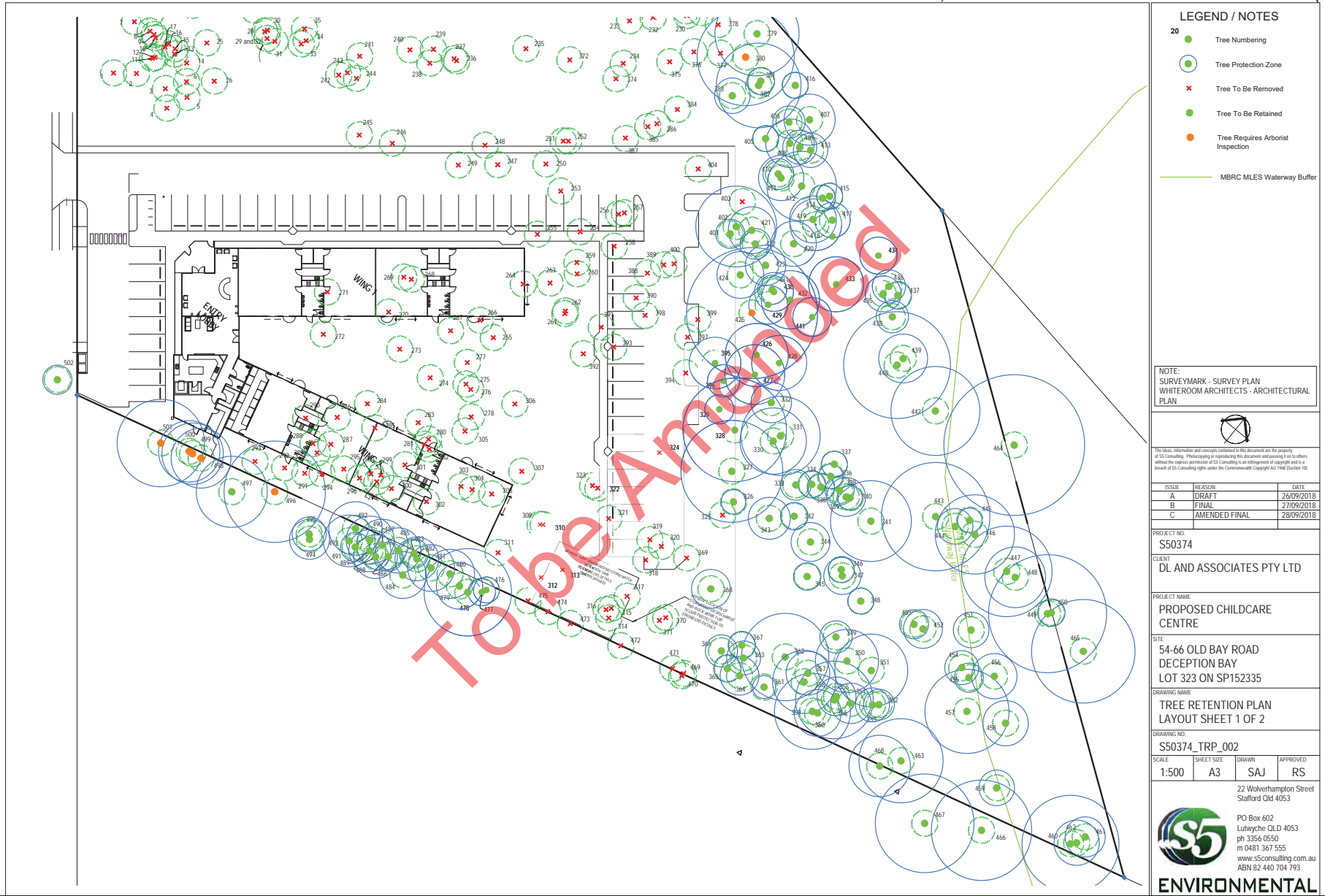
SCALE	SHEET SIZE	DRAWN	APPROVED
1:750	A3	SAJ	RS

22 Wolverhampton Street
Stafford Qld 4053

S5 ENVIRONMENTAL

PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



LEGEND / NOTES

- 20 ● Tree Numbering
- Tree Protection Zone
- ✕ Tree To Be Removed
- Tree To Be Retained
- Tree Requires Arborist Inspection
- MBRC MLES Waterway Buffer

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL PLAN

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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	22/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT
DL AND ASSOCIATES PTY LTD

PROJECT NAME
PROPOSED CHILDCARE CENTRE

SITE
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME
TREE RETENTION PLAN
LAYOUT SHEET 1 OF 2

DRAWING NO.
S50374_TRP_002

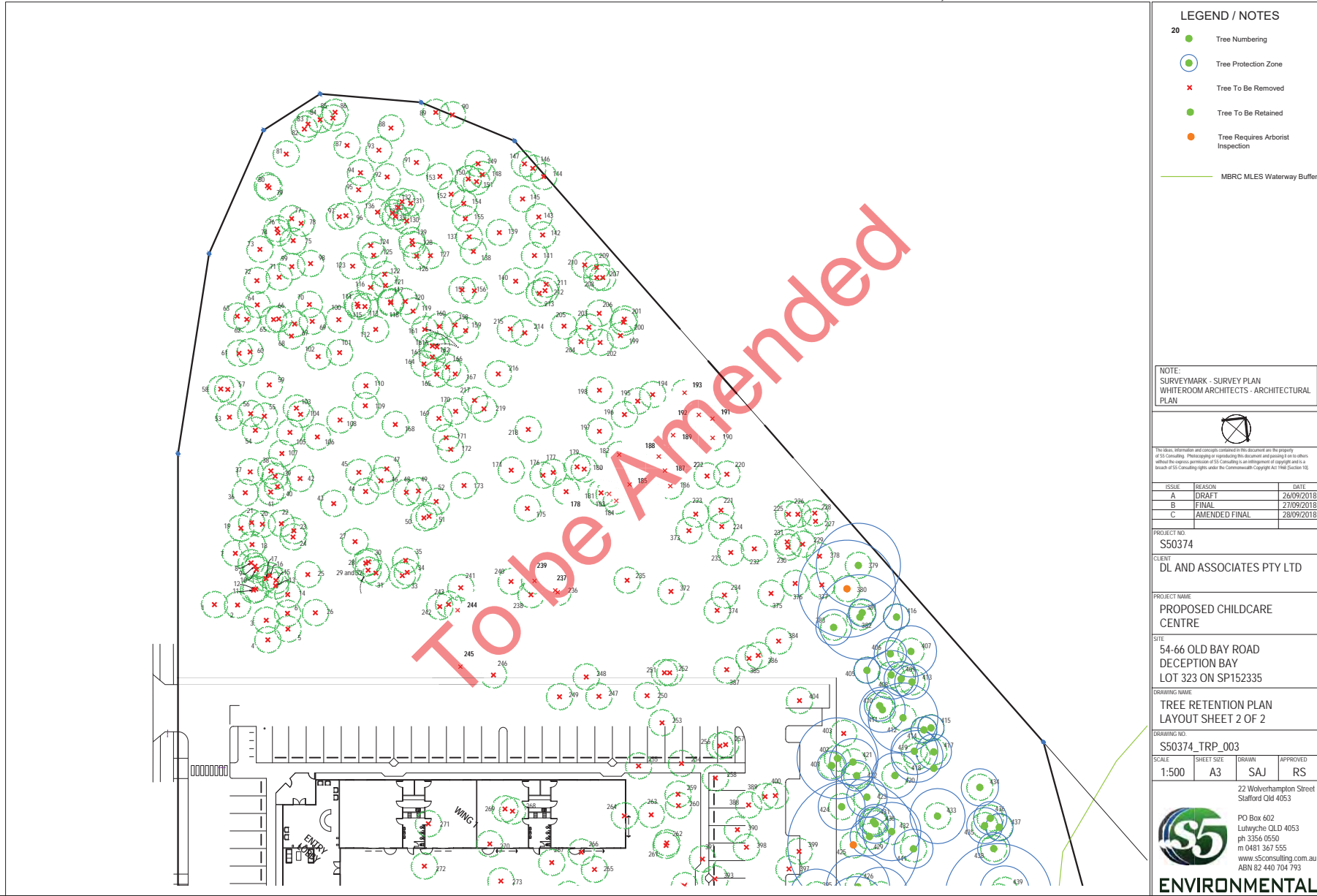
SCALE	SHEET SIZE	DRAWN	APPROVED
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22 Wolverhampton Street
Stafford Qld 4053

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Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
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ABN 82 440 704 793

ENVIRONMENTAL

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



LEGEND / NOTES

- 20 ● Tree Numbering
- Tree Protection Zone
- ✕ Tree To Be Removed
- Tree To Be Retained
- Tree Requires Arborist Inspection
- MBRC MLES Waterway Buffer

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL PLAN

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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	22/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT
DL AND ASSOCIATES PTY LTD

PROJECT NAME
PROPOSED CHILDCARE CENTRE

SITE
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME
TREE RETENTION PLAN
LAYOUT SHEET 2 OF 2

DRAWING NO.
S50374_TRP_003

SCALE	SHEET SIZE	DRAWN	APPROVED
1:500	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053

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Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
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ABN 82 440 704 793

ENVIRONMENTAL

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE															
55-56 Old Bay Road, Deception Bay															
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD [m]	Habitat	Health	Form [mm]	NOTES	TPZ
1	Remove	<i>Corymbia torelliana</i>	Cadaghi	240					5	4		Good		Fauna Scratches	2880
2	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	210					7	2		Good		Fauna Scratches	2520
3	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	160					6	2		Good		Fauna Scratches	1920
4	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	850					21	11		Good		Fauna Scratches	10200
5	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	490					20	5		Good		Fauna Scratches	5880
6	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	290					18	4		Good		Fauna Scratches	3480
7	Remove	<i>Eucalyptus propinqua</i>	Grey gum	650					20	7		Good		Fauna Scratches	7800
8	Remove	<i>Pinus elliotii</i>	Slash pine	150					4	1		Good			1800
9	Remove	<i>Pinus elliotii</i>	Slash pine	230					10	2		Good		Parsonsia present	2760
10	Remove	<i>Pinus elliotii</i>	Slash pine	210					8	2		Good			2520
11	Remove	<i>Pinus elliotii</i>	Slash pine	160					9	2		Good			2802
12	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	310		170			12	3		Good		Fauna Scratches	3720
13	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	370					14	4		Good		Fauna Scratches	4440
14	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	310					19	5		Good			3720
15	Remove	<i>Pinus elliotii</i>	Slash pine	290					9	2	Termitaria	Fair			3480
16	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	280					20	4		Good		Fauna scratches	3360
17	Remove	<i>Pinus elliotii</i>	Slash pine	160					9	2		Fair			1920
18	Remove	<i>Eucalyptus propinqua</i>	Grey gum	240					18	3		Good		Fauna Scratches	2880
19	Remove	<i>Lophostemon suaveolens</i>	Swamp box	270					3	2		Good			3240
20	Remove	<i>Pinus elliotii</i>	Slash pine	200					12	3		Good			2400
21	Remove	<i>Pinus elliotii</i>	Slash pine	120		240			10	3		Good	DL@base		3220
22	Remove	<i>Pinus elliotii</i>	Slash pine	230					15	2		Good			2760
23	Remove	<i>Pinus elliotii</i>	Slash pine	250					14	4		Good			3000
24	Remove	<i>Pinus elliotii</i>	Slash pine	230		150			14	3		Good	DL@0.3		3296
25	Remove	<i>Eucalyptus propinqua</i>	Grey gum	210					12	3	Fauna Scratches	Good		Fauna Scratches	2520
26	Remove		Stag	200					3	2		Dead			2400
27	Remove	<i>Acacia disparinima</i>	Hickory wattle	180					7	3		Good			2160
28	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	540					16	9		Good		Fauna Scratches	6480
29	Remove	<i>Pinus elliotii</i>	Slash pine	270					12	2		Good			3240
30	Remove	<i>Pinus elliotii</i>	Slash pine	150					12	2		Good			1800
31	Remove	<i>Pinus elliotii</i>	Slash pine	200					9	1		Good			2400
32	Remove	<i>Pinus elliotii</i>	Slash pine	270					11	2		Good			3240
33	Remove	<i>Acacia disparinima</i>	Hickory wattle	310					9	3		Good	Lean to SE		3720
34	Remove	<i>Acacia disparinima</i>	Hickory wattle	270					14	5		Good	Lean to SE		3240
35	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	260					16	4		Good			3120
36	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	480					21	12		Good		Fauna Scratches	5760
37	Remove	<i>Eucalyptus resinifera</i>	Stringybark	390					22	5		Good			4680
38	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	260					22	2		Good			3120
39	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	180					9	2		Good			2160
40	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	260					8	5		Good			3120
41	Remove	<i>Pinus elliotii</i>	Slash pine	180					9	1		Good			2160
42	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	250		340			13	4		Good	DL@0.6		5065
43	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	350					17	7		Good			4200
44	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	330					13	4		Good			3960
45	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	460					16	8		Good			5520
46	Remove	<i>Acacia disparinima</i>	Hickory wattle	160					9	3		Good			1920
47	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	370					18	5		Good			4440
48	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	220					13	3		Good			2640
49	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	280		290			12	10		Good	DL@0.4	Fauna Scratches	4838
50	Remove	<i>Acacia disparinima</i>	Hickory wattle	160					6	3		Fair	Lean To SE		1920
51	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	490					17	5		Good			5880
52	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	350					16	5		Good			4200
53	Remove	<i>Acacia disparinima</i>	Hickory wattle	210		130			7	4		Good			2964
54	Remove	<i>Acacia disparinima</i>	Hickory wattle	150					8	3		Good			1800
55	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	220					9	3		Good			2640
56	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	510		340			18	13		Good	DL@0.6		7356
57	Remove	<i>Eucalyptus propinqua</i>	Grey gum	260					9	3		Good			3120
58	Remove	<i>Acacia disparinima</i>	Hickory wattle	270					9	6		Good			3240
59	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	270					13	4		Good			3240
60	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	180		180			7	3		Good			3055

LEGEND / NOTES

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL
PLAN



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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:

S50374

CLIENT

DL AND ASSOCIATES PTY LTD

PROJECT NAME

PROPOSED CHILDCARE CENTRE

SITE

54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME

TREE RETENTION PLAN
SCHEDULE 1 OF 9

DRAWING NO:

S50374_TRP_004

SCALE

SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ
		RS

22 Wolverhampton Street
Stafford Old 4053



PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

PAGE 28
Agenda - Supporting Information Item 2.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE															
55-56 Old Bay Road, Deception Bay															
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD [m]	Habitat	Health	Form [mm]	NOTES	TPZ
61	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	190					7	2		Good	Lean to W		2280
62	Remove	<i>Acacia disparinima</i>	Hickory wattle	190	90	70			5	4		Good	Lean to SW		2680
63	Remove	<i>Acacia disparinima</i>	Hickory wattle	160					5	4		Good	Lean to NW		1920
64	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	560					16	10		Good			6720
65	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	280					16	5		Good			3360
66	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	180					12	2		Good			2160
67	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	220					12	3		Good			2640
68	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	150					10	2		Good			1800
69	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	480					18	7		Good			5520
70	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	340					11	5		Good	DL@0.4		4562
71	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	180					6	3		Good			2160
72	Remove	<i>Eucalyptus propinqua</i>	Grey gum	290					10	5		Good		Fauna Scratches	3480
73	Remove	<i>Eucalyptus propinqua</i>	Grey gum	340					11	5		Good		Fauna Scratches	4080
74	Remove	<i>Eucalyptus propinqua</i>	Grey gum	330					13	7		Good		Fauna Scratches	3960
75	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	250					15	6		Good			3000
76	Remove	<i>Acacia disparinima</i>	Hickory wattle	170					6	3		Good	Lean to W		2040
77	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	220					7	3		Good			2640
78	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	280					16	5		Good			3360
79	Remove	<i>Acacia disparinima</i>	Hickory wattle	180	50	10			4	3	Amy Caterpillar Nest	Good	ML@base		2245
80	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	480					17	10		Good			5760
81	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	270					16	4		Good	DL@0.6		4416
82	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	290					13	4	Termitaria	Good			3480
83	Remove	<i>Acacia disparinima</i>	Hickory wattle	160					7	2		Good			1920
84	Remove	<i>Eucalyptus propinqua</i>	Grey gum	350					14	6		Good		Fauna Scratches	4200
85	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	590					17	12		Good			7080
86	Remove	<i>Acacia disparinima</i>	Hickory wattle	160					4	2		Good			1920
87	Remove	<i>Pinus elliotii</i>	Slash pine	340					15	6		Good			4080
88	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	280					12	3		Good			3360
89	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	120	130	190			11	4		Good	ML@base		3116
90	Remove	<i>Lophostemon suaveolans</i>	Swamp box	160					3	1		Fair			1920
91	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	250					14	3		Good			3000
92	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	200					12	3		Good			2400
93	Remove	<i>Lophostemon suaveolans</i>	Swamp box	190					10	3		Good			2280
94	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	250					12	4		Good			3000
95	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	170					9	3		Good			2400
96	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	200					15	4		Good			2400
97	Remove	<i>Eucalyptus propinqua</i>	Grey gum	170					9	2		Poor		Fauna Scratches	2040
98	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	380					20	8		Good		Fauna Scratches	4560
99	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	180					7	2		Good			2160
100	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	310					17	5		Good			3720
101	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	190					10	3		Good			2280
102	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	220					14	4		Good			2640
103	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	350					16	5		Good		Fauna Scratches	4779
104	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	420					17	5		Good			5040
105	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	300					16	5		Good			3600
106	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	380					17	8		Good			4560
107	Remove	<i>Acacia disparinima</i>	Hickory wattle	170					8	2	Termitaria	Poor			2040
108	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	500					16	10		Good		Fauna Scratches	6000
109	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	340					15	5		Good		Fauna Scratches	4080
110	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	410					16	7		Good		Fauna Scratches	4920
111	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	370					16	3		Fair		Fauna Scratches	4440
112	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	290					17	4		Good		Fauna Scratches	3480
113	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	160					9	2		Good			1920
114	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	220					10	3		Good			2640
115	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	360					15	4		Good		Fauna Scratches	4320
116	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	340					17	5		Good		Fauna Scratches	4080
117	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	280					16	4		Good		Fauna Scratches	3360
118	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	160					8	4		Good			1920
119	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	260					17	5		Good		Fauna Scratches	3120
120	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	360					17	7		Good		Fauna Scratches	4320

LEGEND / NOTES

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL
PLAN



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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
SS0374

CLIENT
DL AND ASSOCIATES PTY LTD

PROJECT NAME
PROPOSED CHILDCARE
CENTRE

SITE
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME
TREE RETENTION PLAN
SCHEDULE 2 OF 9

DRAWING NO:
SS0374_TRP_005

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053



PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE															LEGEND / NOTES
55-56 Old Bay Road, Deception Bay															
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD (m)	Habitat	Health	Form [mm]	NOTES	TPZ
121	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	210					15	3		Good		Fauna Scratches	2520
122	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	240					15	4		Good		Fauna Scratches	2880
123	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	230					14	4	Termitaria	Good			2760
124	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	260					16	5		Good			3120
125	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	190					14	2		Good			2280
126	Remove	<i>Alphitonia excelsa</i>	Red ash	150	120				8	3		Fair			2306
127	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	270					14	5		Good			3240
128	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	170					10	3		Good			2040
129	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	310					17	7		Good			3720
130	Remove	<i>Alphitonia excelsa</i>	Red ash	160	110				9	2		Good			2330
131	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	370					16	4		Good			4440
132	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	170					6	2		Good			2040
133	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	210					12	3		Good		Fauna Scratches	2520
134	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	160					9	2		Good			1920
135	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	180					8	2		Good			2160
136	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	180					7	2		Good			2160
137	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	360					18	6		Good		Fauna Scratches	4320
138	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	230					11	5		Good			2760
139	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	170					9	4		Good			2040
140	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	380					18	6		Good			4560
141	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	220					14	3		Good			2640
142	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	530					18	7		Good			6360
143	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	290					10	6		Good		Parsonsia	3480
144	Remove		Stag	250					7	2		Dead			3000
145	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	370					16	8		Good			4440
146	Remove		Stag	160					3	1		Dead			1920
147	Remove		Stag	220					4	2		Dead			2640
148	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	320					13	6		Good			3840
149	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	220					10	3	Termitaria	Good			2640
150	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	190					5	3		Good			2280
151	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	260					12	4		Good			3120
152	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	270					12	4		Good			3240
153	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	170					7	2		Fair		Parsonsia	2040
154	Remove	<i>Eucalyptus propinqua</i>	Grey gum	370					15	6		Good			4440
155	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	170					9	3		Good			2040
156	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	280					12	4		Good			3360
157	Remove	<i>Eucalyptus propinqua</i>	Grey gum	280					10	3		Good			3000
158	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	160					7	2		Good			1920
159	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	510					17	12	Termitaria	Good			6120
160	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	150					8	1	Termitaria	Fair			1800
161	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	350					17	5	Fauna Scratches	Good			4200
162	Remove		Stag	170					8	1	Parsonsia	Dead			2040
163	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	320					18	5		Good			3840
164	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	150					9	1		Fair			1800
165	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	350					18	10		Good			4200
166	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	150					8	3	Termitaria	Good			1800
167	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	150					8	2		Fair			1800
168	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	490					18	7	Fauna Scratches	Good			5880
169	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	240					17	3	Fauna Scratches	Good			2880
170	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	450					18	8		Good			5400
171	Remove	<i>Lophostemon suaveolens</i>	Swamp box	200					8	4		Good			2400
172	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	200					8	3		Good			2400
173	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	430					17	5	Fauna Scratches	Good			5190
174	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	540					18	12	Fauna Scratches	Good			6480
175	Remove	<i>Acacia disperspinna</i>	Hickory wattle	360					16	6		Good			6026
176	Remove	<i>Lophostemon suaveolens</i>	Swamp box	170	350				7	2	Parsonsia	Good		DL@0.3	2040
177	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	180					8	3		Good			2160
178	Remove	<i>Pinus elliotii</i>	Slash pine	320					16	5		Good			3840
179	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	170					10	4		Good			2040
180	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	190					9	3		Good		Parsonsia	2280

LEGEND / NOTES

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL
PLAN

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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT:
DL AND ASSOCIATES PTY LTD

PROJECT NAME:
PROPOSED CHILDCARE
CENTRE

SITE:
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME:
TREE RETENTION PLAN
SCHEDULE 3 OF 9

DRAWING NO:
S50374_TRP_006

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053

PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE																
55-56 Old Bay Road, Deception Bay																
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD [m]	Habitat	Health	Form [mm]	NOTES	TPZ	
181	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	340					17	5	Fauna Scratches	Good			4080	
182	Remove	<i>Acacia disparimma</i>	Hickory wattle	200					15	4		Good			2400	
183	Remove	<i>Acacia disparimma</i>	Hickory wattle	240					8	4		Fair		Parsonsia	2880	
184	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	390					13	5		Good			4680	
185	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	150					9	1		Poor		Parsonsia	1800	
186	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	190	200				10	3		Good	DL@1m		3311	
187	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	490					17	8		Good			5520	
188	Remove	<i>Lophostemon suaveolens</i>	Swamp box	190					9	3		Fair		Parsonsia	1920	
189	Remove	<i>Acacia disparimma</i>	Hickory wattle	200					9	3		Fair		Parsonsia	2400	
190	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	190	220	190			10	5		Good		Parsonsia	4188	
191	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	300					10	4		Good		Parsonsia	3600	
192	Remove	<i>Eucalyptus propinqua</i>	Grey gum	370					17	5	Fauna Scratches	Good			4440	
193	Remove	<i>Acacia disparimma</i>	Hickory wattle	260					6	5		Poor	Lean to N		3120	
194	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	280					15	4	Fauna Scratches	Good			3360	
195	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	500					19	9		Good			6000	
196	Remove	<i>Lophostemon suaveolens</i>	Swamp box	210	100				11	3		Good	DL@0.3		2760	
197	Remove	<i>Lophostemon suaveolens</i>	Swamp box	170					7	2		Good			2040	
198	Remove	<i>Acacia disparimma</i>	Hickory wattle	170					7	3		Good			2040	
199	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	380					15	5		Good	Lean to N		4560	
200	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	170					9	1		Fair			2040	
201	Remove		Stag	190	380				7	6		Dead			5059	
202	Remove	<i>Alphitonia excelsa</i>	Red ash	180					12	2		Fair			2160	
203	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	190					11	3		Good			2280	
204	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	320					15	8		Good			3840	
205	Remove	<i>Acacia disparimma</i>	Hickory wattle	250	190				10	4		Fair	DL@0.2m, Lean to NW		3789	
206	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	280					15	3		Good			3120	
207	Remove	<i>Acacia disparimma</i>	Hickory wattle	270	280				12	4		Good	DL@0.3, Lean to N		4668	
208	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	250					14	4		Good			3000	
209	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	190	150				8	5		Good	DL@0.4m		2905	
210	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	420					17	9		Good			5040	
211	Remove		Stag	190					9	1		Dead		Parsonsia	2280	
212	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	190					10	3		Good			2280	
213	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	210					10	3		Good			2520	
214	Remove	<i>Acacia disparimma</i>	Hickory wattle	360					14	4		Good			4320	
215	Remove	<i>Alphitonia excelsa</i>	Red ash	180					7	2		Good			2160	
216	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	240					18	3		Good			2880	
217	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	170					9	2		Fair			2040	
218	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	190					10	2		Poor		Parsonsia	2280	
219	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	180					12	3		Good			2160	
220	Remove	<i>Acacia disparimma</i>	Hickory wattle	260					10	5		Poor	Lean to NE		3120	
221	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	330					19	6		Good			3960	
222	Remove		Stag	180					6	2		Dead			2160	
223	Remove	<i>Acacia disparimma</i>	Hickory wattle	180					9	3	Termitaria	Fair		Parsonsia	2160	
224	Remove	<i>Acacia disparimma</i>	Hickory wattle	180					7	3		Fair	Lean to NE	Parsonsia	2160	
225	Remove		Stag	650					20	10	Termitaria	Dead			7800	
226	Remove		Stag	320					6	4		Dead		Lean to N	Parsonsia	3840
227	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	380					8	4		Good			4560	
228	Remove		Stag	150					4	2		Dead			1800	
229	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	260					11	2		Poor			3120	
230	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	210	200				9	3		Good			3480	
231	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	19					9	2		Good			228	
232	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	210					9	3		Good			2520	
233	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	600					18	10		Good			7200	
234	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	680					22	12		Good			8160	
235	Remove	<i>Acacia disparimma</i>	Hickory wattle	300					12	5		Fair			3600	
236	Remove	<i>Acacia disparimma</i>	Hickory wattle	190					10	4		Good			2280	
237	Remove	<i>Acacia disparimma</i>	Hickory wattle	180					8	2		Good			2160	
238	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	180					10	4		Good			2160	
239	Remove	<i>Acacia disparimma</i>	Hickory wattle	200					11	3		Good			2400	
240	Remove	<i>Glochidion ferdinandi</i>	Cheese tree	200					8	4		Good			2400	

LEGEND / NOTES

NOTE: SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL
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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO: S50374

CLIENT: DL AND ASSOCIATES PTY LTD

PROJECT NAME:
PROPOSED CHILDCARE CENTRE

SITE:
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME:
TREE RETENTION PLAN
SCHEDULE 4 OF 9

DRAWING NO:
S50374_TRP_007

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053



PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

PAGE 31
Agenda - Supporting Information Item 2.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE															
55-56 Old Bay Road, Deception Bay															
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD [m]	Habitat	Health	Form [mm]	NOTES	TPZ
241	Remove	<i>Acacia disparimima</i>	Hickory wattle	160					9	3		Good			1920
242	Remove		Stag	160					3	1		Dead			1920
243	Remove	<i>Lophostemon suaveolans</i>	Swamp box	160					6	2		Good			1800
244	Remove	<i>Allocasuarina littoralis</i>	Black she-oak	150					9	3		Fair			1800
245	Remove	<i>Lophostemon suaveolans</i>	Swamp box	170					7	4		Dead			2040
246	Remove		Stag	210					5	1		Good			2520
247	Remove	<i>Allocasuarina littoralis</i>	Black she-oak	270					6	4		Good			3240
248	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	490					16	7		Good			5880
249	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	390					17	8		Good			4680
250	Remove	<i>Acacia disparimima</i>	Hickory wattle	460					10	6		Good			5520
251	Remove	<i>Acacia disparimima</i>	Hickory wattle	180					10	4		Fair	Lean to S		2160
252	Remove	<i>Acacia disparimima</i>	Hickory wattle	210					11	4		Good			2520
253	Remove	<i>Acacia disparimima</i>	Hickory wattle	310	150				12	5		Good	DL @ 0.6m		4133
254	Remove	<i>Pinus elliotii</i>	Slash pine	340					17	4		Good			4080
255	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	450					18	7		Good			5400
256	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	230					9	3		Fair	Parsonsia		2760
257	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	180					9	3		Fair	Parsonsia		2160
258	Remove	<i>Acacia disparimima</i>	Hickory wattle	290					11	4		Poor	Parsonsia		3480
259	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	220					12	3		Good			2640
260	Remove	<i>Pinus elliotii</i>	Slash pine	230					11	2		Fair			3360
261	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	340					14	3		Good			4080
262	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	250					11	2		Good			3000
263	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	360					16	6		Good			4320
264	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	410					16	7		Good			4920
265	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	440					18	7		Good			5280
266	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	450					20	8		Good			5400
267	Remove	<i>Lophostemon suaveolans</i>	Swamp box	190					9	2	Termitaria	Good			2280
268	Remove	<i>Lophostemon suaveolans</i>	Swamp box	250					12	4		Good			3000
269	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	420					20	6		Good			5040
270	Remove	<i>Lophostemon suaveolans</i>	Swamp box	360					13	4		Good			4320
271	Remove	<i>Brachychiton acenifolius</i>	Illawarra flame tree	300					10	4		Good			3600
272	Remove	<i>Brachychiton acenifolius</i>	Illawarra flame tree	320					9	3		Good			3840
273	Remove	<i>Acacia disparimima</i>	Hickory wattle	390					12	6		Good			4680
274	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	610					20	9	Fauna Scratches	Good			7320
275	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	220					12	4	Fauna Scratches	Good	Canopy on lean to North-east		2640
276	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	230					11	3		Good			2760
277	Remove	<i>Acacia disparimima</i>	Hickory wattle	160					12	4		Good			1920
278	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	270					16	4	Koala fauna scratches	Good			3240
279	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	270					14	4		Good	Cats Claw Vine present		3240
280	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	260					17	4		Good			3120
281	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	460					18	5		Good			5520
282	Remove	<i>Eucalyptus propinqua</i>	Grey gum	320					14	4		Good	On lean to East		3840
283	Remove	<i>Pinus elliotii</i>	Slash pine	200					12	3		Good			2400
284	Remove	<i>Lophostemon suaveolans</i>	Swamp box	240					11	3		Good			2880
285	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	410	430				21	9	Fauna Scratches	Good	DL @ 0.5		7130
286	Remove	<i>Lophostemon suaveolans</i>	Swamp box	190					10	3		Good			2280
287	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	240					16	3	Fauna Scratches	Good			2880
288	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	470					18	5	Fauna Scratches	Good			5640
289	Remove	<i>Acacia disparimima</i>	Hickory wattle	230					11	3		Good			2760
290	Remove	<i>Pinus elliotii</i>	Slash pine	400					14	5		Good			4800
291	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	350					14	4		Good			4200
292	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	420					16	5		Good	Monkey Rope vine present		5040
293	Remove	<i>Ficus rubiginosa</i>	Port Jackson fig	220					8	3		Good			2640
294	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	200					12	3	Fauna Scratches	Good			2400
295	Remove	<i>Pinus elliotii</i>	Slash pine	340					16	4		Good			4080
296	Remove	<i>Pinus elliotii</i>	Slash pine	340					15	3		Good	Monkey Rope vine smothering		4080
297	Remove	<i>Pinus elliotii</i>	Slash pine	180					14	2		Good			2160
298	Remove	<i>Pinus elliotii</i>	Slash pine	150					12	3		Good	Monkey Rope vine smothering canopy		1800
299	Remove	<i>Pinus elliotii</i>	Slash pine	220					17	3		Good			2640
300	Remove	<i>Acacia disparimima</i>	Hickory wattle	360	280				17	8		Good	DL @ 0.3		5473

LEGEND / NOTES

NOTE:
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WHITEROOM ARCHITECTS - ARCHITECTURAL
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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT
DL AND ASSOCIATES PTY LTD

PROJECT NAME
PROPOSED CHILDCARE
CENTRE

SITE
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME
TREE RETENTION PLAN
SCHEDULE 5 OF 9

DRAWING NO:
S50374_TRP_008

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053

PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
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ENVIRONMENTAL

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE															Habitat		Health		Form (mm)		NOTES		TPZ	
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1	DBH 2	DBH 3	DBH 4	DBH 5	HEIGHT	SPREAD														
				(mm)	(mm)	(mm)	(mm)	(mm)	(m)	(m)														
301	Remove	Melaleuca quinquenervia	Broad-leaved paperbark	170					12	3			Good							2040				
302	Remove	Acacia dispermma	Hickory wattle	190					10	3			Good							2160				
303	Remove	Lophostemon suaveolans	Swamp box	210					14	3			Good							2520				
304	Remove	Schinus	Broad-leaved Pepper Tree	150	130	140	110	120	4	8			Good	ML @ 0.2						3200				
305	Remove	Melaleuca quinquenervia	Broad-leaved paperbark	270					14	4			Good							3240				
306	Remove	Corymbia intermedia	Pink bloodwood	330					16	5			Good							3660				
307	Remove	Eucalyptus racemosa	Scribbly gum	490	200				18	9			Good	DL @ 0.5						6351				
308	Remove	Eucalyptus tereticomis	Forest red gum	520					16	5			Good							6240				
309	Remove	Pinus elliotii	Slash pine	320					14	5			Good							3840				
310	Remove	Melaleuca quinquenervia	Broad-leaved paperbark	360					16	4			Good							4320				
311	Remove	Eucalyptus racemosa	Scribbly gum	380					19	8			Good							4560				
312	Remove	Acacia dispermma	Hickory wattle	260					14	3			Good							3120				
313	Remove	Acacia dispermma	Hickory wattle	170					12	2			Fair							2040				
314	Remove	Eucalyptus racemosa	Scribbly gum	810					22	6			Good							7320				
315	Remove	Acacia dispermma	Hickory wattle	420					12	5			Good							5040				
316	Remove		Stag	170					12	3			Dead							2040				
317	Remove	Eucalyptus racemosa	Scribbly gum	550					22	7			Good							6600				
318	Remove	Melaleuca quinquenervia	Broad-leaved paperbark	340					14	4			Good							4080				
319	Remove	Eucalyptus racemosa	Scribbly gum	620					22	8			Good							7440				
320	Remove	Eucalyptus racemosa	Scribbly gum	420					15	5			Good							5040				
321	Remove		Stag	180					8	3			Dead							2160				
322	Remove	Acacia dispermma	Hickory wattle	220	320				15	6			Good	DL @ 1m						4860				
323	Remove	Eucalyptus racemosa	Scribbly gum	520					18	8			Good							7440				
324	Remove	Eucalyptus racemosa	Scribbly gum	570					18	9			Good							6840				
325	Remove	Eucalyptus racemosa	Scribbly gum	610					18	7			Good							7320				
326	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	150					12	3			Good							1800				
327	Retain	Eucalyptus racemosa	Scribbly gum	830					14	4			Good							7560				
328	Retain	Eucalyptus racemosa	Scribbly gum	640					23	10			Good							7680				
329	Retain	Acacia dispermma	Hickory wattle	180					12	3			Fair							2160				
330	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	410					15	4			Good							4920				
331	Retain	Eucalyptus racemosa	Scribbly gum	490					14	6			Good							5880				
332	Retain	Pinus elliotii	Slash pine	250					16	3			Good							3000				
333	Retain	Lophostemon suaveolans	Swamp box	190					14	3			Good							2280				
334	Retain	Alphitonia excelsa	Red ash	170					15	3			Good							2040				
335	Retain	Lophostemon suaveolans	Swamp box	170					13	3			Good							2040				
336	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	150					14	4			Good							1800				
337	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	190					8	3			Good							1920				
338	Retain	Lophostemon suaveolans	Swamp box	190					14	2			Good							2160				
339	Retain	Eucalyptus tereticomis	Forest red gum	240					16	4			Good							2880				
340	Retain	Lophostemon suaveolans	Swamp box	150					14	3			Good							1800				
341	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	500					17	5			Good							6000				
342	Retain	Eucalyptus tereticomis	Forest red gum	170					14	3			Good							2040				
343	Retain	Eucalyptus tereticomis	Forest red gum	260					14	3			Good							3120				
344	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	240					14	3			Good							2880				
345	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	170					12	3			Good							2040				
346	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	160					12	3			Good							1920				
347	Retain	Eucalyptus tereticomis	Forest red gum	230					16	4			Good							2760				
348	Retain	Lophostemon suaveolans	Swamp box	160					11	3			Good							1820				
349	Retain	Eucalyptus tereticomis	Forest red gum	200					13	4			Good							2400				
350	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	390					15	4			Good							4560				
351	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	450					17	6			Good							5400				
352	Retain	Eucalyptus tereticomis	Forest red gum	190					14	3			Good							2280				
353	Retain	Lophostemon suaveolans	Swamp box	210					12	3			Good							2520				
354	Retain	Acacia dispermma	Hickory wattle	250					12	5			Good							3000				
355	Retain	Eucalyptus racemosa	Scribbly gum	240					15	4			Good							2880				
356	Retain	Eucalyptus racemosa	Scribbly gum	480					20	7			Good							5760				
357	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	270					16	6			Good							3240				
358	Retain	Melaleuca quinquenervia	Broad-leaved paperbark	390					16	7			Good							4680				
359	Retain	Eucalyptus tereticomis	Forest red gum	470					18	6			Good							5640				
360	Retain		Stag	290					9	3			Dead							3480				

LEGEND / NOTES

NOTE: SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL
PLAN



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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT:
DL AND ASSOCIATES PTY LTD

PROJECT NAME:
PROPOSED CHILDCARE
CENTRE

SITE:
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME:
TREE RETENTION PLAN
SCHEDULE 6 OF 9

DRAWING NO:
S50374_TRP_009

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053



PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE														LEGEND / NOTES	
55-56 Old Bay Road, Deception Bay															
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD [m]	Habitat	Health	Form [mm]	NOTES	TPZ
361	Retain	<i>Acacia disparrimma</i>	Hickory wattle	110	90				15	4		Poor	DL @ base		1708
362	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	540					16	4		Good		Monkey Rope vine present	6480
363	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	210					13	4		Good		Monkey Rope vine present	2520
364	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	240					13	3		Good		Monkey Rope vine smothering	2880
365	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	170					14	3		Good		Monkey Rope vine smothering	2040
366	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	150	130				14	3		Good	DL @ 0.4	Monkey Rope vine present	2382
367	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	170					16	3		Good			2040
368	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	240					16	3		Good			2880
369	Remove	<i>Acacia disparrimma</i>	Hickory wattle	190					7	4		Poor	On lean to South-east	Monkey Rope vine present	1920
370	Remove	<i>Acacia disparrimma</i>	Hickory wattle	160					14	5		Good			1920
371	Remove	<i>Acacia disparrimma</i>	Hickory wattle	170					13	4		Good		Monkey Rope vine present	2040
372	Remove	<i>Allocasuarina littoralis</i>	Black she-oak	310					13	4		Good			3720
373	Remove	<i>Acacia disparrimma</i>	Hickory wattle	170					11	4		Fair			2040
374	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	250					12	3		Good		Fig growing off base	3000
375	Remove	<i>Acacia disparrimma</i>	Hickory wattle	310					15	5		Poor			3720
376	Remove		Stag	260					12	0.5		Dead			3120
377	Remove	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	360					16	7		Good			4320
378	Remove		Stag	220					12	1		Dead			2640
379	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	520					12	5		Fair		Monkey Rope vine smothering	6240
380	Retain		Stag	600					14	2	Potential small hollows	Dead		Monkey Rope vine smothering	7200
381	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	170					12	4		Good			2040
382	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	370	370				16	6		Good		Monkey Rope vine smothering	6280
383	Retain		Stag	220					14	0.5		Dead		Monkey Rope vine smothering	2640
384	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	470					20	5	Small hollows	Good			5640
385	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	340					9	3	Fauna Scratches, Small Hollows	Poor			4080
386	Remove	<i>Acacia disparrimma</i>	Hickory wattle	260	260				14	7	Termitaria	Good		Monkey Rope vine smothering	4588
387	Remove		Stag	250					14	2		Dead			3000
388	Remove	<i>Alphitonia excelsa</i>	Red ash	190					14	3		Good			2280
389	Remove	<i>Acacia disparrimma</i>	Hickory wattle	220					13	4		Good			2640
390	Remove	<i>Pinus elliptii</i>	Slash pine	330					17	6		Good			3960
391	Remove	<i>Pinus elliptii</i>	Slash pine	360					18	6	Termitaria	Good			4320
392	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	470					13	7	Fauna Scratches	Good			5640
393	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	300					16	5	Fauna Scratches	Good			3600
394	Remove	<i>Acacia disparrimma</i>	Hickory wattle	160					12	5		Good			1920
395	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	320					11	4		Good		Monkey Rope vine present	3840
396	Retain	<i>Lophostemon suaveolens</i>	Swamp box	200					13	3		Good		Monkey Rope vine present	2400
397	Remove	<i>Lophostemon suaveolens</i>	Swamp box	190					12	3	Termitaria	Good			2160
398	Remove	<i>Corymbia intermedia</i>	Pink bloodwood	230					16	4		Good			2760
399	Remove	<i>Pinus elliptii</i>	Slash pine	180					11	2		Fair			2160
400	Remove	<i>Alphitonia excelsa</i>	Red ash	200					12	3		Fair			2400
401	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	180					10	3		Good		Scaly-breasted Lorikeet breeding pair utilizing hollow	2160
402	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	500					20	7	Small Hollows, Fauna Scratches	Good			6000
403	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	600					22	8	Small Hollows, Fauna Scratches	Good			7200
404	Remove	<i>Eucalyptus racemosa</i>	Scribbly gum	570					20	9	Small Hollows, Fauna Scratches	Good			6640
405	Retain	<i>Lophostemon suaveolens</i>	Swamp box	160					15	4		Good			1920
406	Retain	<i>Acacia disparrimma</i>	Hickory wattle	200					12	3		Good			2400
407	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	180	260				12	4		Good	DL @ 0.4		3795
408	Retain	<i>Lophostemon suaveolens</i>	Swamp box	300					12	3		Fair		Monkey Rope vine smothering	3600
409	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	210					14	3		Fair		Monkey Rope vine smothering canopy	2520
410	Retain	<i>Acacia disparrimma</i>	Hickory wattle	190					14	3		Good			2280
411	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	290					14	3		Good			3360
412	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	430					16	4		Good			5160
413	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	140	160				14	3		Good	DL @ 0.1		2552
414	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	160					12	3	Fauna Scratches	Good			1920
415	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	160					10	3	Fauna Scratches	Fair			1920
416	Retain	<i>Acacia disparrimma</i>	Hickory wattle	180					10	4		Good			1920
417	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	160	150				12	4		Good	DL @ base		2632
418	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	320					16	3		Good			3840
419	Retain	<i>Melaleuca quinquenervia</i>	Broad-leaved paperbark	290					4	2		Poor			3480
420	Retain	<i>Lophostemon suaveolens</i>	Swamp box	280					12	5		Good		Monkey Rope vine present	3360

NOTE: SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL
PLAN



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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT
DL AND ASSOCIATES PTY LTD

PROJECT NAME
PROPOSED CHILDCARE CENTRE

SITE
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME
TREE RETENTION PLAN SCHEDULE 7 OF 9

DRAWING NO:
S50374_TRP_010

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053



PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

PAGE 34
Agenda - Supporting Information Item 2.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE															
55-56 Old Bay Road, Deception Bay															
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD [m]	Habitat	Health	Form [mm]	NOTES	TPZ
421	Retain	<i>Eucalyptus propinqua</i>	Grey gum	290					16	4	Fauna Scratches	Fair			3480
422	Retain	<i>Acacia disparimima</i>	Hickory wattle	190					14	4		Poor	On lean to North-east	Monkey Rope vine smothering canopy	2280
423	Retain	<i>Pinus elliotii</i>	Slash pine	250					15	4		Good		Monkey Rope vine present	3000
424	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	290					16	3		Good		Monkey Rope vine present	3480
425	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	810					22	10	Fauna Scratches, Small Hollows	Good			9720
426	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	390					16	3	Fauna Scratches	Good			4680
427	Retain		Stag	370					14	2		Dead			4440
428	Retain		Stag	340					14	2	Small Hollow	Dead			4080
429	Retain	<i>Pinus elliotii</i>	Slash pine	240					12	4		Good			2880
430	Retain	<i>Pinus elliotii</i>	Slash pine	240					16	3		Good		Monkey Rope vine smothering	2880
431	Retain		Stag	180					12	2		Dead			2160
432	Retain	<i>Eucalyptus racemosa</i>	Scribbly gum	360					17	4	Fauna Scratches	Good			4320
433	Retain	<i>Corymbia torelliana</i>	Cadaghi	340					12	6		Good		Monkey Rope vine smothering	4080
434	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	230					8	4		Good			2760
435	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	180	130				12	3		Good	DL @ base		2865
436	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	150	140				12	3		Good	DL @ 0.1		2463
437	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	170					10	3	Fauna Scratches	Good			2040
438	Retain	<i>Lophostemon suaveolans</i>	Swamp box	200					12	3		Good			2400
439	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	250	170				10	5		Good	DL @ base		3628
440	Retain	<i>Eucalyptus propinqua</i>	Grey gum	660					17	5	Fauna Scratches and Hollows	Fair			7920
441	Retain	<i>Acacia disparimima</i>	Hickory wattle	170	170				12	3		Good	DL @ 0.3	Monkey Rope vine smothering	2885
442	Retain	<i>Eucalyptus propinqua</i>	Grey gum	550					22	7	Fauna Scratches	Good			6600
443	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	670					23	9	Fauna Scratches, Small Hollows	Good			8040
444	Retain		Stag	220					14	0.5		Dead			2640
445	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	150					9	3		Good			1800
446	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	490					20	8	Fauna Scratches, Small Hollows	Good			5880
447	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	560					20	5	Fauna Scratches	Good			6720
448	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	280	250				14	6		Good	DL @ 0.4		4505
449	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	730					24	7	Fauna Scratches, Hollows	Good			8760
450	Retain	<i>Lophostemon suaveolans</i>	Swamp box	170					8	3		Good			2040
451	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	220					9	4		Good			2640
452	Retain	<i>Eucalyptus propinqua</i>	Grey gum	240					14	4	Fauna Scratches	Good			2880
453	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	180					14	3		Good			2160
454	Retain	<i>Corymbia torelliana</i>	Cadaghi	210					15	7		Good			2520
455	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	180					12	4		Good			2160
456	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	280					12	6		Good			3360
457	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	520					15	7	Small Hollows	Good			6240
458	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	280					14	5		Good			3360
459	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	220					8	5		Good			2640
460	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	600					17	6	Fauna Scratches, Small Hollows	Fair			7200
461	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	190	160				10	4		Good	DL		2681
462	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	280					8	4		Good			3360
463	Retain	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	520					12	3		Good			6240
464	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	870					18	7	Fauna Scratches	Good	4 m to east of boundary		10440
465	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	640					21	8	Fauna Scratches, Small Hollows	Good	3 m to east of boundary		7680
466	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	620					19	8	Fauna Scratches	Good	3 m to south of boundary		7440
467	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	610					23	8	Fauna Scratches, Hollows	Good	4 m to south of boundary		7320
468	Retain	<i>Eucalyptus tereticornis</i>	Forest red gum	380					15	4	Fauna Scratches	Good	1 m to south of boundary		4560
469	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	220					12	4	Fauna Scratches	Good	1 m to south of boundary		2640
470	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	240					8	5	Fauna Scratches	Good	On lean to S	1 m to south of boundary	2880
471	Remove	<i>Eucalyptus tereticornis</i>	Forest red gum	230					14	3	Fauna Scratches	Good		1 m to south of boundary	2760
472	Remove	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	280	240				14	5		Good	DL @ 0.3	1 m to south of boundary	4428
473	Remove	<i>Acacia disparimima</i>	Hickory wattle	240					10	5		Good		1 m to south of boundary	2880
474	Remove	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	180	150				8	4		Good	DL @ 0.2	1 m to south of boundary	3336
475	Remove	<i>Mealeuca quinquenervia</i>	Broad-leaved paperbark	280					8	2		Fair		1 m to south of boundary	3120
476	Retain	<i>Brachycton acerifolius</i>	Illawarra flame tree	160					4	1		Good		1m to S	1620
477	Retain	<i>Archontophoenix cunninghamiana</i>	Bangalow palm	170					8	2		Good		1.5m to S	2040
478	Retain	<i>Brachycton acerifolius</i>	Illawarra flame tree	540					10	4		Good		3m to S	6480
479	Retain	<i>Brachycton acerifolius</i>	Illawarra flame tree	230	170				8	2		Good	DL @ 0.4	2m to S	3433
480	Retain	<i>Brachycton acerifolius</i>	Illawarra flame tree	220	210				8	3		Good	DL @ 0.3	1m to S	3650

LEGEND / NOTES

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL PLAN



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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT:
DL AND ASSOCIATES PTY LTD

PROJECT NAME:
PROPOSED CHILDCARE CENTRE

SITE:
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME:
TREE RETENTION PLAN
SCHEDULE 8 OF 9

DRAWING NO:
S50374_TRP_011

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053



PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

VEGETATION MANAGEMENT SCHEDULE															
55-56 Old Bay Road, Deception Bay															
Tree No.	STATUS	SCIENTIFIC NAME	COMMON NAME	DBH 1 [mm]	DBH 2 [mm]	DBH 3 [mm]	DBH 4 [mm]	DBH 5 [mm]	HEIGHT [m]	SPREAD [m]	Habitat	Health	Form [mm]	NOTES	TPZ
481	Retain	<i>Brachychiton acerifolius</i>	Ilawarra flame tree	290					8	3		Good		1.5m to S	3480
482	Retain	<i>Brachychiton acerifolius</i>	Ilawarra flame tree	270					8	3		Good		1m to Southern Boundary	3240
483	Retain	<i>Syzygium sp.</i>	Lilly pilly	180					9	3		Good		1m to S	2160
484	Retain	<i>Leucaena leucocephala</i>	Leucaena	290					5	2		Good		4m to S	3480
485	Retain	<i>Brachychiton acerifolius</i>	Ilawarra flame tree	280					11	3		Good		1m to S	3360
486	Retain	<i>Lbidibia ferrea</i>	Leopard tree	180					8	2		Good		3m to S	2160
487	Retain	<i>Brachychiton acerifolius</i>	Ilawarra flame tree	260	180				11	3		Good		1m to S	3795
488	Retain	<i>Livistona australis</i>	Cabbage tree Palm	270					3	2		Good		4m to So	3240
489	Retain	<i>Lbidibia ferrea</i>	Leopard tree	220	140				7	2		Good		4m to S	3130
490	Retain	<i>Brachychiton acerifolius</i>	Ilawarra flame tree	200	220				8	3		Good		2m to S	3568
491	Retain	<i>Leucaena leucocephala</i>	Leucaena	180					4	3		Good		3m to s	2160
492	Retain	<i>Brachychiton acerifolius</i>	Ilawarra flame tree	330					8	3		Good		1m to S	3960
493	Retain	<i>Brachychiton acerifolius</i>	Ilawarra flame tree	320					8	2		Good		3m to S	3840
494	Retain	<i>Leucaena leucocephala</i>	Leucaena	180	170				5	2		Good	DL @ 0.2	5 m to S	2972
495	Retain	<i>Anchortoprocne cunninghamiana</i>	Bangalow palm	210					10	3		Good		8 m to S	2520
496	Retain	<i>Acacia disperspinna</i>	Hickory wattle	550	300				10	7		Good	DL @ 0.2	1m to S	7518
497	Retain	<i>Gorymbia intermedia</i>	Pink bloodwood	440					18	7		Good		4m to S	5280
498	Retain	<i>Pinus elliptii</i>	Slash pine	370					17	4		Good		1m to S	4440
499	Retain	<i>Pinus elliptii</i>	Slash pine	380					17	5		Good		1m to S	4560
500	Retain	<i>Pinus elliptii</i>	Slash pine	380					17	4		Good		1m to S	4560
501	Retain	<i>Pinus elliptii</i>	Slash pine	540					17	5		Good		1m to S	6480
502	Retain	<i>Harpullia pendula</i>	Tulipwood	180					3	2		Good		3m to W	2160

To be Amended

LEGEND / NOTES

NOTE:
SURVEYMARK - SURVEY PLAN
WHITEROOM ARCHITECTS - ARCHITECTURAL
PLAN



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ISSUE	REASON	DATE
A	DRAFT	26/09/2018
B	FINAL	27/09/2018
C	AMENDED FINAL	28/09/2018

PROJECT NO:
S50374

CLIENT
DL AND ASSOCIATES PTY LTD

PROJECT NAME
PROPOSED CHILDCARE
CENTRE

SITE
54-66 OLD BAY ROAD
DECEPTION BAY
LOT 323 ON SP152335

DRAWING NAME
TREE RETENTION PLAN
SCHEDULE 9 OF 9

DRAWING NO:
S50374_TRP_012

SCALE	SHEET SIZE	DRAWN	APPROVED
N.T.S.	A3	SAJ	RS

22 Wolverhampton Street
Stafford Old 4053



PO Box 602
Lutwyche QLD 4053
ph 3356 0550
m 0481 367 555
www.s5consulting.com.au
ABN 82 440 704 793

ENVIRONMENTAL

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

54-66 OLD BAY RD, DECEPTION BAY (Child Care Centre)

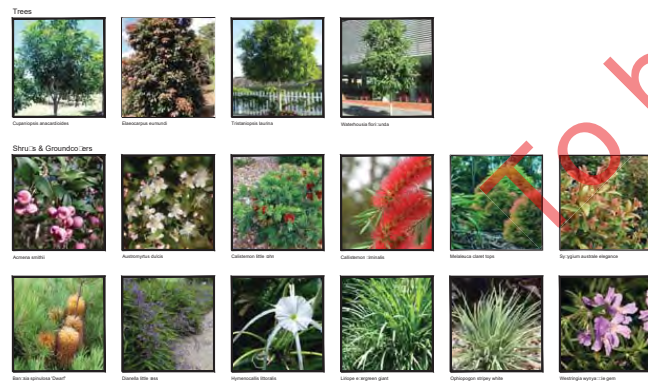
LANDSCAPE DOCUMENTATION DRAWING REGISTER

DRAWING TITLE	DRAWING No.
Cover Sheet	18024-CS-01
Landscape Intent Plan	18024-LI-01
Landscape Character Images	18024-LI-02



Aerial Location Plan NTS

PLANTING PALETTE



GENERAL NOTES:

- SET OUT WORKS. ALL WORK TO BE SET OUT ON SITE FOR APPROVAL BY LANDSCAPE SUPERINTENDENT PRIOR TO CONSTRUCTION. NO WORK TO COMMENCE ON SITE WITHOUT PRIOR APPROVAL FROM LANDSCAPE SUPERINTENDENT.
- ALL SERVICE LOCATIONS SHOWN ARE INDICATIVE ONLY. REFER TO ENGINEERS DRAWINGS FOR MORE DETAIL. CONFIRM SERVICE LOCATIONS ON SITE PRIOR TO ANY CONSTRUCTION.
- REFER TO ARCHITECTS DRAWINGS FOR FINISHED LEVELS WITHIN PROPERTY BOUNDARY.
- FINAL PLANTING LOCATION AND NUMBERS SUBJECT TO FINAL SERVICE LOCATIONS. REFER TO PLANTING PLAN FOR PLANTING DETAILS.
- THE LANDSCAPE CONTRACTOR SHALL CONFIRM THE LOCATION OF UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF WORKS.
- ALL WEED GROWTH SHALL BE ERADICATED PRIOR TO COMMENCEMENT.
- ALL EXISTING REGULATORY SIGNAGE TO BE RETAINED, IN EXISTING LOCATIONS.
- ALL SERVICE PITS ARE TO BE CAST IRON OR AS APPROVED BY LANDSCAPE ARCHITECT.

SURFACE DRAINAGE NOTES:

- WHEN SETTING OUT LINES AND LEVELS OF GARDENS, ENSURE THE ACCURATE FORMATION OF GRADES AND CROSS FALLS LEADING TO SURFACE CATCH DRAINS AND FIELD INLETS: SO ENABLING THE AREAS TO DRY QUICKLY AND SURPLUS WATER TO REACH THE DRAINAGE SYSTEM IN SUCH A WAY THAT POTENTIAL EROSION CHANNELS AND/OR WET SPOTS ARE AVOIDED.

NOTES ON PLANTING AND PLANT SCHEDULE:

- PLANT SCHEDULE IS PROVIDED FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL REVIEW PLANT SCHEDULE TO ENSURE THE DRAWINGS AND SCHEDULE CONCUR. WHERE DISCREPANCIES EXIST, NUMBERS INDICATED ON DRAWINGS SHALL TAKE PRECEDENCE.
- ALL TREES ARE TO BE NAT-SPEC COMPLIANT AND CERTIFICATES TO BE SUPPLIED BY ARBORIST NURSERY PRIOR TO INSTALLATION ON SITE. THE LANDSCAPE SUPERINTENDENT RESERVES THE RIGHT TO DEFECT ANY PLANT STOCK THAT IS NOT DEEMED TO MEET REQUIREMENTS, TO BE REPLACED AT CONTRACTOR'S COST.
- ALL CONTAINER SIZES SHOWN ARE MINIMUM ACCEPTABLE SIZES.
- SPECIES AND SIZES SUBSTITUTIONS MAY BE ACCEPTED, TO BE CONFIRMED WITH LANDSCAPE SUPERINTENDENT IN WRITING PRIOR TO ORDERING INSTALLATION.
- ALL GRASS SPECIES ARE TO BE PLANTED WITH CROWN OF PLANT CLEAR OF MULCH.
- REFER TO NOTES FOR ALL SOIL AND MULCH REQUIREMENTS.

GARDENS ON GROUND:

- 100MM CULTIVATED SUB-GRADE
- SUBSOIL DRAINAGE AS REQUIRED FOR STORMWATER
- 300MM LAYER OF IMPORTED TOPSOIL
- 100MM LAYER OF HOOP PINE MULCH.

MULCH:

- ORGANIC MULCH - 100MM DEEP HOOP PINE FINES

IRRIGATION:

- CONTRACTOR SHALL DESIGN, SUPPLY, INSTALL & COMMISSION OF IRRIGATION SYSTEM TO ALL PLANTING AREAS ON NATURAL GROUND, PODIUM SLAB AND TO RAISED ORNAMENTAL POTS. ALL IRRIGATION TO BE DRIP IRRIGATED.

PLANT MATERIAL QUALITY SPECIFICATION- NURSERY STOCK:

- ALL PLANTS SHALL BE TRUE TO SCHEDULED NOMENCLATURE, WELL FORMED, HARDENED OFF AND DISEASE FREE NURSERY STOCK. THEY SHALL BE CONTAINER GROWN IN POTTING SOIL WITH ROOT SYSTEM FIRMLY ESTABLISHED BUT WITH NO LARGE ROOTS GROWING OUT OF THE CONTAINER. NO PLANT SHALL BE POT BOUND.
- EXCAVATE OR FILL AREAS AS NECESSARY ALLOWING FOR DEPTHS OF IMPORTED TOPSOIL AND MULCH. REMOVE AND DESTROY ANY GRASS OR WEED GROWTH PRESENT. IF NOxious WEEDS ARE FOUND, SUCH AS NUT GRASS, IN THE AREA TO BE CULTIVATED AND PREPARED, INFORM THE SUPERINTENDENT BEFORE PROCEEDING.
- DE-COMPACT EXISTING GROUND TO A MINIMUM OF 100MM. IN AREAS OF CUT OR WHERE COMPACTION OF THE SUB-GRADE HAS OCCURRED DEEP RIP SUB-GRADE TO MINIMUM DEPTH OF 200MM.
- CARRY OUT ANY SUB-SURFACE DRAINAGE WORKS AS SPECIFIED AND/OR SHOWN ON DRAWINGS.
- SPREAD SOIL AS SPECIFIED TO DEPTHS AS SHOWN IN DETAILS ENSURING MINIMUM THICKNESS SHOWN ON DRAWINGS AFTER SETTLEMENT.
- AS THE GROUND IS WORKED, ALL GARDEN AREAS ARE TO BE RAISED OR CROWNED IN THE CENTER TO ASSIST IN SOIL DRAINAGE UNLESS IN A DESIGNATED OVERLAND FLOW PATH.
- FINISHED LEVEL OF SOIL AT PATHS AND AT PLANTER BOUNDARIES TO ALLOW FOR MINIMAL SETTLEMENT AND FOR THE PLACEMENT OF MULCH AS SPECIFIED
- AN ESTABLISHMENT PERIOD OF 12 WEEKS SHALL APPLY FOR ALL LANDSCAPE WORKS FROM THE DATE OF COMPLETION. ESTABLISHMENT SHALL INCLUDE WEEDING, WATERING, PRUNING AND RE-MULCHING. PLANTS NOT SHOWING SIGNS OF ACTIVE GROWTH AT THE END OF THE ESTABLISHMENT PERIOD SHALL BE REPLACED BY THE CONTRACTOR

18024-L-CS-01
ISSUE: H: APPROVAL
DATE: 13 SEP, 2018

FOR: DL AND ASSOCIATES PTY LTD

BY:



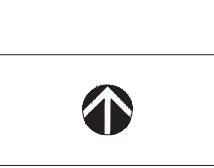
David Scassola AILA
REGISTERED LANDSCAPE ARCHITECT
Membership #: 001746
PH: 0407 589 785
EMAIL: david@thelandscapegroup.com.au
A&N: 83166834224

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



54-66 OLD BAY RD,
DECEPTION BAY
(Child Care Centre)
FOR
DL AND ASSOCIATES
PTY LTD

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*REFER TO ARCHITECTURAL & ENGINEERING DRAWINGS FOR LOCATIONS OF SERVICES



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DATA SOURCES

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H	For Approval	13.09.2018	DS
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LANDSCAPE INTENT PLAN



Drawing No: 18024-LI-01
Issue: H

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PLAYSCAPE ELEMENTS



A GRADE SANDSTONE BLOCKS



SANDPIT & ROCKS



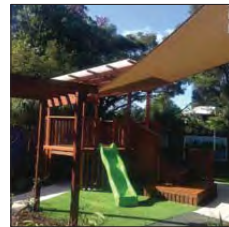
WET SANDPIT & ROCKS



LOG SEATS



SAWN TIMBER STEPPERS



TIMBER FORT



TIMBER TEE PEE



CUBBY HOUSE

54-66 OLD BAY RD,
DECEPTION BAY
(Child Care Centre)
FOR
DL AND ASSOCIATES
PTY LTD

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LANDSCAPE
CHARACTER IMAGES



Drawing No 18024-LI-02 Issue H

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



NATURAL HAZARD BUSHFIRE ASSESSMENT 54-66 Old Bay Road, Deception Bay



Client:	DL and Associates Pty Ltd
Ref:	S50374ER002
Date:	20 th August 2018

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



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Figures Post Development Plan (Client Supplied Drawing No: CP1003, 28/08/2017
Post Development Lots 1-3 (Client Supplied Drawing No: CP1004, 28/08/2017
Post Development Lots 4-6 (Client Supplied Drawing No: CP1005, 28/08/2017
Figure 5 Bushfire Hazard Rating for Site and Surrounding Areas

Appendix A MBRC Bushfire Hazard Overlay

Appendix B Bushfire Hazard Map (State Planning Policy, 2016)

Appendix C Slope Calculations

Appendix D Queensland Fire and Emergency Services' Bushfire Survival Plan

Appendix E Landscaping for Bushfire

Appendix F Unity Water Utilities Map

To be Amended

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

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Quality Control

Prepared for: DL and Associates Pty Ltd
Prepared by: S5 Consulting Pty Ltd (ACN 600 187 844)
PO Box 602
Lutwyche, QLD, 4030
T 07 3356 0550
www.s5consulting.com.au
Date: 20 August 2018

Version	Description	Date	Author	Verifier	Approver
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S5 Consulting Pty Ltd trading as S5 Environmental has developed this Bushfire Hazard and Bushfire Attack Level Assessment, taking into consideration the Australian Standards (AS3959-2009) - Construction of building in bushfire-prone areas, the State Planning Policy and relevant local authority policies and guidelines. However, there can be no guarantee that following the recommendations made in this assessment can guarantee safety of property and human life.

Fire is an element of nature, and as such fire events (small or large) can have disastrous outcomes even with the best planning in place. The authors of this report and S5 Consulting Pty Ltd accept no responsibility for any harm to property or human life caused by fire or any other cause to persons utilising property or structures.

S50374ER002REVB

54-66 Old Bay Rd, Deception Bay
Natural Hazard Bushfire Assessment

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

v

Abbreviations

AS	Australian Standards
BAL	Bushfire Attack Level
BHU	Bushfire Hazard Sub-Unit
DES	Department of Environment and Science (Qld)
DNRME	Department of Natural Resources, Mines and Energy (Qld)
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
Ha	Hectares
MBRC	Moreton Bay Regional Council
PSP	Planning Scheme Policy
QFES	Queensland Fire and Emergency Services
SPA	<i>Sustainable Planning Act 2009</i>
SPP	<i>State Planning Policy</i>
SPR	<i>Sustainable Planning Regulation 2009</i>
VMA	<i>Vegetation Management Act 1999</i>

To be Amended

1.0 INTRODUCTION

S5 Environmental was commissioned by DL and Associates Pty Ltd to conduct a Bushfire Hazard Assessment of the property located at 54-66 Old Bay Road, Deception Bay. The client is proposing a Childcare Centre be built on the property.

The property is further described as Lot 32 on SP152335 and is 1.638 hectares (ha) in area. The property will herein be referred to as the 'site'. The site is located within the local government area of Moreton Bay Regional Council (MBRC). This Bushfire Hazard Assessment has been compiled as environmental supporting documentation to support a Development Application to be submitted for the site. S5 Environmental understands that the site is mapped under the MBRC's Planning Scheme to contain areas within the Bushfire Hazard Overlay Map.

1.1 Site Description

The subject site is located at 54-66 Old Bay Road in the suburb of Deception Bay, which is located approximately 12.5 kilometres (km) to the south-east of Caboolture Central Business District. Figure 1, below, locates the site within Deception Bay.



Figure 1 Site Location

Source: Google Maps 2018

The site is zoned as Suburban Neighbourhood Precinct within the General Residential Zone under the MBRC's Planning Scheme. The purpose of the General Residential Zone is "to provide for the establishment of an appropriate mix of dwelling types to accommodate a range of household sizes, age groups, socio-economic groups, cultures and ability levels within the community. Ensuring that these residential activities are also supported by a range of community uses and small-scale services and facilities that cater for local residents".

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

The suburb of Deception Bay is characterised by general and rural residential land uses with areas of recreation and open space.

A review of recent aerial photography of the subject site, shown below in Figure 2, identifies that the site contains an existing residential dwelling, ancillary sheds and associated driveways in the western and central portions of the site. The balance of the site contains native vegetation. The site is bound and accessed by Old Bay Road to the west with Thompson Street adjacent to the northern boundary. To the east and south of the site are a drainage channel and sports ground (Deception Bay Dragons Football Club). Similarly vegetated rural residential lots exist to the west and north of the site.

The site was characterised by a landscaped area with an overgrown lawn and associated weed species around the existing structures. Retained eucalypts were present around the perimeter of this area. In the northwest corner of the site was an area of dense retained vegetation, including Scribbly Gum (*Eucalyptus racemosa*), Grey Gum (*Eucalyptus propinqua*), Forest Red Gum (*Eucalyptus tereticornis*), Pink Bloodwood (*Corymbia intermedia*) and some Slash Pine (*Pinus elliotii*). A similar vegetation community was present in the eastern portion of the site, although the vegetation wasn't as dense and an increased number of weed species were present.



Figure 2 Site Aerial

Source: Google Earth Pro. 2017

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

1.2 Proposed Development

S5 Environmental understand that the client is proposing a Childcare Centre (see Figure 3 below) and that the development includes the clearing of most vegetation on site with some vegetation retained in the eastern portion of the site. This Bushfire Hazard Assessment has focused on bush fire risks associated with the retained vegetation in the eastern portion of the site and on surrounding properties.

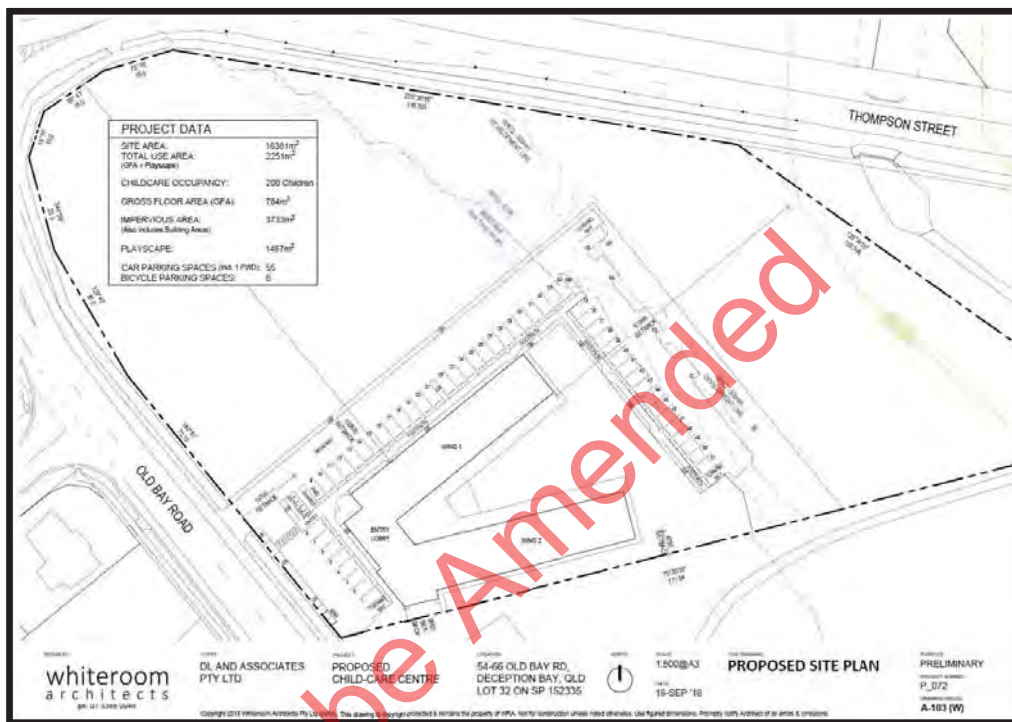


Figure 3: Proposed Development

Source: Material Change of Use for Proposed Childcare Centre, Whiteroom Architects Pty Ltd, 2018

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

2.0 METHODOLOGY

The intent of this report is to provide an informed assessment of the potential bushfire hazard within the site and surrounding areas in relation to the proposal. Accordingly, S5 Environmental's approach involved both quantitative and qualitative assessments of the site. The quantitative assessments included a review of the vegetation communities, slope and aspect. The qualitative assessments were based upon the known bushfire behaviour of the subject land. S5 Environmental's Ecologist's conducted a review of the site and surroundings lands, vegetation communities, slope angles and aspects on Wednesday 1st August 2018.

A measured walkover of the entire site was achieved along with an inspection of publicly accessible areas on adjacent properties, with a particular focus on areas mapped within a Bushfire Hazard Area. Vegetation communities were inspected in order to assess their structure, dominance, associations and connectivity to adjoining bushland. The vegetation community structure, fuel loads and potential hazards were also assessed and documented.

S5 Environmental utilised the elevations and contours provided by the Queensland Government through the QSpatial website in order to complete the quantitative assessment.

Aerial photography was utilised to discern connectivity of the site to bushland areas in the locality. The MBRC's Bushfire Hazard Overlay Map and State Planning Policy (SPP), 2016 Natural Hazards Map were reviewed prior to the field assessment in order to inform potential bushfire hazard areas.

The site-specific Bushfire Hazard Assessment (including the Bushfire Attack Level (BAL) Assessment) have been completed in accordance with the following Policies and Standards:

- MBRC *Bushfire Planning Scheme Policy* (PSP);
- Superseded *State Planning Policy Guidelines 1/03 Mitigating the Adverse Impact of Flood, Bushfire and Landslide* (SPP 1/03);
- Australian Standard (AS 3959 – 1999) *Building in Bushfire Prone Areas*; and
- Australian Standard (AS 1940 - 2004) *The storage and handling of flammable combustible liquids*.

It should be noted that the *MBRC Bushfire Planning Scheme Policy* does not specify a methodology for bushfire risk identification. Therefore, S5 Environmental have used the methodology detailed in the superseded SPP 1/03, which is utilised as the foundation document for bushfire assessment in many Local Council Planning Schemes.

Accordingly, S5 Environmental's approach involved both quantitative and qualitative assessments of the site. The quantitative assessments included a review of the vegetation communities, slope and aspect. The qualitative assessments were based upon the known bushfire behaviour of the subject land.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

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3.0 BUSHFIRE HAZARD OVERLAYS

The *MBRC Planning Scheme* mapping has development constraint overlays including a Bushfire Hazard Overlay. This map and the State Planning Policy 2016 (SPP) Bushfire Hazard Area Maps (attached in Appendix A and B) were consulted to determine the preliminary bushfire hazard ratings of the site.

In accordance with the MBRC Bushfire Hazard Overlay, vegetation through the middle of the site and extending off-site to the north, across Thompson Street is mapped as Medium Potential Bushfire Intensity with the associated Potential Impact Buffer extending from this area across the remainder of the site. An area mapped as High Potential Bushfire Intensity is present on land to the north of the site with the associated Potential Impact Buffer also extending onto the site (refer to Bushfire Hazard Overlay in Appendix A). The SPP Bushfire Hazard Areas Map identifies a similar area of High Potential Bushfire Intensity to the north of the site with an associated buffer that slightly crosses the northern site boundary, but does not identify the Medium Potential Bushfire Intensity vegetation mapped across the site by the MBRC Planning Scheme (refer to SPP Bushfire Map in Appendix B).

Given this review of the available mapping, further investigation of the site-specific bushfire hazard characteristics has been undertaken to determine the actual status of the site. This data is presented below in Section 4.0 of this report.

To be Amended

4.0 SITE-SPECIFIC BUSHFIRE HAZARD ASSESSMENT

The following provides a detailed, site specific, technical assessment of the site to determine the actual level of potential bushfire risk. It is understood that this assessment will be used as supporting documentation for the Development Application. Accordingly, this site-specific assessment has been prepared in general accordance with the MBRC's Bushfire PSP.

The site-specific bushfire hazard assessment involves a quantitative assessment utilising a cumulative scoring system accounting for vegetation communities, aspect, and slope. The following sections are in accordance with this approach.

4.1 Current Conditions

The site was characterised by a landscaped area with an overgrown lawn and associated weed species around the existing structures. Retained eucalypts were present around the perimeter of this area. In the northwest corner of the site was an area of dense retained vegetation, including Scribbly Gum (*Eucalyptus racemosa*), Grey Gum (*Eucalyptus propinqua*), Forest Red Gum (*Eucalyptus tereticornis*), Pink Bloodwood (*Corymbia intermedia*) and some Slash Pine (*Pinus elliotii*). A similar vegetation community was present in the eastern portion of the site, although the vegetation wasn't as dense and an increased number of weed species were present.

Plates 1 – 4, below, show the subject site and vegetation present.



Plate 1. View the landscaped area around the house.



Plate 2. Weed infested edge of the house clearing.



Plate 3. View of Scribbly Gum open forest present in the north-western and eastern portions of the site.



Plate 4. View of Scribbly Gum open forest with Paperbark and Acacia understorey.

4.2 Site Sub-units

An assessment of the vegetation community, slopes and aspects displayed across the site and surrounds was undertaken with the goal of breaking the site down into areas referred to as 'bushfire hazard sub-units' (BHUs). Each sub-unit is essentially an area of land with a particular combination of vegetation, slope and aspect characteristics.

When establishing the BHUs, consideration is given to the likely makeup of the proposed development. In this instance, the proposed development involves the clearing of all vegetation on site and the bushfire assessment has focused on BHUs on surrounding properties. Four (4) BHUs have been determined appropriate for the subject site and surrounds based upon variation in vegetation communities, slope and aspect. BHU's have been described below and are represented in Figure 4, below.



Figure 4 Bushfire Hazard Units
(Source: Cadastre © DNRME, 2018; Aerial Imagery Google Earth Pro. 2018; Contours © DNRM, 2016)

4.3 Assessment of Vegetation Communities

Hazard scores for the vegetation communities associated with each BHU have been taken from the superseded SPP 1/03. Below is a description of vegetation communities within each BHU.

BHU 1 – Retained Open forest

Bushfire Hazard Unit 1 comprises the retained Scribbly Gum open forest present in the eastern portion of the site. Other canopy species present included Forest Red Gum (*Eucalyptus tereticornis*), Pink Bloodwood (*Corymbia intermedia*) and Grey Gum (*Eucalyptus propinqua*). The sub-canopy featured some smaller species including Hickory Wattle (*Acacia disparrima*), Swamp Box (*Lophostemon suaveolens*) and Broad-leaved Paperbark (*Melaleuca quinquenervia*). The shrub layer, whilst sparse, included species such as Tuckeroo (*Cupaniopsis anacardioides*), Soap Tree (*Alphitonia excelsa*),

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Cheese Tree (*Glochidion Ferdinandii*) and Black She-oak (*Allocasuarina littoralis*). Groundcovers were absent due to thick leaf litter and low light, apart from scattered Blue Flax Lilly (*Dianella caerulea*), Graceful Grass (*Ottlochloa gracilis*) and Blady Grass (*Imperata cylindrica*). Exotic species including Slash Pine (*Pinus elliottii*), Cadaghi (*Corymbia torelliana*) and Singapore Daisy (*Sphagneticola trilobata*) were also scattered throughout the community, refer to Plates 3 and 4, above.

BHU 2 – Landscaped Large Residential Properties

Bushfire Hazard Unit 2 is the landscaped residential properties to the north of the subject site. This BHU is characterised by scattered retained Forest Red Gum (*Eucalyptus tereticornis*) over a maintained lawn. The sub-canopy consisted of smaller trees (up to 12 m in height), including Brush Box (*Lophostemon confertus*), Hickory Wattle (*Acacia disparrima*), Pink Bloodwood (*Corymbia intermedia*) with scattered Slash Pine (*Pinus elliottii*) and Broad-leaved Paperbark (*Melaleuca quinquenervia*). The shrub layer was sparse to absent with juvenile Broad-leaved Paperbark and Red Ash (*Alphitonia excelsa*). Ground cover consisted of mown or slashed areas of turf surrounding existing buildings with fallen leaf litter, pine cones and small wood debris. Along the southern boundary of this BHU a short line of paperbarks was also present. Refer to Plates 5 to 8, below.



Plate 5. Vegetation within BHU 2, showing landscaped and grassed understory and juvenile Broad-leaved Paperbark and occasional Forest Red Gum.



Plate 6. Vegetation within BHU 2, showing mown understory and sub-canopy trees.

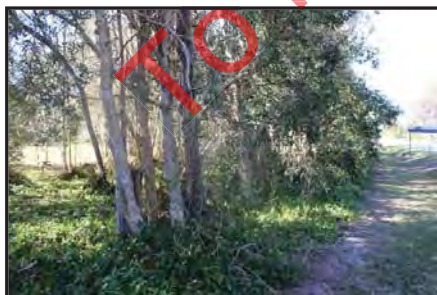


Plate 7. Vegetation within BHU 2, showing Broad-leaved Paperbarks adjacent to Thompson Road.



Plate 8. View looking east along Thompson Road.

BHU 3 – Waterway and Grazed Grasslands

Bushfire Hazard Unit 3 is similar to BHU 2, although it also includes a formed waterway/drainage channel and vegetation is more sparsely distributed. The waterway corridor contains overgrown

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grasses with a mown strip along the top of the bank. Adjacent to this mown strip is a line of mature trees consisting primarily of Forest Red Gum with some Hickory Wattle and Pink Bloodwood. Vegetated areas consist of scattered Forest Red Gum over a grazed understorey. Occasional Brush Box, Hickory Wattle, Pink Bloodwood and Broad-leaved Paperbark are also present. Refer to Plates 9 and 10, below.



Plate 9. View of the waterway within BHU 3.



Plate 10. View of the scattered vegetation over a grazed understorey in BHU 3.

BHU 4 – Remnant Regional Ecosystem

To the north of BHU 2 is an area of remnant vegetation that is a combination of RE 12.3.6 (Broad-leaved Paperbark open forest) and RE 12.5.3 (Scribbly Gum woodland). This vegetation is predominantly greater than 100 m from the site, but the eastern edge extends southwards across part of the adjacent property on the north side of Thompson Street and comes is approximately 87 m from the site. This BHU is identified on the MBRC Bushfire Hazard Overlay as High Potential Bushfire Intensity (refer to Figure 4, above, and Appendix A).

Table 1, below, identifies the Vegetation Community description that most closely describes site conditions and the associated hazard score rating for the vegetation communities present within the BHUs identified within and adjacent to the site.

Table 1 Hazard Score and Associated Fire Behaviour for the Vegetation Community on the Site

Sub-unit	Vegetation Community	Fire Behaviour	Hazard Score
BHU 1	Grassy eucalypt and acacia forest, exotic pine plantations, cypress pine plantations, wallum heath.	Fire intensity may be severe with flame lengths to 20 m, but less attack from embers.	6 -2 = 4*
BHU 2	Grazed grasslands, slashed grass.	Grazing reduces intensity and rate of spread of fire, duration <2 minutes.	2
BHU 3	Grazed grasslands, slashed grass.	Grazing reduces intensity and rate of spread of fire, duration <2 minutes.	2

Sub-unit	Vegetation Community	Fire Behaviour	Hazard Score
BHU 4	Paperbark heath and swamps, eucalypt forest with dry-shrub ladder fuels.	Fire intensity depends on fuel accumulation, but can be severe, with flame lengths to 20 m, spot fires frequent across firebreaks, radiant heat and direct flame for 15 minutes.	8
<p>Notes:</p> <p>* Table A3.1 of SPP 1/03 notes "<i>Narrow strips of vegetation may be flammable; however, bushfires will not generally reach their full intensity where bushfire fronts are less than 100 metres wide. For this reason the following examples may be viewed as having the next lower hazard score (i.e. paperbark heath would have a score of 6 not 8, cypress forest 5 not 6):</i></p> <ul style="list-style-type: none"> • <i>Areas with a linear shape (e.g. roadside vegetation beside a cleared paddock); and</i> • <i>Units of vegetation less than 50 hectares in area and more than one kilometre from the nearest extensive vegetation."</i> <p>Furthermore, bushfire risk in this area is to be managed appropriately, which will also reduce the fire risk associated with this vegetation.</p> <p>On this basis the vegetation score for BHU 1 has been reduced from 6 to 4.</p>			

4.4 Assessment of Slope

The severity of a slope and location of the slope in relation to the subject site is relevant as fire travels faster upslope than downslope and steeper slopes can potentially increase the speed the fire travels. One metre (m) contours available from the QSpatial online portal were used to calculate the slope of the land under each BHU. The site and surrounding area is essentially flat with a slight fall from the southern corner of the site, at 5 m Australian Height Datum (mAHD) to the north where the elevation is approximately 3 mAHD along Thompson Street and remains at or about 3 mAHD across all 4 BHUs. There is a slight rise further to the east of the site, which affects BHU 3 with the eastern edge of the unit at approximately 4 mAHD, falling to 3 mAHD near the middle of the unit. Table 2 below indicates the hazard score for the slope measured for the site. Refer to Appendix C for Slope Calculation of each BHU.

Table 2 Hazard Score for Slope

Sub-unit	Slope	Hazard Score
BHU 1	Plain (0% to 5%)	1
BHU 2	Plain (0% to 5%)	1
BHU 3	Plain (0% to 5%)	1
BHU 4	Plain (0% to 5%)	1

4.5 Assessment of Aspect

As noted above, there is a slight fall from south to north across the site, with little or no slope beneath the BHUs. Table 3 provides the hazard scores for the aspect occurring on the site.

Table 3 Hazard Scores for Aspect

Sub-unit	Aspect	Hazard Score
BHU 1	East to South and all land under 5% slope	0
BHU 2	East to South and all land under 5% slope	0
BHU 3	East to South and all land under 5% slope	0
BHU 4	East to South and all land under 5% slope	0

4.6 Field Verification

As stated, S5 Environmental's Ecologist's conducted a site inspection of the site and surrounding lands, vegetation communities, slope angles and aspects on Wednesday 1st of August 2018 and verified the on ground site conditions.

4.7 Severity of Bushfire Hazard

In accordance with SPP 1/03 the scores for the individual factors determined for vegetation community, slope and aspect have been summed to provide a total for each sub-unit as follows:

Total hazard score = vegetation community hazard score + slope hazard score + aspect hazard score.

The total fire hazard scores calculated for the site as per the SPP1/03 Guideline are shown below in Table 4 below and also in Figure 4 Bushfire Hazard Rating for Site and Surrounding Areas attached in the Figures section of this report.

The scores for the individual factors determined for vegetation communities, slope and aspect have been summed to provide a total for each sub-unit as follows:

Table 4 Table 4 Sub-unit Hazard Score

Sub-unit	Vegetation Score	Slope Score	Aspect Score	Total Hazard Score	Hazard Rating
BHU 1	4	1	0	5	LOW
BHU 2	2	1	0	3	LOW
BHU 3	2	1	0	3	LOW
BHU 4	8	1	0	9	MEDIUM

In accordance with the SPP 1/03, a total fire hazard score of 13 or greater is considered to be 'High' bushfire hazard areas, a total fire hazard score of 6 to 12.5 is considered 'Medium' Hazard Areas and

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a hazard score of 1 to 5.5 is considered 'Low' Hazard. Therefore, the identified vegetation communities to the north of the site within BHU 1 and BHU 3 are considered a Low Bushfire Hazard whilst the vegetation within BHU 2 and BHU 4 are considered Medium Bushfire Hazard Areas.

4.8 Qualitative Review

S5 Environmental investigated any identifiable bushfire evidence during the site verification and no recent evidence of fire within the site was recorded. No formal information regarding past bushfire activity was available at the time of writing this report.

4.9 Safety Buffers

The final step for a site-specific Bushfire assessment in accordance with the SPP 1/03 is the inclusion of a safety buffer for 'Medium' rated bushfire hazard areas. It states that land within 50 m of an area identified as having a Medium bushfire severity classification should be included in the 'Medium' bushfire hazard area. While BHU 4 has been assessed as Medium Bushfire Hazard, this area is 87 m or more from the site boundary and the 50 m Medium Bushfire Hazard Buffer is 37 m or more from the site boundary and does not affect the proposed development. Refer to Figure 5 Medium Bushfire Hazard Ratings within the Figures Section of this report.

4.10 Overall Hazard Rating of the Site

S5 Environmental's site specific Bushfire Hazard Rating for the site is considered LOW Bushfire Hazard. Low Bushfire Hazards are also present on surrounding properties with an area of vegetation to the north of the site, 87 m or more from the site boundary, identified as presenting a Medium Bushfire Hazard. Figure 5 Medium Bushfire Hazard Ratings, attached in the Figures Section, details the hazard rating of the site.

While the site and immediately adjacent properties scored a LOW Bushfire Hazard rating, this is partly based on the appropriate management of retained vegetation on site to prevent or minimise the bushfire risk associated with this vegetation. Consequently, to be conservative, given the proposed use for Child Care, a Bushfire Management Plan has been prepared for the site (see Section 5, below).

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5.0 BUSHFIRE MANAGEMENT PLAN

Due to the need to manage the retained vegetation within the eastern portion of the site in order to minimise the on-site bushfire risk, this Bushfire Management Plan has been prepared to provide a variety of bushfire mitigation measures based on the risks identified in the Bushfire Hazard Assessment in Section 4 of this report. The mitigation measures emphasise resilience to bushfire. Mitigation measures outlined below include the following strategies:

- Assessment of site characteristics (future);
- Bushfire education and survival plans (Prepare-Act-Survive);
- Vegetation Management (including clearing buffers and landscaping for bushfire);
- Road access; and
- Water supply and firefighting infrastructure.

The following Bushfire Management Plan is in accordance with Section 5 of the Bushfire PSP.

5.1 Assessment of Site Characteristics (Future)

Estimated Usage

The "Proposed Site Plan" (refer to the Figures Section of this report) indicates an estimated childcare occupancy of 200 children. The proposed hours of operation of the childcare facility may vary based on community needs, but are anticipated to be between 6.00 am and 7.00 pm, Monday to Friday, 52 weeks a year. The likely hours of operation of the outside play area are between 7 am and 6 pm weekdays, 52 weeks a year.

Traffic Movement Patterns

The current proposal allows for a total of 55 car parks and 8 bicycle parking spaces. Peak times for arrival of families and staff are anticipated to be between 7.00 am and 9.00 am each weekday morning and peak times for departure will be between 3.30 pm and 6.30 pm each weekday afternoon. However, during these times there will be a procession of arrivals and departures and they will not all occur concurrently. Entry and exit from the childcare centre will be via Old Bay Road.

5.2 Emergency Response Procedures

It is understood that the operator of the childcare centre will develop Emergency Response and Management Procedures for the site. These procedures shall be adapted to the site-specific requirements of the site and implemented from commencement of operations.

Emergency Response Procedures to be implemented are to include but are not limited to:

- Emergency Evacuation Plans;
- Emergency Flip Chart;
- Risk Assessment to plan for Bushfire;
- Bushfire Procedure;

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- Risk Management Procedure; and
- Fire and Evacuation Plan.

Queensland Fire and Emergency Services

The Deception Bay Fire Station is located approximately 1.4 km by road from the site. The contact details for the Deception Bay Fire Station are as follows:

Address: 26 Endeavour Street, Deception Bay QLD 4508
Phone: (07) 3204 2513

Please note that in fire emergencies the triple zero (000) emergency telephone number should be used.

5.3 Vegetation Management

The retained vegetation in the eastern portion of the site must be managed to ensure fuel loads do not built up over time. Vegetation within this area will be managed to reduce fire risk. It is recommended that the presence of weeds is minimised along with the build-up of woody debris and that the shrub layer is thinned to minimise connectivity between groundcovers and canopy trees.

Vegetation management should occur prior to and throughout summer months. Limiting fuel accumulation on the site and ensuring landscape design is in accordance with **Landscaping for Bushfire** (CFA, 2011) is important to ensure bushfire hazards on the site are reduced (refer to Appendix E of this report).

Landscaping

Site landscaping plays an important role in increasing a buildings' ability to endure bushfire attack. Landscaping for bushfire reduces the risk of ember attack which is the most common cause of house loss during bushfire.

The Country Fire Authority (CFA) have produced an online Plant Selection Key which facilitates landscape designers and property owners select firewise garden plants. THE CFA have also produced the publication 'Landscaping for Bushfire: Garden Design and Plant Selection' (CFA, 2011). The publication outlines planning, designing, choosing suitable plants, maintaining the garden and provides a plant selection key (refer to Appendix E).

5.4 Road Design and Layout

As described in Section 5.1 above the proposed childcare centre will have access from Old Bay Road. The Queensland Fire and Emergency Services (2014) states a minimum roadway clearance of 3.5 m wide by 4.8 m high is required for Emergency Services Vehicle Access. S5 Environmental recommends that driveways for the Childcare Centre are designed to meet this requirement.

5.5 Water Supply and Firefighting Infrastructure

The site is connected to reticulated water supply (refer to **Unity Water Utilities Map** in Appendix F of this report) and it is understood that the proposed development will be connected to the reticulated

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54-66 Old Bay Rd, Deception Bay
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water supply. In July 2013, a set of consolidation Design and Construction Standards came into effect in South East Queensland (SEQ). These standards are the SEQ Water Supply & Sewage Design & Construction Code, also known as the 'SEQ Code'. It is anticipated that the reticulated water network for the proposed development complies with the provisions outlined in the SEQ Code.

Firefighting Appliances

Firefighting appliances such as fire extinguishers will be fitted in accordance with the Work Place Health and Safety requirements and will be inspected by the Queensland Fire and Rescue Service who shall issue a fire inspection certificate upon their satisfaction.

Smoke Alarms

The Building Code of Australia indicates minimum requirements for hard-wired smoke alarms. The proposed Childcare Centre must meet the requirements of the Building Code of Australia in relation to (but not limited to) smoke alarms. Smoke alarms must comply with the Australian Standard (AS3786-1993). Siting and number of smoke alarms will differ depending on the size of the facility.

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

6.0 CONCLUSIONS

This Bushfire Hazard Assessment has completed a quantitative and qualitative bushfire hazard assessment of the site and surrounding areas. The assessment indicated 'Low' Bushfire Hazard Areas site and on neighbouring properties to the north with an area of 'Medium' Bushfire Hazard and associated Bushfire Hazard Buffer present further to the north, which is broadly consistent with the State Government's SPP mapping classification of the site and MBRC's Bushfire Hazard Overlay.

Hazardous vegetation has not been identified within the site, provided the retained vegetation in the eastern portion of the site is managed in such a way as to minimise fuel loads. Hazardous vegetation further to the north of the site is 87 m or more from the site boundary and not considered to present a bushfire risk to the site.

Due to the need to manage the retained vegetation on site to minimise bushfire risk, S5 Environmental has prepared a Bushfire Management Plan for the site to enable the appropriate management of this vegetation.

Based on this assessment, a variety of recommendations and mitigation measures have been provided to address the potential risk of bushfire attack on the proposed development of the site. However, fire is unpredictable and a natural process within bushland areas. Therefore, it is important that people present in facilities situated within bushfire prone areas are educated and prepared for bushfire in order to ensure the protection of property and life.

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

7.0 REFERENCES

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FIGURES

- Figure 1 - Site Location
- Figure 2 - Site Aerial
- Figure 4 – Bushfire Hazard Units
- Figure 5 Bushfire Hazard Rating for Site and Surrounding Areas

To be Amended

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Figure 1 - Site Location Plan

Material Change of Use for Proposed Childcare Centre - 54-66 Old Bay Road, Deception Bay
DL and Associates Pty Ltd

Job Number: S50374;
D:\S5 Consulting Server\S5 Projects\S5 Projects\S50374 Old Bay Road, Deception Bay\04 Drawings\PDF\Figure 1
Author: SYB; Date: 3 August 2018
Data: Digital Cadastral Database (c) - State of Qld, 2018.
Map - Google Maps 2018. CRS: MGA94 Z56

This plan may only be relied upon in relation to the project and purpose for which it was commissioned.



Scale: approx 1:10,000 @A3



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Figure 2 - Site Aerial

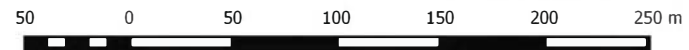
Material Change of Use for Proposed Childcare Centre - 54-66 Old Bay Road, Deception Bay
DL and Associates Pty Ltd

Job Number: S50374;
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Author: SYB; Date: 3 August 2018
Data: Digital Cadastral Database (c) - State of Qld, 2018.
Map - Google Maps 2018. CRS: MGA94 Z56

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Scale: approx 1:2,000 @A3



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Figure 4 - Bushfire Hazard Sub-Units

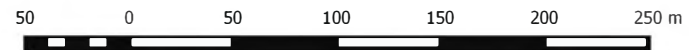
Material Change of Use for Proposed Childcare Centre - 54-66 Old Bay Road, Deception Bay
DL and Associates Pty Ltd

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Author: SYB; Date: 8 August 2018
Data: Digital Cadastral Database (c) - State of Qld, 2018.
Map - Google Maps 2018. CRS: MGA94 Z56

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Figure 5 - Medium Bushfire Hazard Ratings

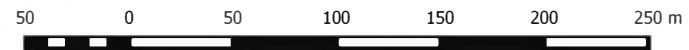
Material Change of Use for Proposed Childcare Centre - 54-66 Old Bay Road, Deception Bay
DL and Associates Pty Ltd

Job Number: S50374;
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Author: SYB; Date: 14 August 2018
Data: Digital Cadastral Database (c) - State of Qld, 2018.
Map - Google Maps 2018. CRS: MGA94 Z56

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

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Appendix A –
Proposed Development Architectural Plans

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Material Change of Use for
Proposed Child-care Centre
at
54-66 Old Bay Road, Deception Bay, QLD 4508
Lot 32 on SP152335
for
DL and Associates Pty Ltd

PREPARED BY

whiteroom
architects
ph: 07 3366 9946

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



2 2017 AERIAL IMAGERY
SCALE:



3 MBRC-ZONES & PRECINCTS
SCALE:

1 LOCALITY MAP (GOOGLE)
SCALE:

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

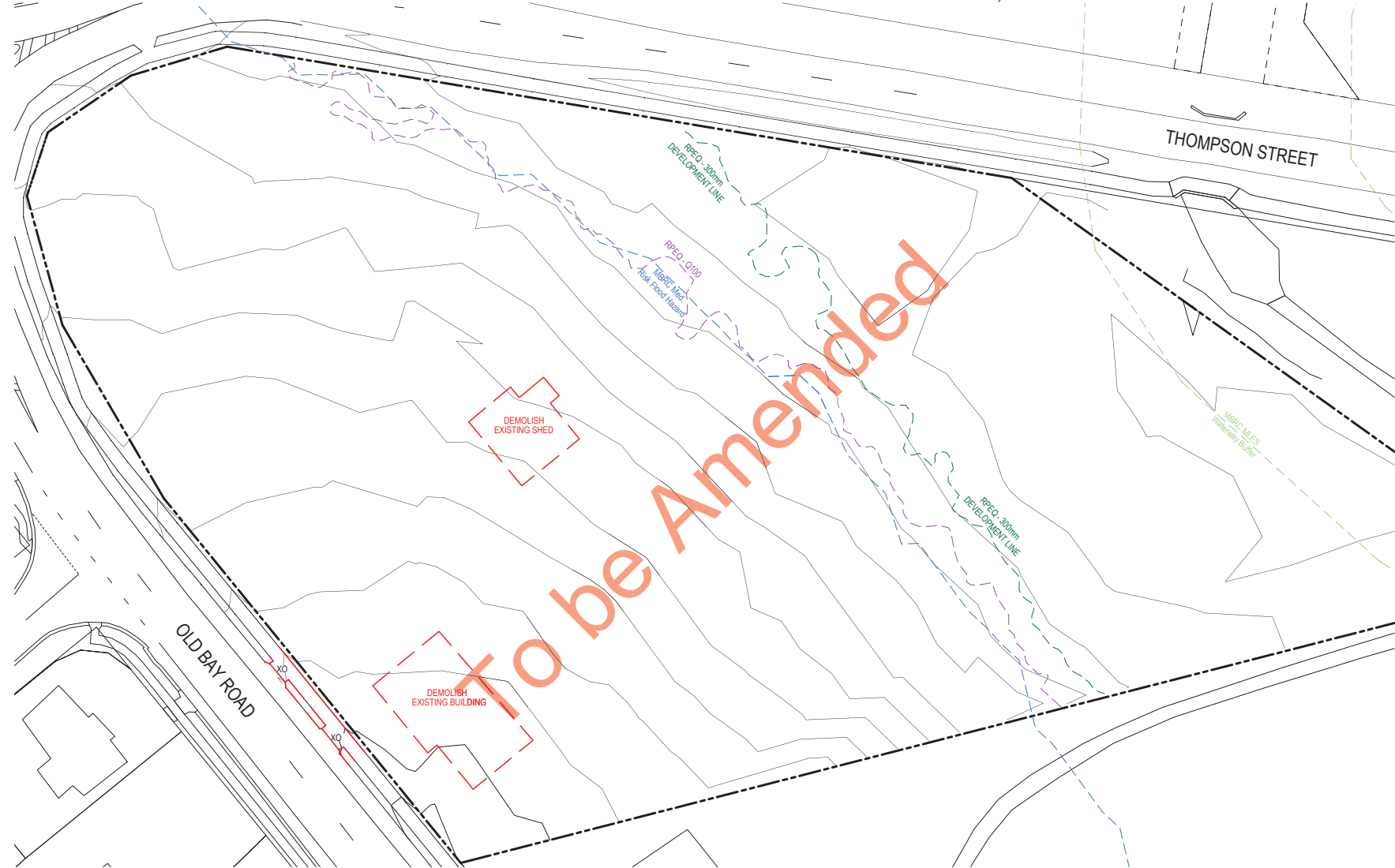


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DATE:
18-SEP '18

THIS DRAWING:
SITE LOCALITY PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-101 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
 architects
 ph: 07 3366 9946

CLIENT:
 DL AND ASSOCIATES
 PTY LTD

PROJECT:
 PROPOSED
 CHILD-CARE CENTRE

LOCATION:
 54-66 OLD BAY RD,
 DECEPTION BAY, QLD
 LOT 32 ON SP 152335



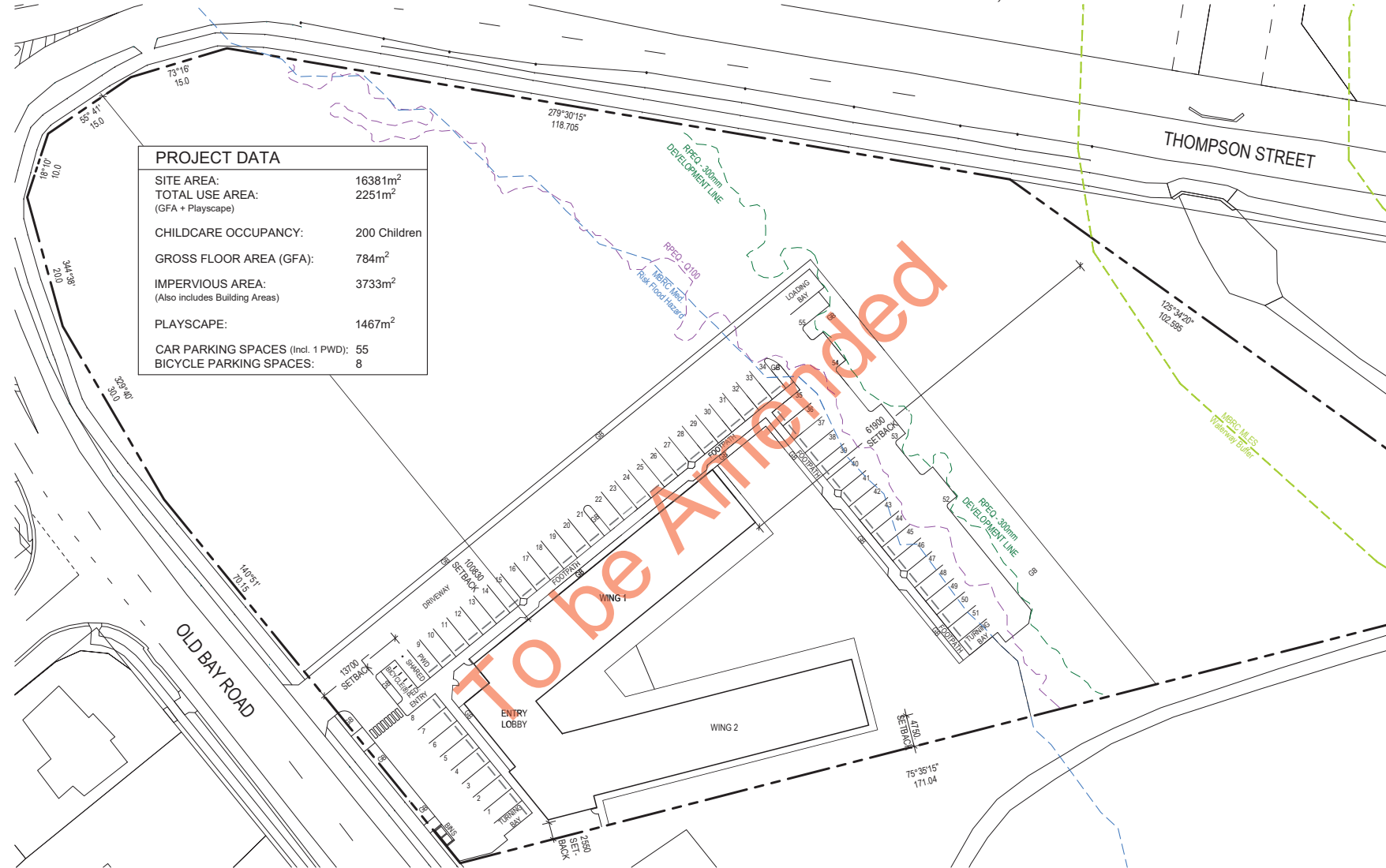
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 18-SEP '18

THIS DRAWING:
**EXISTING/DEMO
 SITE PLAN**

PURPOSE:
 PRELIMINARY
 PROJECT NUMBER:
 P_072
 DRAWING (ISSUE):
A-102 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



PROJECT DATA	
SITE AREA:	16381m ²
TOTAL USE AREA: (GFA + Playscape)	2251m ²
CHILDCARE OCCUPANCY:	200 Children
GROSS FLOOR AREA (GFA):	784m ²
IMPERVIOUS AREA: (Also includes Building Areas)	3733m ²
PLAYSCAPE:	1467m ²
CAR PARKING SPACES (Incl. 1 PWD):	55
BICYCLE PARKING SPACES:	8

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

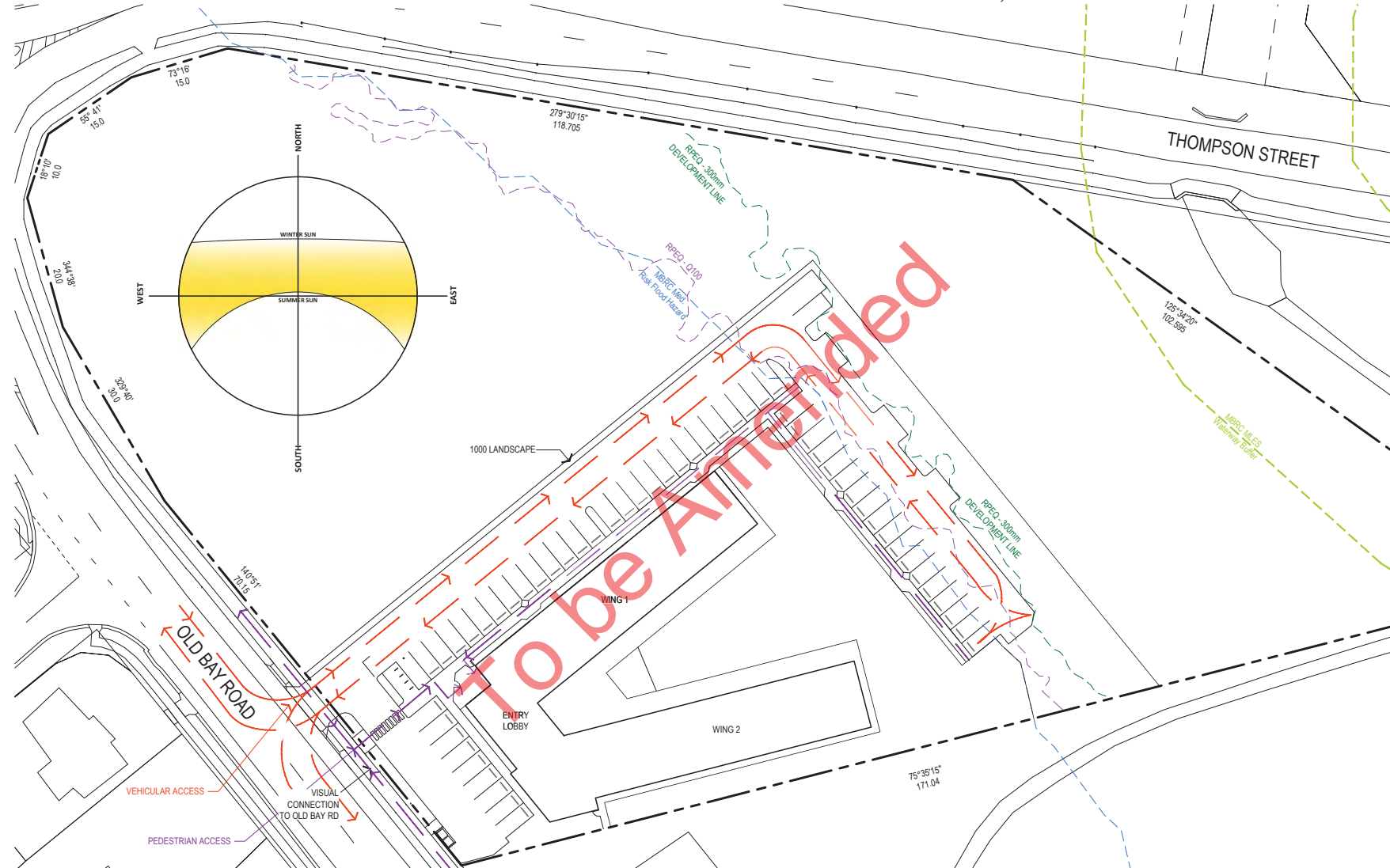


SCALE:
1:500@A3
DATE:
18-SEP '18

THIS DRAWING:
PROPOSED SITE PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-103 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:
SCALE:
1:500@A3
DATE:
18-SEP '18

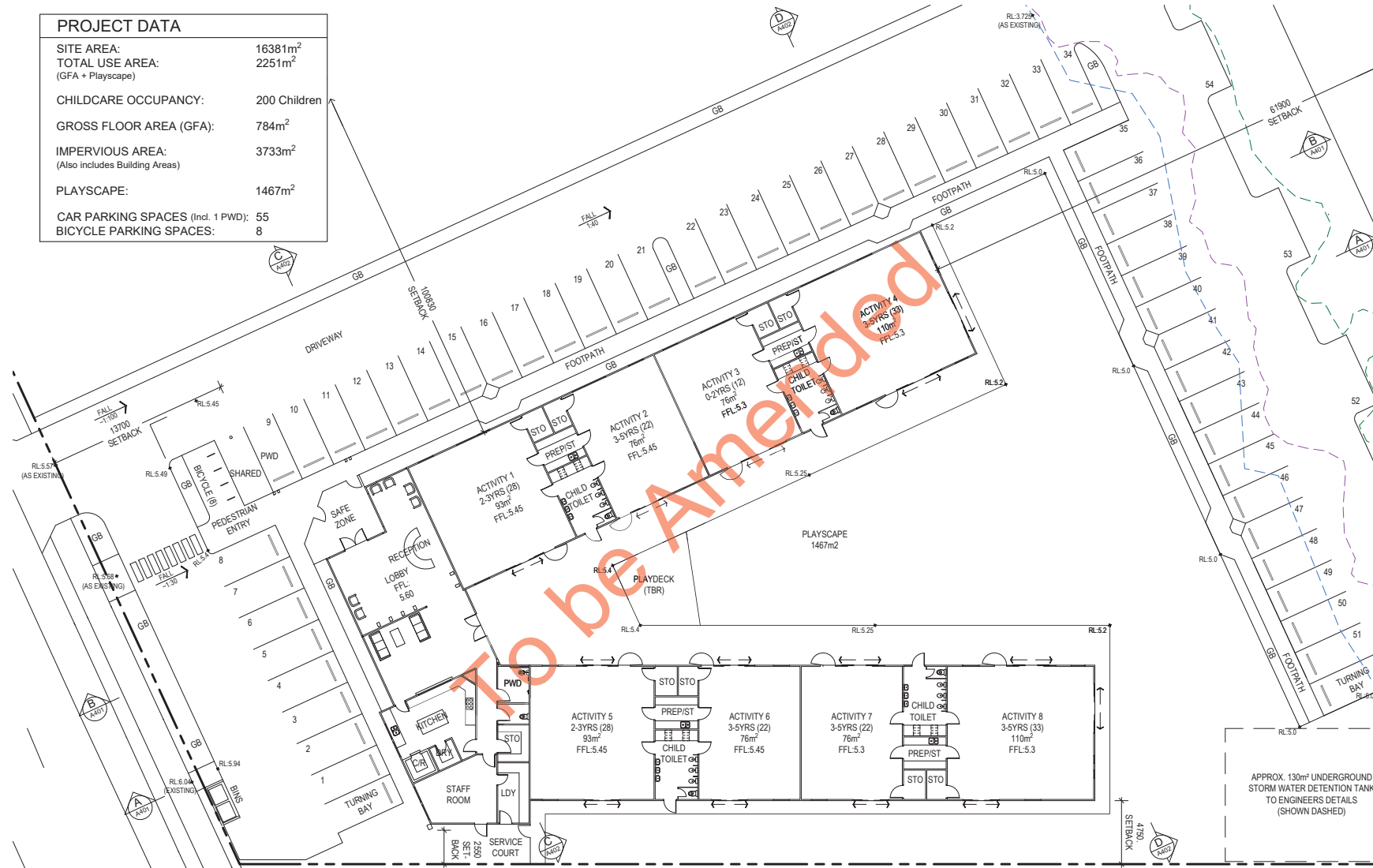
THIS DRAWING:
SITE ANALYSIS PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-104 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PROJECT DATA	
SITE AREA:	16381m ²
TOTAL USE AREA: (GFA + Playscape)	2251m ²
CHILDCARE OCCUPANCY:	200 Children
GROSS FLOOR AREA (GFA):	784m ²
IMPERVIOUS AREA: (Also includes Building Areas)	3733m ²
PLAYSCAPE:	1467m ²
CAR PARKING SPACES (Incl. 1 PWD):	55
BICYCLE PARKING SPACES:	8



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



NORTH:
SCALE:
1:250@A3
DATE:
18-SEP '18

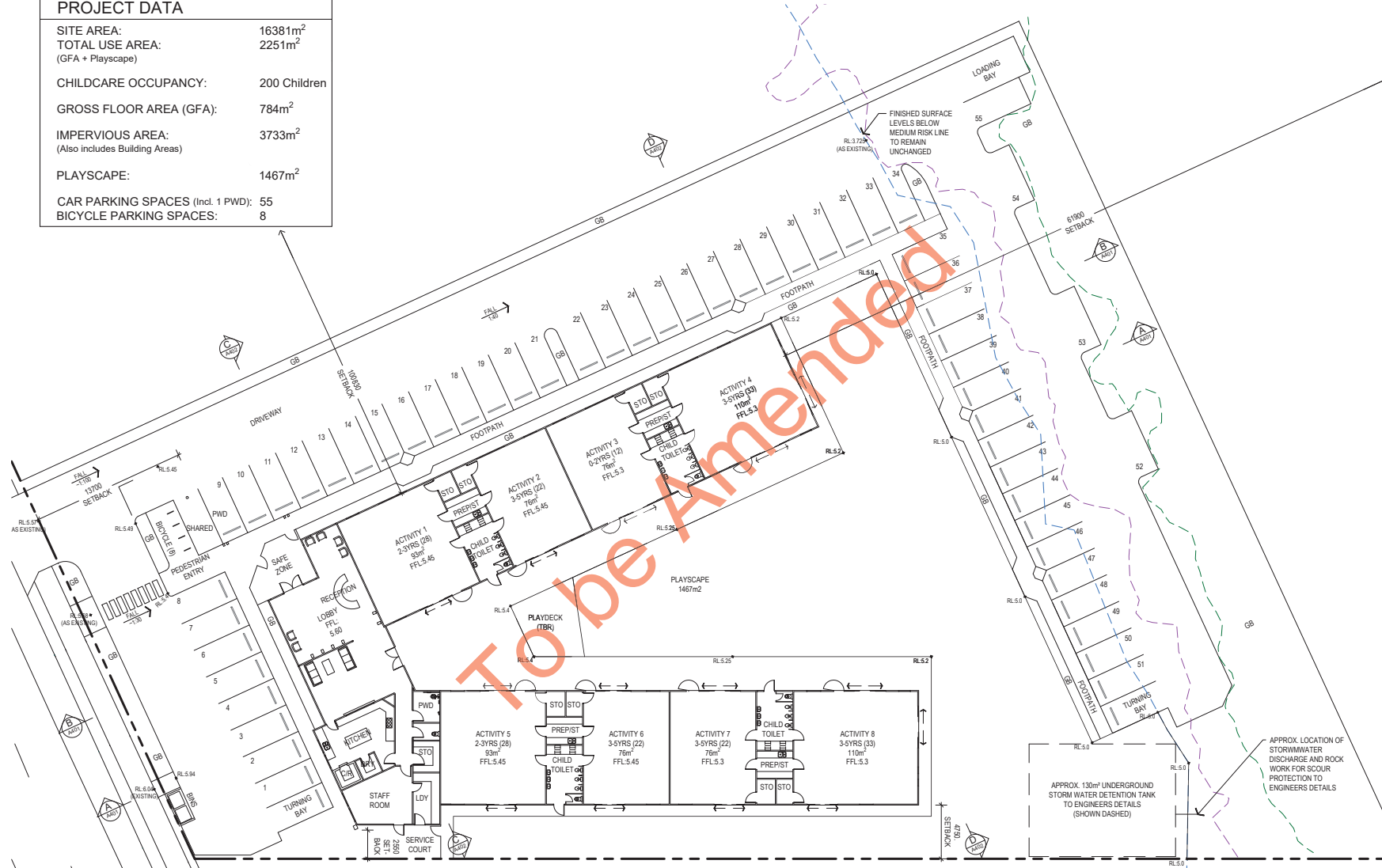
THIS DRAWING:
GROUND FLOOR PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING ISSUE:
A-201 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PROJECT DATA	
SITE AREA:	16381m ²
TOTAL USE AREA: (GFA + Playscape)	2251m ²
CHILDCARE OCCUPANCY:	200 Children
GROSS FLOOR AREA (GFA):	784m ²
IMPERVIOUS AREA: (Also includes Building Areas)	3733m ²
PLAYSCAPE:	1467m ²
CAR PARKING SPACES (Incl. 1 PWD):	55
BICYCLE PARKING SPACES:	8



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

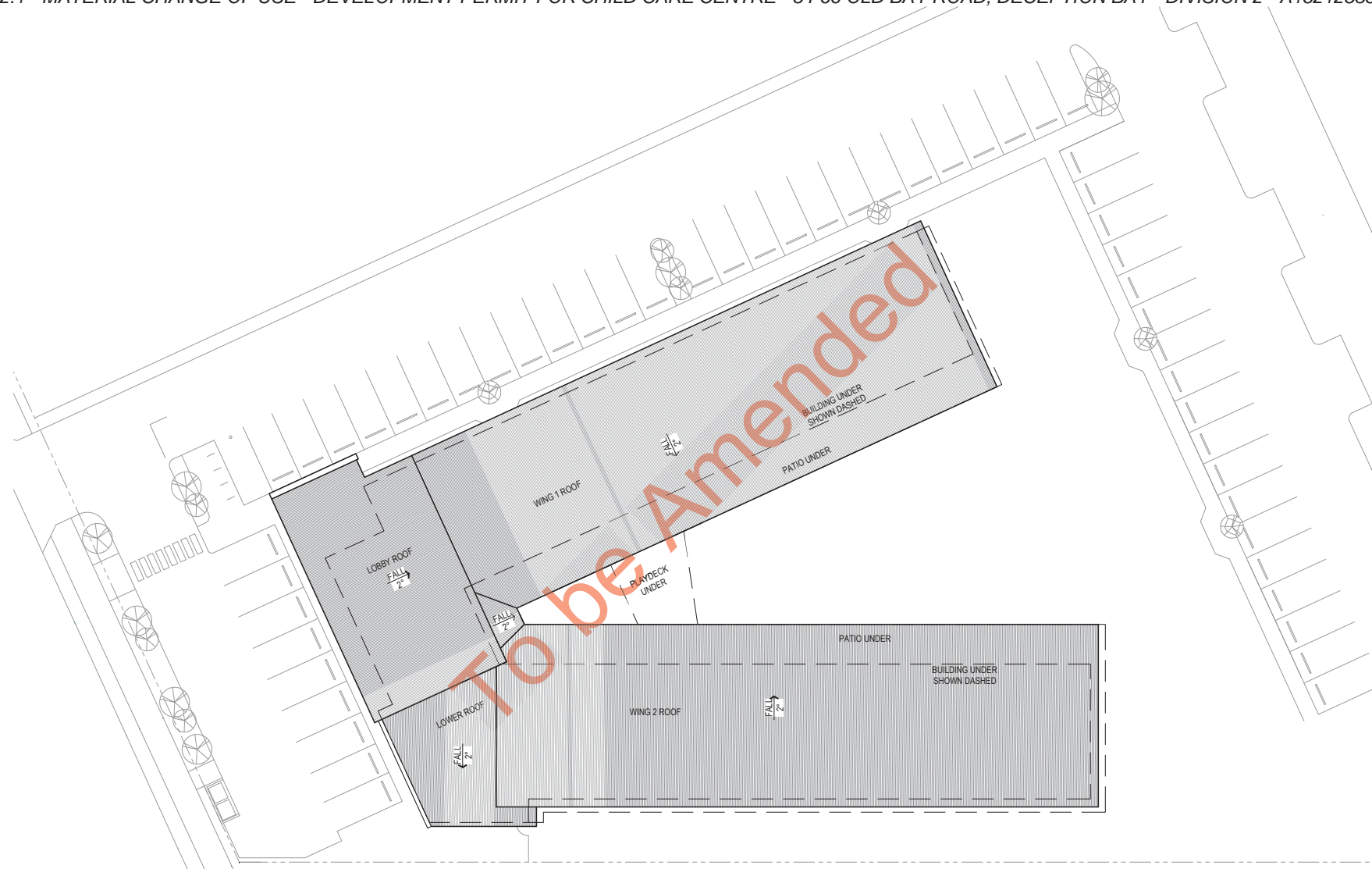


SCALE:
1:300@A3
DATE:
18-SEP '18

THIS DRAWING:
**GROUND FLOOR PLAN
(MACRO)**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-202 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:

whiteroom
architects
ph: 07 3366 9946

CLIENT:

DL AND ASSOCIATES
PTY LTD

PROJECT:

PROPOSED
CHILD-CARE CENTRE

LOCATION:

54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:



SCALE:

1:100@A3

DATE:

18-SEP '18

THIS DRAWING:

ROOF PLAN

PURPOSE:

PRELIMINARY

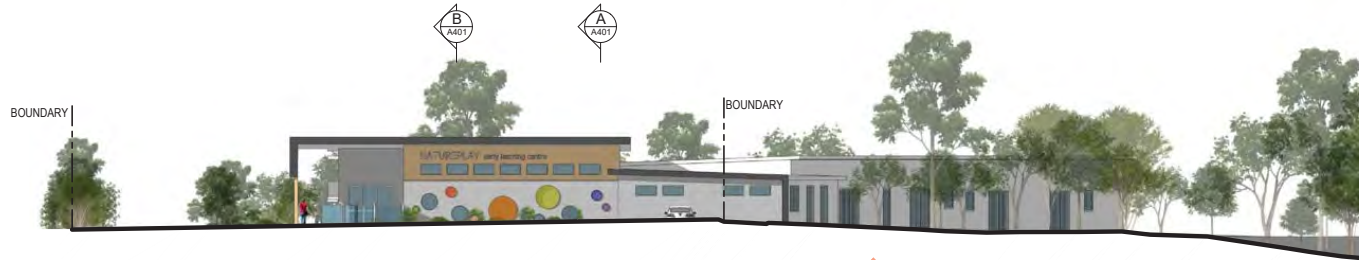
PROJECT NUMBER:

P_072

DRAWING (ISSUE):

A-211 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



1 WEST ELEVATION (STREET)
SCALE 1:250



2 NORTH ELEVATION
SCALE 1:250

To Be Amended

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



SCALE:
1:250@A3
DATE:
18-SEP '18

THIS DRAWING:
**WEST & NORTH
ELEVATIONS**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-301 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



1 EAST ELEVATION
SCALE 1:250



2 SOUTH ELEVATION
SCALE 1:250

DESIGN BY:

whiteroom
architects
ph: 07 3366 9946

CLIENT:

DL AND ASSOCIATES
PTY LTD

PROJECT:

PROPOSED
CHILD-CARE CENTRE

LOCATION:

54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:



SCALE:

1:250@A3

DATE:

18-SEP '18

THIS DRAWING:

**EAST & SOUTH
ELEVATIONS**

PURPOSE:

PRELIMINARY

PROJECT NUMBER:

P_072

DRAWING (ISSUE):

A-302 (W)

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



To be Amended

*ARTISTS IMPRESSION
(NOT TO SCALE)

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



SCALE:
NTS
DATE:
18-SEP '18

THIS DRAWING:
**BUILDING
PERSPECTIVES 1**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-303 (W)

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



To be Amended

*ARTISTS IMPRESSION
(NOT TO SCALE)

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

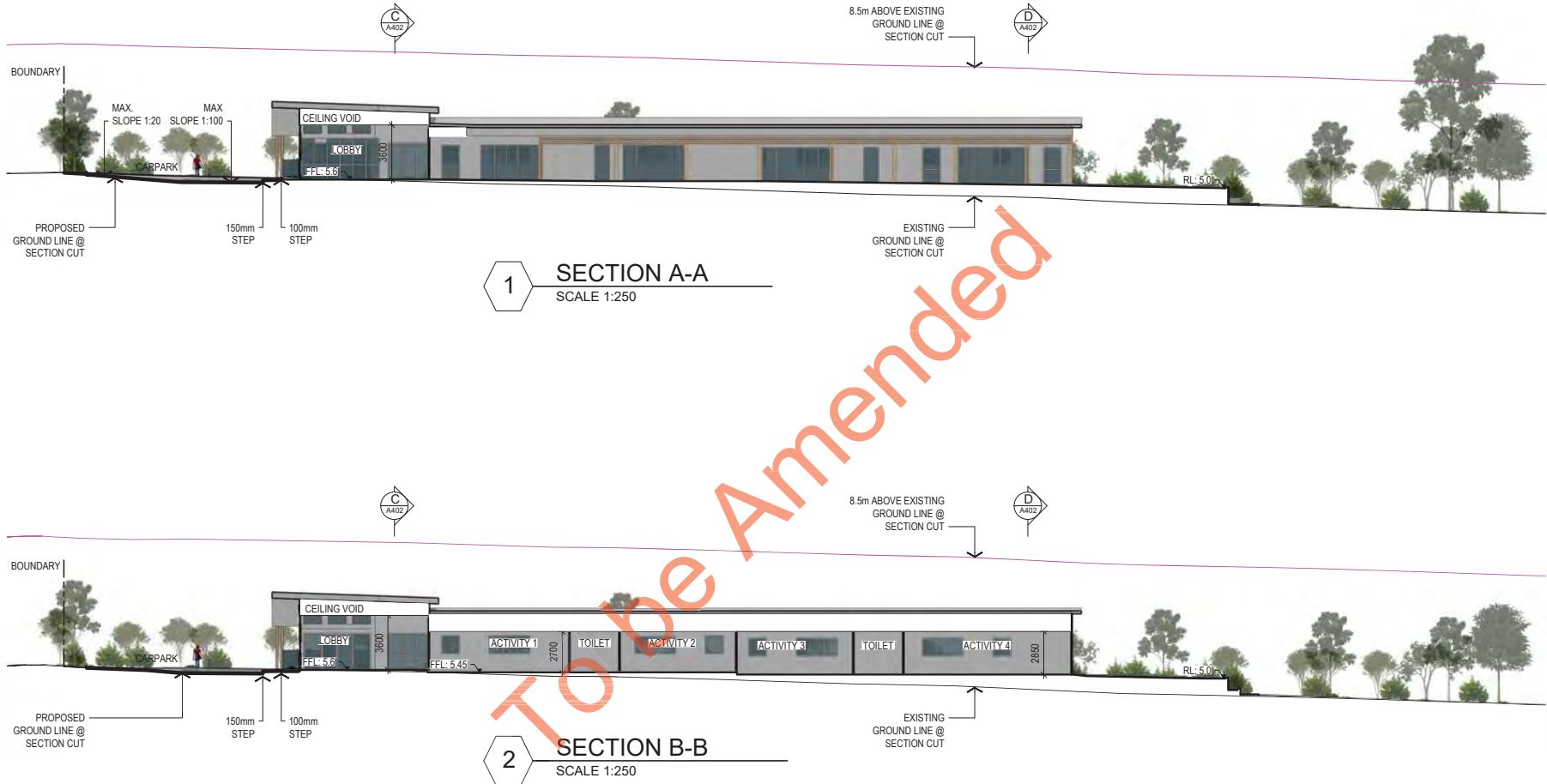


SCALE:
NTS
DATE:
18-SEP '18

THIS DRAWING:
**BUILDING
PERSPECTIVES 2**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-304 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

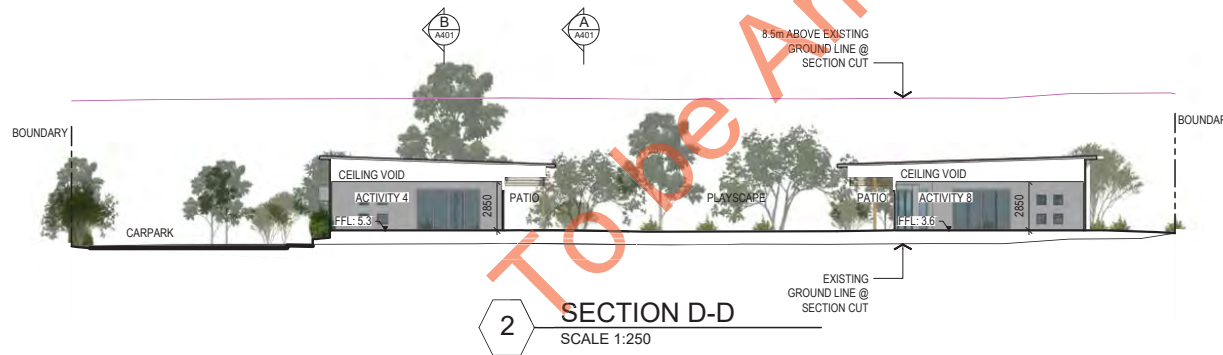
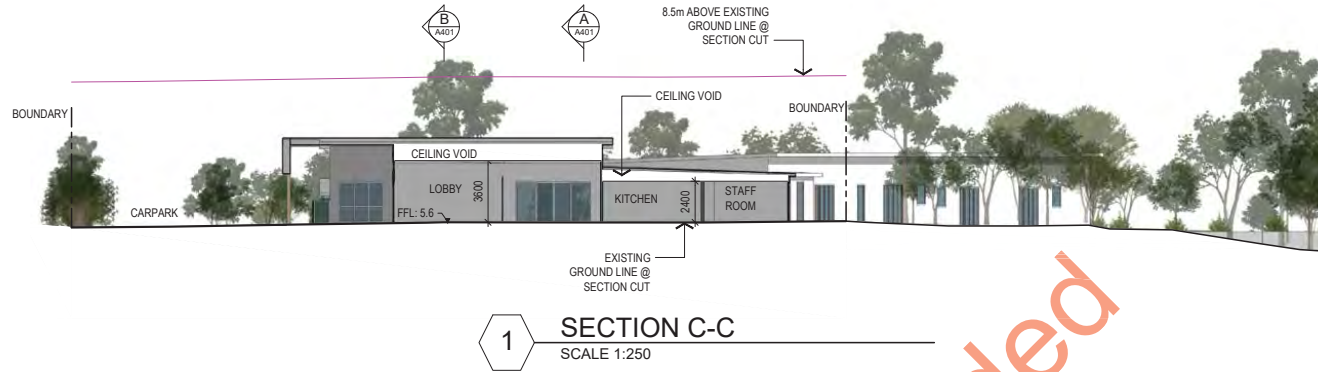
LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:
SCALE:
1:250@A3
DATE:
18-SEP '18

THIS DRAWING:
SECTIONS 1

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-401 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335

NORTH:
SCALE:
1:250@A3
DATE:
18-SEP '18

THIS DRAWING:
SECTIONS 2

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-402 (W)

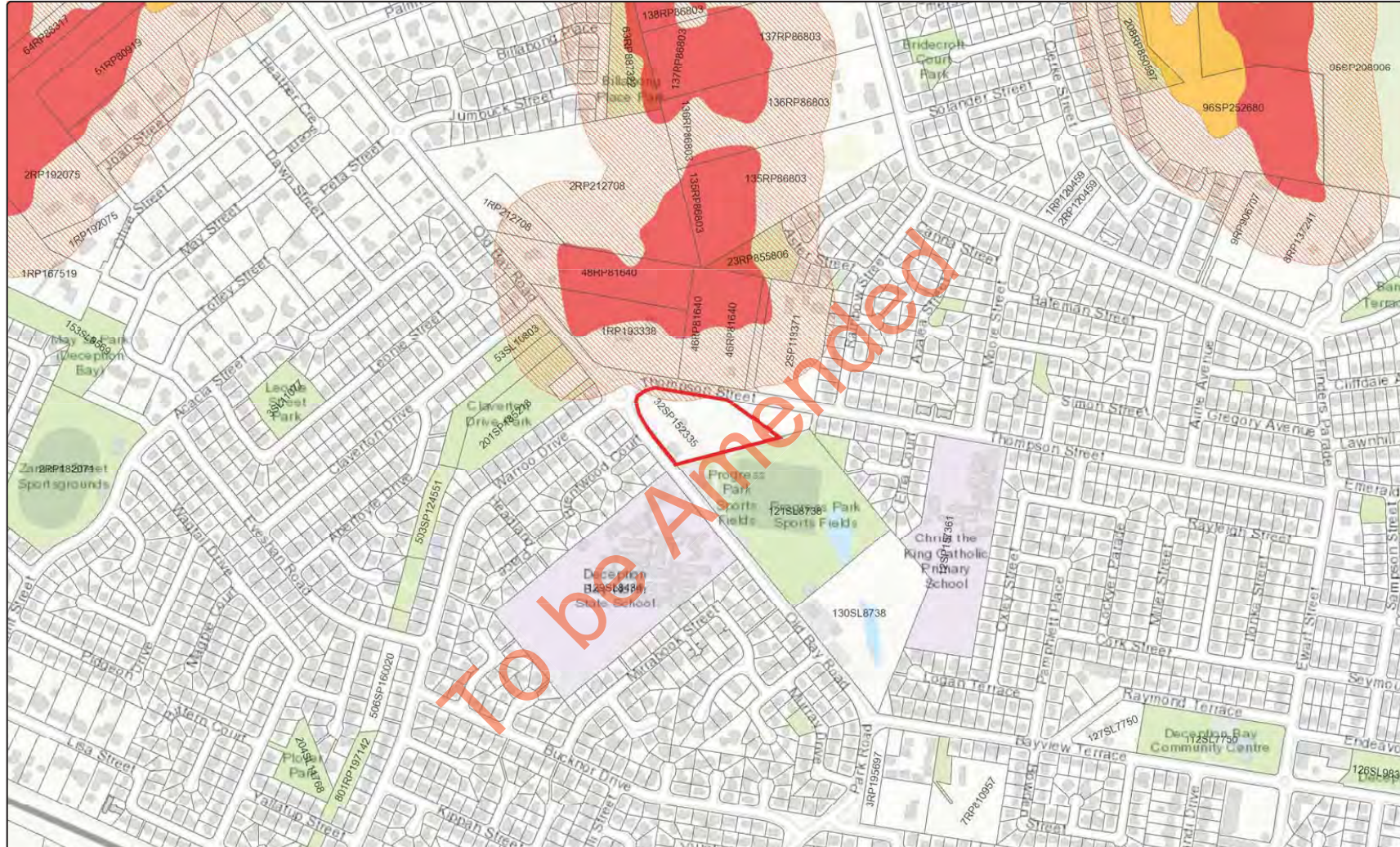
ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

B

Appendix B –
Bushfire Hazard Map SPP

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



State Planning Policy

Making or amending a local planning instrument and designating land for community infrastructure

Date: 08/08/2018

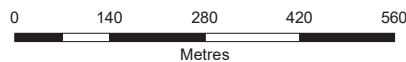
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Department of State
Development, Manufacturing,
Infrastructure and Planning

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Legend

Drawn Polygon Layer


Override 1


Cadastral (10k)


 Cadastral (10k)

Bushfire prone area

 Very High Potential Bushfire Intensity

 High Potential Bushfire Intensity

 Medium Potential Bushfire Intensity

 Potential Impact Buffer

To be Amended



Department of State
Development, Manufacturing,
Infrastructure and Planning

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State Planning Policy
Making or amending a local planning instrument
and designating land for community infrastructure

Date: 08/08/2018

Disclaimer:
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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

C

Appendix C -
Slope Calculations

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Project Number:	54-66 Old Bay Road, Deception Bay			
Client:	S50374			
	DL and Associates Pty Ltd			

BUSHFIRE SLOPE CALCULATOR

BHU 1	Top Elevation	<input type="text" value="4"/> m		
<input type="text" value="NE"/>			Slope %	Slope ⁰
	Bottom Elevation	<input type="text" value="3"/> m	<input type="text" value="1.61%"/>	<input type="text" value="0.92"/>
	Distance	<input type="text" value="62"/> m		
BHU 2	Top Elevation	<input type="text" value="3"/> m		
<input type="text" value="N"/>			Slope %	Slope ⁰
	Bottom Elevation	<input type="text" value="3"/> m	<input type="text" value="0.00%"/>	<input type="text" value="0.00"/>
	Distance	<input type="text" value="112"/> m		
BHU 3	Top Elevation	<input type="text" value="4"/> m		
<input type="text" value="S"/>			Slope %	Slope ⁰
	Bottom Elevation	<input type="text" value="3"/> m	<input type="text" value="1.23%"/>	<input type="text" value="0.71"/>
	Distance	<input type="text" value="81"/> m		
BHU 4	Top Elevation	<input type="text" value="3"/> m		
<input type="text" value="S"/>			Slope %	Slope ⁰
	Bottom Elevation	<input type="text" value="3"/> m	<input type="text" value="0.00%"/>	<input type="text" value="0.00"/>
	Distance	<input type="text" value="83"/> m		

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

D

Appendix D –
Queensland Fire and Emergency Services' Bushfire
Survival Plan

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Queensland Fire and Emergency Services

Bushfire Survival Plan

PREPARE. ACT. SURVIVE.

To be Amended





You must PREPARE . ACT . SURVIVE .

Your main priority is to ensure that you and your family are safe. During a bushfire, you and your family's survival and safety depend on your preparations, and the decisions you make.

The lives of you and your family are more important than any building.

Whether your plan is to leave early or stay, you must prepare your home and property to increase their levels of resilience and your chances of survival.

Bushfires in Queensland

The fire season in Queensland normally commences in the far north of the state in July and progresses through to southern areas as spring approaches. The fire season can extend through to February in southern and far south-western Queensland. These time frames can vary significantly from year to year, depending on the fuel loads, long-term climate, and short-term weather conditions in each area.

There are four key considerations for dealing with bushfire:

- The safety of you and your family.
- The resilience of your property.
- The protection of irreplaceable valuables and important documents.
- The maintenance of adequate levels of insurance.

This document will provide you with information about the things you need to consider to prepare yourself and your home for the bushfire season, and how to make your own personal Bushfire Survival Plan.

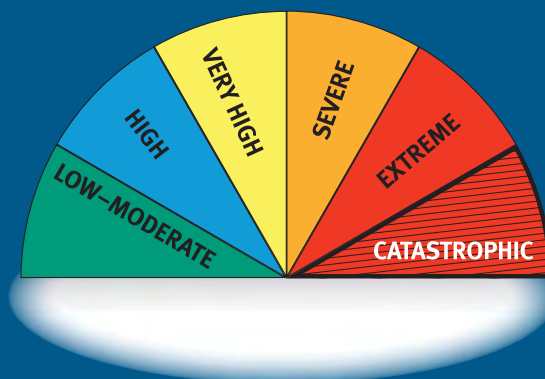
It is your responsibility to prepare yourself, your family and your home for the threat of bushfire.

Understand your risk

The first step in planning to survive a bushfire is to understand your own level of risk. By understanding your own level of risk, you will be able to make informed decisions that are right for you and your family. Included with this Bushfire Survival Plan is a self-assessment tool that will enable you to gauge the risk level associated with your property. If you are still unsure of your level of risk or require assistance, contact your local fire station for more information. To book a Bushfire Safety presentation, call 13 QGOV (13 74 68).

Fire danger ratings

The increased frequency of extreme bushfires in Australia in the last 10 years and the recent experience of the Black Saturday fires in Victoria have encouraged fire services throughout Australia to introduce new levels of Fire Danger Rating (FDR). A lift-out chart of the FDR system is contained within this document. Display it in a prominent place in your home, or keep it with your Bushfire Survival Plan.



PREPARE . ACT . SURVIVE .

Catastrophic fire danger rating

The highest level is catastrophic. On a day of catastrophic FDR, leaving early is the only option to ensure your survival. You must relocate early to a safer location hours before a fire approaches, or even the day before. Under no circumstances will it be safe to stay with your property.

Leaving late can be a deadly option. If you are in any doubt, make the decision to LEAVE EARLY.

Extreme fire danger rating

The second highest level is extreme. Should a fire occur in your area on a day of extreme FDR, leaving early will always be the only option. Staying can only be considered for homes that:

- Have been designed and constructed specifically to address the threat of bushfire.
- Have been maintained to those levels and are currently well prepared.
- Can be actively defended by people with the skills, knowledge and confidence to implement a well-rehearsed Bushfire Survival Plan.

On days of catastrophic or extreme FDR:

- Fires are likely to be uncontrollable, unpredictable and very fast moving, with highly aggressive flames extending high above tree tops and buildings.
- Thousands of embers may be violently blown into and around homes causing other fires to start rapidly and spread quickly up to 20 kilometres ahead of the main fire.
- Fire can threaten suddenly, without warning, and the heat and wind will make it difficult to see, hear and breathe as the fire approaches.
- People in the path of such fires will almost certainly be injured or die, and a significant number of homes and businesses will be destroyed or damaged.
- Even well-prepared and constructed homes will not be safe.
- Expect power, water and phone networks to fail as severe winds well ahead of the fire will bring down trees and power lines, and blow roofs off buildings.

It is vital that you understand that, on these days, your survival will depend solely on how well you have prepared and how decisively you act.

What will you do?

At all times you need to **PREPARE.ACT.SURVIVE.**

When the fire danger rating is 'catastrophic', leaving early is the safest option.

When the fire danger rating is lower than 'catastrophic', one of the most important decisions you need to make is whether you will leave early or stay with a well-prepared property. This decision is the basis of your Bushfire Survival Plan.

The following questions may help you make the right decision about whether you leave early or stay:

- Do you need to consider family members who are young, elderly or infirm?
- Are you physically and emotionally prepared to stay with your property?
- Do you have the knowledge, skills, and confidence to stay with your property?
- Is your home adequately constructed, maintained, and prepared to withstand the impact of a fire? In other words, is your home prepared to withstand the impact of a bushfire?
- Do you have well-maintained resources and equipment to fight fire, and do you know how to use them?
- Do you have appropriate protective clothing to fight a fire?
- What will you do if a rapid onset fire gives you no time to leave? Where will you shelter?

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Leave early

If you plan to leave early, then you must leave your home well before a bushfire threatens and travelling by road becomes hazardous. Your leave-early preparations include:

Step 1: Preparation – your property should be well prepared for bushfire, even if you intend to leave early.

Step 2: What you will do? Make your Bushfire Survival Plan in accordance with your decision to leave early.

Step 3: Make a contingency plan – the FDR, the preparedness of your home, a change in household circumstances, a change in your physical preparedness or unexpected visitors are some things that may require you to reconsider your Bushfire Survival Plan.

Planning to stay

Planning is critical to successfully staying with your home, as it may involve the risk of psychological trauma, injury or death.

Step 1: Preparation – your property must be able to withstand the impact of bushfire and be prepared well enough to shelter you and your family.

Step 2: What you will do? Make your Bushfire Survival Plan in accordance with your decision to stay.

Step 3: Make a contingency plan – the FDR, the preparedness of your home, a change in household circumstances, a change in your physical preparedness or unexpected visitors are some things that may require you to reconsider your Bushfire Survival Plan.

In making your decision to stay, there are a few things you need to consider:

- Is your property able to withstand the impact of a bushfire?
- Are you physically and emotionally prepared to stay with your property?
- Do you have well-maintained resources and equipment, and do you know how to use them?
- Do you have appropriate protective clothing?
- Will your bushfire survival plan need to be different for weekdays, weekends or if someone is sick at home?
- Do you have a contingency plan?

Preparing your Bushfire Survival Plan

Preparation is the key to survival. Being involved in a fire will be one of the most traumatic experiences of your life.

- Prepare yourself – you need to be both mentally and physically prepared to carry out your Bushfire Survival Plan.
- Prepare your Bushfire Survival Plan.
- Prepare your Bushfire Emergency Kit.
- Prepare your Bushfire Evacuation Kit.
- Prepare your property.

When writing your plan, you need to consider:

- Have you made the right choice – to leave early or stay?
- Have you discussed your choice with your family, friends and neighbours?
- Who will take charge and lead other family members by carefully communicating the various tasks set out in the plan?
- If you have chosen to stay, what will you do to protect your property when the fire arrives?
- What will you put in your Bushfire Emergency Kit and where will you store it?
- Do your friends, family and neighbours know the details of your plan?

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

- What will you do if your Bushfire Survival Plan fails?
- Do you have an alternative option or contingency plan if your plan fails?
- Do you have a Neighbourhood Safer Place (NSP) you can go to as a last resort? For more information on NSPs, see www.ruralfire.qld.gov.au.
- Is it safe to travel there?

If your decision is to leave early, you must include the following information or action items in your Bushfire Survival Plan:

- Monitor media outlets – radio, TV, mobile phone and internet for bushfire alerts.
- When will you leave?
- What will be your trigger for action?
- Will your plan be different for weekdays, weekends, or if someone is at home sick or injured?
- What will you take with you (Evacuation Kit)?
- Where will you and your family go when you leave early?
- What route will you take to get there?
- What will you do with your pets?
- What will you do if there are consecutive or multiple ‘catastrophic’ or extreme fire danger days?
- Will you go to work on days when the FDR is in the upper levels?
- Will you send your children to school when the FDR is in the upper levels?
- Will all members of your household leave early?
- What will you do to prepare your property?
- What is your contingency plan in the event that it is unsafe to leave?

If your decision is to stay, you must include the following information or actions items in your Bushfire Survival Plan:

- Monitor media outlets – radio, TV, mobile phone and internet.
- Locate your Bushfire Emergency Kit.
- Put on protective clothing.
- Remain hydrated by drinking lots of water.

- Move any stock to fully grazed paddocks.
- Move cars to a safe location.
- Remove garden furniture, doormats, and other items.
- Close windows and doors and shut blinds.
- Take down curtains and move furniture away from windows.
- Seal gaps under doors and window screens with wet towels.
- Place pets inside, restrain them, and provide water.
- Block downpipes and fill gutters with water.
- Wet down the sides of buildings facing the approaching fire front.
- Wet down decks and verandas.
- Wet down fine fuels close to buildings.
- Turn on garden sprinklers before the bushfire arrives.
- Fill containers with water – bath, sinks, buckets, wheelie bins, etc.
- Have ladders ready to access inside roof spaces, and against the roof on the outside.
- Have a generator or petrol pump ready.
- Start patrolling outside to check for embers.

When the fire front arrives:

- Take all fire-fighting equipment, such as hoses and pumps, inside – these may melt during the fire.
- Go inside and shelter away from the fire front.
- Patrol the inside of your home, including the ceiling space, for embers or small fires that may start.
- Drink lots of water.
- Check family and pets.

After the fire front has passed:

- Wear protective equipment.
- Go outside once it is safe.
- Check for small spot fires and burning embers:
 - inside roof space
 - under floor boards
 - under house space

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

- on veranda and decks
- on window ledges and door sills
- in roof lines and gutters
- garden beds and mulch
- wood heaps
- outdoor furniture
- sheds and carports.
- Continue to drink lots of water.
- Stay at your property until the surrounding area is clear of fire.
- Monitor media outlets – radio, TV, mobile phone and internet.

You need to be both mentally and physically prepared to carry out your Bushfire Survival Plan.

There may be other actions to include, depending on your individual property and the level of bushfire risk you are exposed to.

Include the whole family in creating your Bushfire Survival Plan. You and your family should be aware of the actions you will take at the various FDR levels, and it is important to ensure this is incorporated into your Bushfire Survival Plan. The FDR for your area can be found on roadside signs and by visiting www.ruralfire.qld.gov.au and following the FDR link.

It is important that your Bushfire Survival Plan does not rely solely on receiving an alert.

Once you have completed your Bushfire Survival Plan, practise it regularly to ensure everyone involved knows exactly what to do in the event of a fire.

Preparing your Bushfire Emergency Kit

It is essential that you have a Bushfire Emergency Kit if your choice is to stay with your property. This kit will ensure you and your family have the important equipment you need to stay. For a comprehensive list of equipment needed in a Bushfire Emergency Kit see page 14.

Preparing your Bushfire Evacuation Kit

It is equally important to have a Evacuation Kit if your choice is to leave early. This kit will ensure you and your family have important items and equipment required to relocate for the time needed. For a comprehensive list of items and equipment needed in a Bushfire Evacuation Kit see page 15.

Making a contingency plan

No matter whether your decision is to leave early, well before a bush fire threatens, or to stay, you should still have a contingency plan as part of your Bushfire Survival Plan. There are many scenarios to consider, such as: what you will do if a rapid onset fire starts in your local area, making roads impassable or travel particularly dangerous? You should have other options if road travel is not safe.

- Is your house well prepared?
- Can it provide you with protection from radiant heat?
- Have you identified a safer location, such as an NSP?

Sheltering in a well-prepared property is far safer than being out in the open or in a vehicle.

Preparing your property

An unprepared property is not only at risk itself, but may also present an increased danger for your neighbours and their homes.

Planning is absolutely critical to safely staying with your home. Staying home involves the risk of psychological trauma, injury and death.

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There are a number of measures you can take to prepare your home and property for bushfire. These include annual preparations you must take before the bushfire season.

Your pre-season property preparations should include:

- Displaying a prominent house number.
- Ensuring there is adequate access to your property for fire trucks – 4 metres wide by 4 metres high with a turn-around area. Reduce vegetation loads along the access path.
- Mowing your grass regularly.
- Removing excess ground fuels and combustible material (long dry grass, dead leaves and branches).
- Clearing leaves, twigs, bark and other debris from the roof and gutters.
- Purchasing and testing the effectiveness of gutter plugs.
- Trimming low-lying branches 2 metres from the ground surrounding your home.
- Enclosing open areas under your decks and floors.
- Installing fine steel wire mesh screens on all windows, doors, vents and weep holes.
- Pointing LPG cylinder relief valves away from the house.
- Conducting maintenance checks on pumps, generators and water systems.
- Checking that you have sufficient personal protective clothing and equipment.
- Relocating flammable items away from your home, including woodpiles, paper, boxes, crates, hanging baskets and garden furniture.
- Sealing all gaps in external roof and wall cladding.
- Checking that the first-aid kit is fully stocked.

Bushfire Advice Message – a fire has started – general information to keep you up to date.

Bushfire Watch and Act Message – represents a heightened level of threat. Conditions are changing, a fire is approaching; lives may come under threat. Take appropriate action.

Bushfire Emergency Warning – is the highest level message advising of impending danger. It may be preceded with the Standard Emergency Warning Signal (SEWS).

An Emergency Warning means there is a threat to lives, and protective action is required immediately.

Bushfire Alerts

If you receive an emergency warning about a bushfire or other emergency, take notice – it could save your life.

There are three types of alert messages to help you make the right safety choices:

When a bushfire strikes

You have made your decision to **PREPARE.ACT.SURVIVE**.
You have prepared your property before the fire season.
You have made your Bushfire Survival Plan. You have practised your Bushfire Survival Plan.

A bushfire is threatening. What do you do?

- Know the FDR for any given day.
- Regularly check the FDR on the Rural Fire Services website at www.ruralfire.qld.gov.au.
- Monitor your media outlets for warnings on bushfire activity.
- Seek out information if you have to, and do not assume that you will receive a warning.
- Leave early or stay according to your Bushfire Survival Plan.
- Act decisively in accordance with your Bushfire Survival Plan.
- Do not adopt the 'wait-and-see' option.

Travelling in your vehicle near a bushfire

Sheltering inside a vehicle is a high-risk strategy that can result in death. While sheltering inside a vehicle offers you a slightly higher chance of survival than being caught in the open, having a leave-early or stay strategy is a much safer option.

You should never take a journey into areas where the fire danger is catastrophic or extreme. You should consider postponing or finding alternative routes if necessary. If you can smell or see smoke in the distance, it is best to U-turn and drive away from the danger.

If you are caught in smoke or flames while on the road:

- Turn on the vehicle's headlights and hazard warning lights.
- If you need to shelter in your vehicle, drive your car into a bare, clear area well away from surrounding trees, leaving lights on. Position the vehicle to prevent a side impact from an advancing fire front.
- Close all windows and vents.
- Leave the engine running and turn off the air conditioning system.

- Cover your entire body with woollen or cotton blankets to protect you from radiant heat.
- Take shelter below the window level.
- Drink water frequently, and stay in the vehicle until the fire front has passed.
- Once the fire front has passed, exit the vehicle to inspect the damage and ensure other passengers are safe.

Neighbourhood Safer Places

A Neighbourhood Safer Place (NSP) is a place of last resort for people during a bushfire. An NSP may form part of a back-up plan when:

- Your Bushfire Survival Plan has failed.
- Your plan was to stay, but the extent of the fire means that your home cannot withstand the impact of the fire and, therefore, your home is not a safe place to shelter.
- The fire has escalated to an extreme or catastrophic level and relocation is the safest option.

An NSP is an identified building or open space within the community that can provide a level of protection from the immediate life-threatening effects of a bushfire. NSPs still entail some risk, both in moving to them and while sheltering in them; they cannot be considered completely safe.

They are a place of *last resort* in bushfire emergencies only. The following limitations of NSPs need to be considered within your Bushfire Survival Plan:

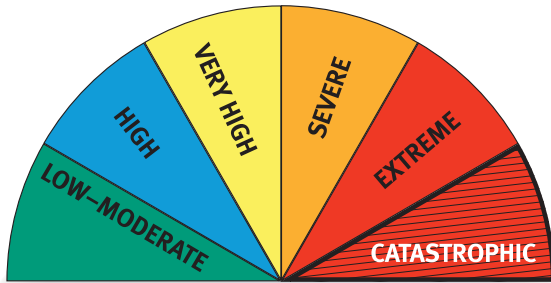
- NSPs do not cater for pets.
- Firefighters may not be present, as they will be elsewhere fighting the main fire front.
- NSPs do not provide meals or amenities.
- They may not provide shelter from the elements, particularly flying embers.

If you are a person with special needs, you should consider what assistance you may require at an NSP.

Although QFES cannot guarantee an immediate presence during a bushfire, every effort will be made to provide support as soon as resources are available.

If an NSP is part of your contingency plan, it should not require extended travel through fire-affected areas to get there.

FIRE DANGER RATING



The Fire Danger Rating (FDR) is an early indicator of potential danger, and should act as your first trigger for action. The higher the rating, the greater the need for you to act.

The FDR is an assessment of the potential fire behaviour, the difficulty of suppressing a fire, and the potential impact on the community should a bushfire occur on a given day.

A Fire Danger Index (FDI) of ‘low–moderate’ means that the fire will burn slowly and that it will be easily controlled, whereas a FDI in excess of ‘catastrophic 100+’ means that the fire will burn so fast and hot, it will be uncontrollable.

CATASTROPHIC

A fire with a rating of ‘catastrophic’ may be uncontrollable, unpredictable and fast-moving. The flames will be higher than roof tops. Many people may be injured, and many homes and businesses may be destroyed.

During a ‘catastrophic’ fire, well-prepared and constructed homes will not be safe. Leaving is the only option for your survival.

EXTREME

A fire with an ‘extreme’ rating may be uncontrollable, unpredictable and fast-moving. The flames may be higher than roof tops. During an ‘extreme’ fire, people will be injured, and homes and businesses may be destroyed.

During an ‘extreme’ fire, well-prepared and well-constructed homes may not be safe. Leaving is the only option for your survival.

SEVERE

A fire with a ‘severe’ rating may be uncontrollable and move quickly, with flames that may be higher than roof tops. A ‘severe’ fire may cause injuries, and some homes or businesses will be destroyed.

During a fire with a ‘severe’ rating, leaving is the safest option for your survival. Use your home as a place of safety only if it is well-prepared and well-constructed.

VERY HIGH

A fire with a ‘very high’ danger rating is one that can be difficult to control with flames that may burn into the tree tops. During a fire of this type, some homes and businesses may be damaged or destroyed.

During a fire with a ‘very high’ danger rating, you should use your home as a place of safety only if it is well-prepared and well-constructed.

HIGH

A fire with a ‘high’ danger rating is one that can be controlled, where loss of life is unlikely, and damage to property will be limited.

During a fire with a ‘high’ danger rating, you should know where to get more information and monitor the situation for any changes.

LOW–MODERATE

A fire with a ‘low to moderate’ rating can be easily controlled and poses little or no risk to life or property.

During a fire with a ‘low to moderate’ rating, you should know where to get more information and monitor the situation for any changes.

BUSHFIRE SURVIVAL PLAN

Complete your personalised Bushfire Survival Plan lift-out.

Personal details:

Important phone numbers: **000 (Triple Zero)** (Fire, Police and Ambulance)

Family:	Family:	Family:
Work:	Friends:	Friends:
School:		

Important contact details – name and phone number:

Insurer:	Policy Number:	Phone:
Electricity:		Phone:
Water:		Phone:
Gas:		Phone:
Phone Company:		Phone:
Council:	Phone:	

Leave early:

List all names and contact phone numbers of household members who have decided to leave early – then complete Section 1.

Names: _____

Phone: _____

Stay:

List all names and contact phone numbers of household members who have decided to stay – then complete Section 2.

Names: _____

Phone: _____

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Leave early – Section 1

Pull this Bushfire Survival Plan lift-out from this document and keep in a safe place.

Leaving early will always be the safest option for you and your family. It is extremely important for you to prepare a detailed leave-early plan to ensure everyone understands what to do and when. Use the boxes below to list tasks to do.

When to go – Think of different triggers that will cause you and your family to leave early. Think about what you will do if you have sent the children to school that day. Think about whether or not you will have to travel from work into the fire zone.

Where to go – Identify one or more safer locations. Consider putting on personal protective clothing before you leave home.

How to get there – What roads will you take to your destination? Have an alternative route if your first choice is impassable.

What to take – Make a list of your most valuable items (e.g. insurance papers, electronic records, photo albums, passports, birth certificates and other important information).

Stay – Section 2

Anyone who is not going to leave early must be involved in completing this stay-and-defend plan to ensure they know what to do. Every stay plan will be different depending on your circumstances. Use the boxes below to list tasks to do.

Before the fire approaches – Start getting yourself and your property ready for a bushfire.

As the fire approaches – Prepare for ember an attack on or near your home.
Remember to put on personal protective clothing.

As the fire front arrives – Stay safe by monitoring the fire from inside your home.

After the fire passed – Patrol your property and extinguish any spot fires or burning embers.
You may need to keep this up for several hours.

Everyone must have a contingency plan

Have a contingency plan – what will you do if you can't activate your Bushfire Survival Plan? Remember that leaving late can lead to loss of life.

Know where your nearest NSP is and how to get there.

ACTIVATING YOUR BUSHFIRE SURVIVAL PLAN

Once you have prepared your Bushfire Survival Plan and completed your preparations, it is absolutely essential that you regularly practise and review your plan. This will make sure you and your family are well organised in the event of a bushfire. If a bushfire threatens the health and safety of you, your family, home or property, you should follow these steps:

Step 1 – Activate your Bushfire Survival Plan

Someone must take charge and lead other family members through this emotional experience by carefully communicating the various tasks set out in the plan. Know who is going to leave early and who is going to stay.

Step 2 – Put on your personal protective clothing

Every member of the family must change into their personal protective clothing, including long pants, long-sleeve-shirt and closed-in shoes.

Step 3A – Pack your vehicle and leave early

If your plan is to leave early, pack all valuables in your vehicle (see Evacuation Kit) and relocate to your designated safer location. Give yourself enough time to get you and your family to safety. Don't return home until it is safe to do so.

OR

Step 3B – Implement your strategy to stay and defend

If your plan is to stay, ensure you have all the items in the Bushfire Emergency Kit ready to go. This can be a dangerous option, and you should be physically and mentally prepared.

Step 4 – Keep informed of bushfire activity

Listen to the radio, television, internet, firefighters and/or police for information on the fire in your local area. Bushfire is dynamic and unpredictable, so you need to be prepared for the unexpected. Warnings are not guaranteed, so do whatever is necessary to ensure you remain safe.

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BUSHFIRE EMERGENCY KIT

You need to have a Bushfire Emergency Kit stored in an area of the house that is safe and easy to access. It should contain:

- protective clothing
- mop
- gloves
- torch
- hoses
- shovel
- towels
- buckets
- safety goggles
- ladder
- medications
- bottled drinking water
- fire extinguishers
- battery-operated radio
- spare batteries
- smoke mask
- woollen blankets
- first-aid kit
- knapsack sprayer
- protective clothing for the whole family.



To be Amended

PREPARE.ACT.SURVIVE.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

EVACUATION KIT

Write a list of all items your family will need before, during, and after your relocation. The list below shows items that you might like to put in your evacuation kit:

- protective clothing for the whole family
- battery-operated radio and spare batteries
- safety goggles
- mobile phone and battery charger
- medications
- wallet or purse and money
- clothing (two sets of clothes for each family member)
- identity information (passports, birth certificates)
- bottled water (enough for each relocated family member)
- family and friends' phone numbers
- items of high importance (e.g. family photos, valuables, important documents)
- blankets (natural fibres)
- children's toys.



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BUSHFIRE RISK SELF-ASSESSMENT CHECKLIST



This basic self-assessment checklist is designed to give you a greater understanding of the bushfire risk level relevant to your property. Information provided in this assessment will assist you when completing your Bushfire Survival Plan.

Address:

Postcode:

Property Owner / Property Name:

ACCESS/EGRESS

Road/Street/Driveway PLEASE APPROPRIATE BOX

Clear of overhanging vegetation	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Unrestricted gate access	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Clear of overhead power lines	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Able to reverse in	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Turning/passing areas	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Heavy vehicle access on cattle grid/bridge	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Alternative way out	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Two-wheel drive access	Yes <input type="checkbox"/>	No <input type="checkbox"/>

STRUCTURE/S

Exterior walls – non-combustible	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Roof ridge capping sealed	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Eaves enclosed	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Roofing gutters and valleys clear of leaf litter and fine fuels	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Underfloor enclosed	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Vents screened	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Windows – non-combustible finishing	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Deck/veranda non-combustible	Yes <input type="checkbox"/>	No <input type="checkbox"/>

WATER SUPPLY

Reticulated water supply	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Tank supply with QFES access – 50 mm male camlock fitting so fire fighters can use water if needed	Yes <input type="checkbox"/>	No <input type="checkbox"/>
QFES accessible external open water supply (dam/pool)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Firefighting pump and hose connected to water supply	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Other considerations

There are a range of other things to be considered regardless of your decision to leave early or stay:

- Firefighting equipment (such as pumps, hoses and sprinkler systems) should be tested regularly and maintained in maximum operational working condition.
- Firefighters may need access to your property during a bushfire. So, it is in your best interests to allow enough space for fire trucks (4 metres wide by 4 metres high).
- Your pets, livestock, and other animals require proper care and attention during fires. Consider food, medication, transportation and sleeping arrangements for your animals.

To be Amended

FAQ'S

Will there always be a fire truck available to fight a bushfire threatening my home?

No, not always. Fire trucks and firefighters are a limited resource, so it is important they are deployed in an appropriate manner to best manage the fire. The QFES cannot guarantee a fire truck will be available to defend every home during a large bushfire event.

Is my home at risk from burning if there is more than 50 metres between my home and nearby bushland?

Yes, most houses destroyed in bushfires are lost as a result of ember attack. Under certain conditions, embers can cause fires to ignite up to 20 kilometres in front of the main fire. A combination of your level of preparation and your home construction will determine the survivability of your home.

Will someone from an emergency service knock on my door when it is time to leave?

Emergency services personnel are not always available to alert the community of potential risks by door knocking and encouraging you to leave. Monitor local radio stations, television networks and emergency service websites for information updates. Remember, the safest option is to leave early. Leaving too late can be fatal.

What does leaving early mean?

Leaving early means before a bushfire event has reached your neighbourhood. Leaving early could be the day before or morning of predicted extreme or catastrophic bushfire weather.

Can I be made to leave my home during a bushfire?

In Queensland, you can be ordered by the Police or Fire Service to evacuate if they believe it is necessary for your safety.

Is cleaning my gutters and mowing my lawns enough to prepare my property for bushfire?

No! Fire requires fuel, heat and oxygen to occur. The radiant heat and flying embers produced by bushfires mean that overhanging trees, shrubs and mulch against homes, woodpiles, old building materials, outdoor furniture or other objects stored under the deck or chemicals in the garden will quickly ignite. Do yourself and your neighbours a favour by taking the time to properly prepare your whole property, which includes yourself, your house and your land.

If I know the backstreets in my suburb or town very well, is it okay for me to leave at the last minute?

If your decision in your Bushfire Survival Plan is to leave early, then you should leave well before the fire front reaches your property. Irrespective of your local area knowledge, you must stick to your plan and leave early. Leaving late can be fatal.

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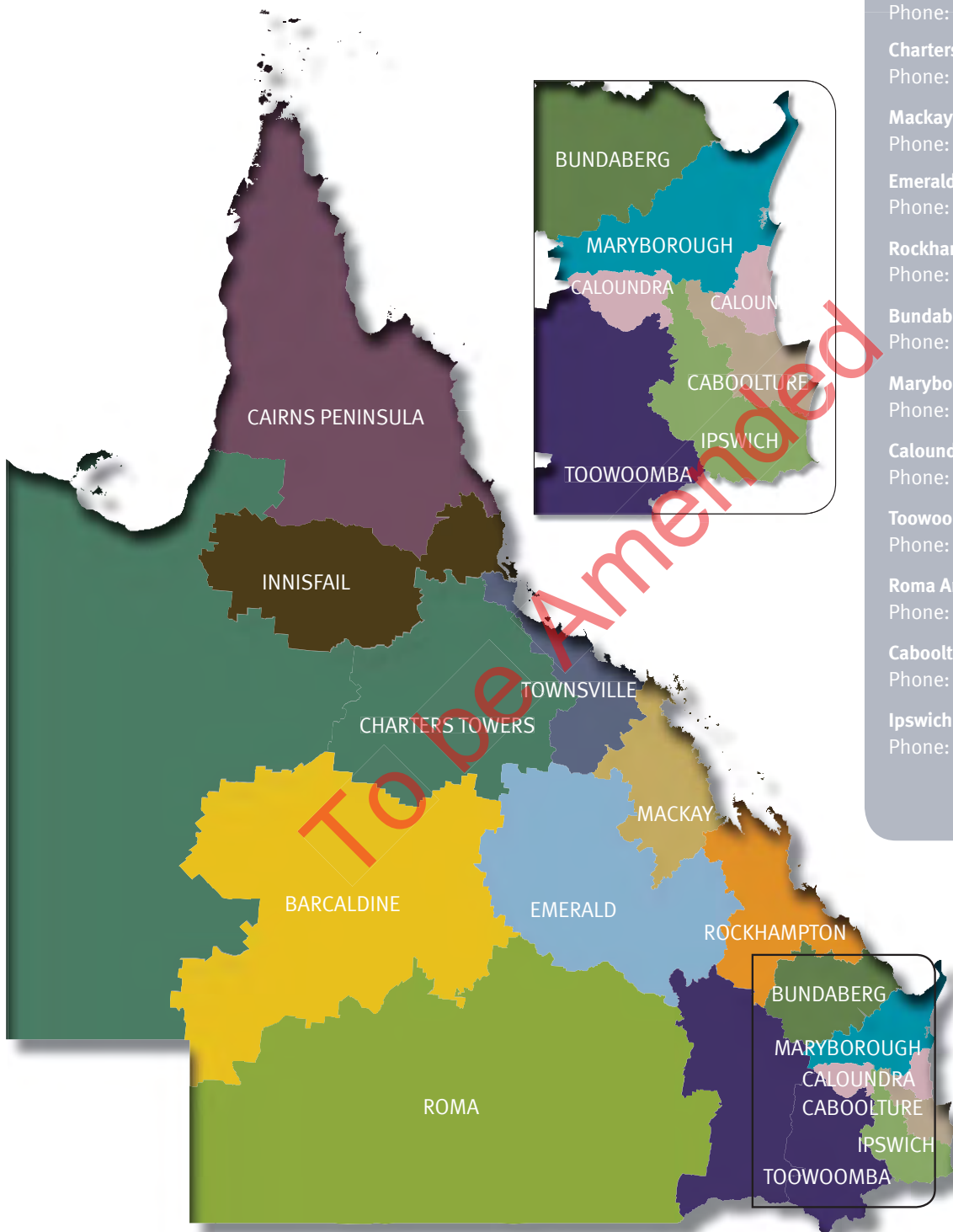
NOTES

To be Amended

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Rural Operations Areas

For further assistance contact your local Area Office



Cairns Area Office
Phone: (07) 4042 5468

Innisfail Area Office
Phone: (07) 4061 0650

Townsville Area Office
Phone: (07) 4796 9082

Charters Towers Area Office
Phone: (07) 4761 5130

Mackay Area Office
Phone: (07) 4965 6641

Emerald Area Office
Phone: (07) 4983 7580

Rockhampton Area Office
Phone: (07) 4938 4736

Bundaberg Area Office
Phone: (07) 4153 3244

Maryborough Area Office
Phone: (07) 4790 4839

Caloundra Area Office
Phone: (07) 5420 7517

Toowoomba Area Office
Phone: (07) 4616 1945

Roma Area Office
Phone: (07) 4622 2074

Caboolture Area Office
Phone: (07) 5420 1333

Ipswich Area Office
Phone: (07) 3294 4944

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Bushfire is a very real risk to many of our suburbs, so make sure you are prepared now!

FOR FURTHER INFORMATION

GO TO www.ruralfire.qld.gov.au
www.qfes.qld.gov.au

OR book a free
"Are you Bushfire Prepared?"
presentation by calling

13 QGOV



facebook.com/QLdFireandRescueService



twitter.com/QLdFES or @QLdFES



youtube.com/FireRescueQld

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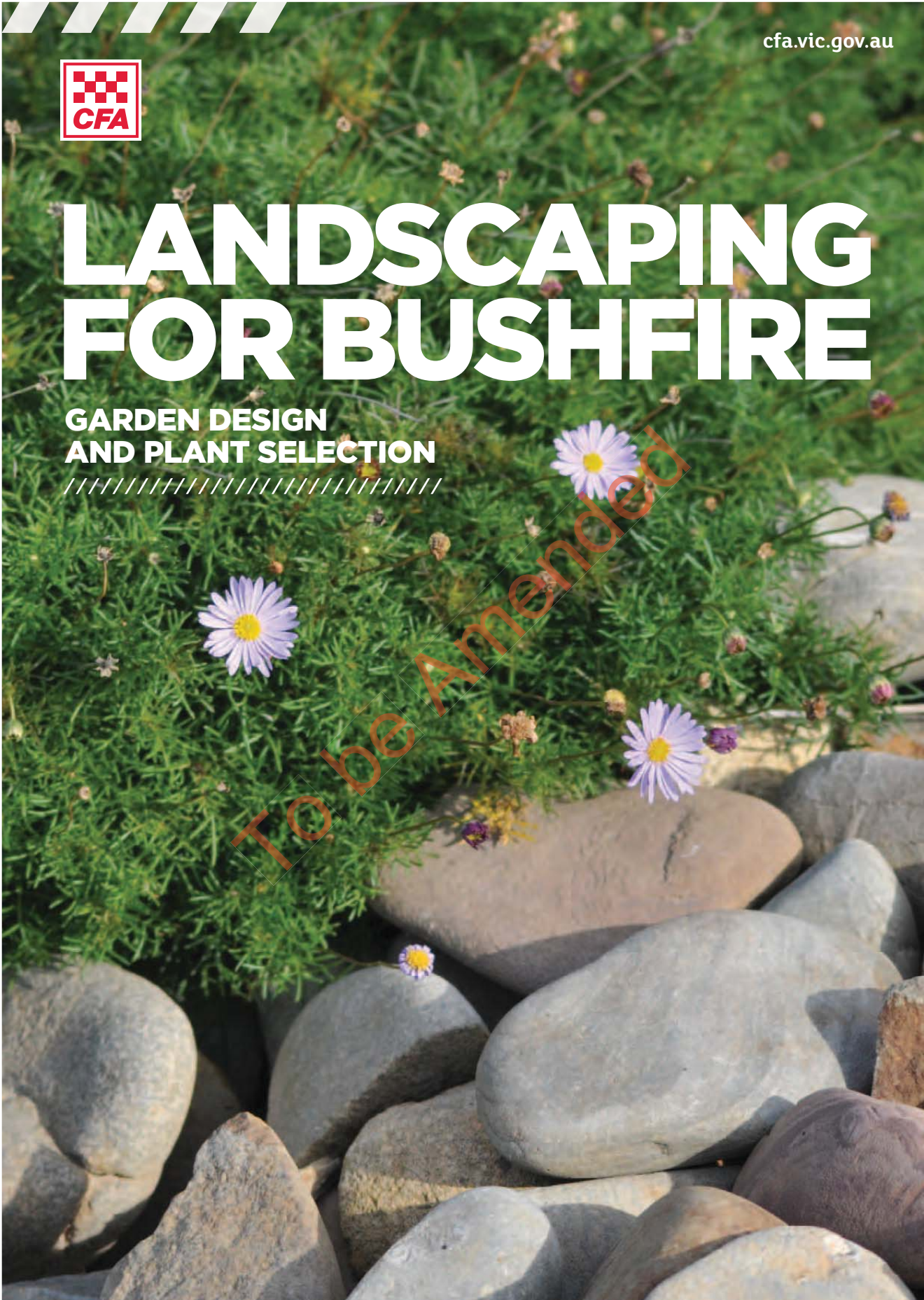
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E

Appendix E –
Landscaping for Bushfire

To be Amended

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LANDSCAPING FOR BUSHFIRE

GARDEN DESIGN
AND PLANT SELECTION



To be Amended

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FOREWORD

The type, quantity and condition of fuel has a very important effect on bushfire behaviour. The survivability of buildings, and of those who occupy and shelter in them, can be significantly enhanced or endangered by the type of plants around the building.

Landscaping for Bushfire has been developed by CFA in response to Recommendation 44 from the Victorian Bushfires Royal Commission. It forms just one part of our approach to help Victorian communities prepare for the fire season.

Residents in high bushfire risk areas need to be aware of their environment and the risks they face during the fire season. Planning ahead is essential for surviving the coming fire season. The most effective way to reduce risk in the garden is to focus on the location and arrangement of fuel on your property.

Even though all plants burn, measures can be taken to reduce fire intensity from garden plants. This guide identifies what you can do within defensible space to minimise the risk of losing your house or threatening the lives of occupants in a bushfire.

Landscaping for Bushfire is a valuable resource for home gardeners, landscape architects and nursery staff as well as CFA Fire Safety Officers, Vegetation Management Officers and Home Bushfire Advice Service consultants.

Landscaping for Bushfire bridges the gap between vegetation management and the Bushfire Management Overlay (BMO), providing advice on how to plan and maintain a garden while meeting planning permit conditions within the BMO.



Euan Ferguson AFSM
Chief Officer

The views and final content of this document remain the responsibility of CFA.

CFA makes this information available on the understanding that you take reasonable care when using it. If you have any uncertainty about the application of the information to your particular circumstance, you should obtain further professional advice.

CFA does not accept responsibility for how you apply or rely on the information in this publication.

Cover image

Brachyscome, photo courtesy of Owen Gooding.

IEB 11/2011

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SECTION 01

ABOUT THIS PUBLICATION

CFA has developed *Landscaping for Bushfire: Garden Design and Plant Selection* for new and established homes in high-risk areas. This includes properties in the Bushfire Management Overlay (see below). The focus is on residential gardens, but the design principles can be applied to larger developments and subdivisions.

WHAT INFORMATION IS COVERED?

This publication provides information on landscaping to minimise the effects of direct flame contact and radiant heat on a house during a bushfire.

Sections 2-5 are a guide to the planning and design process. There are four example gardens with landscape plans, design notes and suitable plant options. These gardens illustrate the design principles of landscaping for bushfire for gardens in coastal, hilly, rural and suburban environments.

Section 6 draws attention to the importance of garden maintenance.

Section 7 includes a Plant Selection Key. This tool can be used to help choose suitable plants with low flammability. The key is also available as an online tool at cfa.vic.gov.au/plants

Section 8 provides information on further resources and references.

WHAT IS LANDSCAPING FOR BUSHFIRE?

Landscaping for bushfire involves planning, designing, planting and managing the area around a house.

The aim is to keep the area around a house and other structures (such as carports and sheds) free of plants that can easily catch fire and then ignite the buildings.

Landscaping for bushfire can be used to create new – or modify existing – gardens. It takes into account a number of factors that include:

- understanding how fire behaves
- creating defensible space
- the location of plants within the garden
- the flammability of individual plants
- the need for ongoing maintenance.

BUSHFIRE MANAGEMENT OVERLAY

The Bushfire Management Overlay is a planning control that applies to high bushfire risk areas in Victoria. It identifies areas where the bushfire hazard requires specified bushfire protection measures to be implemented.

The Bushfire Management Overlay is identified by planning schemes and can be found at Clause 44.06. It sets out:

- the types of development that require a planning permit
- the information that must be submitted with a planning permit application
- the objectives, standards, mandatory standards and decision guidelines that must be considered in a planning permit application.

Visit dpcd.vic.gov.au for further details.

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WHY IS LANDSCAPING FOR BUSHFIRE IMPORTANT?

Victoria is one of the most bushfire-prone areas in the world. The combination of vegetation, climate and topography creates ideal conditions for bushfire. Population growth in high-risk locations means that these communities need to be well prepared for bushfires.

Landscaping using appropriate design principles and plant selection can increase the likelihood of a house surviving a bushfire – even if the plan is to leave early.

Poorly located vegetation that burns readily may expose a house to increased levels of radiant heat and flame contact.

Well-placed vegetation with low flammability may actually help protect houses by:

- reducing the amount of radiant heat received by a house
- reducing the chance of direct flame contact on a house
- reducing wind speed around a house
- deflecting and filtering embers
- reducing flammable landscaping materials within the defensible space.

A holistic approach is the best way to ensure proper preparation. It involves a combination of bushfire protection measures. These include:

- house construction and maintenance
- preparing a Bushfire Survival Plan (see the *Fire Ready Kit* – available at cfa.vic.gov.au)
- having an adequate water supply and road access
- garden design and plant selection.

FIRE RESISTANT, FIRE RETARDANT OR FIREWISE?

These terms are often used when talking about flammability characteristics of a plant. They have very specific and quite different meanings and should not be confused.

Fire resistant is a term that describes plant species that survive being burnt and will regrow after a bushfire. They are resistant to being killed by a bushfire, but not to being burnt. Therefore, they may be highly flammable and inappropriate for a garden in a high bushfire risk area.

Fire retardant can also be misleading when referring to plants. It implies that a plant will not burn readily or may slow the passage of a fire. It cannot be emphasised enough that all plants will burn under the right conditions.

Firewise, in this document, refers to the flammability ranking system applied to a plant by the Plant Selection Key (see Section 7). The term is linked with advice about maintenance and where that plant should be located within a garden.



IMPORTANT



While a well-planned garden is important, it is only one aspect of preparing for bushfire. It should not be relied upon in isolation. In high-risk areas on **Severe, Extreme** and **Code Red** days, leaving early is always the safest option.

SECTION 02

BUSHFIRE BEHAVIOUR

Understanding how bushfire behaves and destroys houses is important when planning, designing and selecting suitable plants for a garden. There are three major factors that influence bushfire behaviour: topography, weather conditions and vegetation.

TOPOGRAPHY (OR SLOPE)

Fire burns faster uphill. As the slope increases so does the speed of the fire and its intensity.

Flames and radiant heat preheat the vegetation ahead of the fire. This dries it out, making it easier to burn.

WEATHER

Hot, dry and windy days provide ideal conditions for a bushfire. In summer, these are common weather conditions that increase the flammability of vegetation.

Low humidity and high temperatures, which are fuelled by hot winds, dry out vegetation, allowing it to readily ignite.

VEGETATION (FUEL)

Plants are the primary source of fuel for a bushfire.

The amount of fuel available to a bushfire and where the fuel is located can directly impact on house survival. Understanding how vegetation influences fire behaviour is important when planning a garden.

Within a property, vegetation management and the placement of other flammable objects around the house can determine the amount of fuel available to a bushfire.

The amount, type (flammability) and arrangement of vegetation affects how easily a bushfire will spread throughout a garden.

Fine fuels such as leaf litter readily dry out, ignite and can be carried as embers. Shrubs, vines and other elevated fuel can act as ladder fuels, allowing fire to climb into the canopies of trees, significantly increasing bushfire intensity.

Breaking up the continuity of the vegetation can limit the spread of fire within the garden.

Remember there are no 'fire proof' plants. All plants can burn under the right conditions – typically in extreme fire weather following extended drought.

See Section 4 for more information about how to minimise bushfire risk through garden design.



Leaf litter and dead plant material on and around houses and gardens can be cleared to reduce the risk of them catching fire or becoming burning embers.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

HOW BUSHFIRE DESTROYS HOUSES

House survival is influenced by many interacting factors. The four main ways houses are destroyed during a bushfire are:

- ember attack
- radiant heat
- direct flame contact
- wind.

Ember attack is the most common way houses catch fire during a bushfire. Ember attack occurs when small burning twigs, leaves and bark are carried by the wind, landing in and around houses and their gardens.

If they land on or near flammable materials, such as leaf litter and dead plant matter, they can develop into spot fires. Embers can also ignite a house if they land on or near vulnerable parts of the building.

Radiant heat is the heat created from combustion during a bushfire. It can:

- ignite surfaces without direct flame contact or ember attack. This is due to the heat being received from the fire
- dry out vegetation ahead of the bushfire so that it burns more readily
- crack and break windows, allowing embers to enter a building
- distort and melt materials such as plastic.

Flame contact occurs when flames touch a house. Any burning vegetation can directly ignite a house if it is planted too close.

Wind can be very destructive to houses in a bushfire because it:

- carries embers
- can cause trees to fall onto buildings
- can break windows
- can loosen roof tiles
- can blow roofs off houses under severe conditions.



Ember attack

SECTION 03

PLANNING A GARDEN

Before designing a garden, there are a number of factors to consider. Reducing bushfire risk to any house is most effective when considered early in the planning process.

NEW HOUSES

Property layout

Think strategically about where the house is located and how the garden around it is designed. That way, it is possible to achieve multiple outcomes – bushfire safety considerations are incorporated but are not the only function of the garden.

Find out what building and planning regulations apply to the property. Visit land.vic.gov.au or talk to the local council. Depending on the bushfire risk, these regulations may influence:

- where the house can be built
- the construction level required
- how to manage the vegetation within the property.

Information in this section is based on the bushfire protection requirements for building in high bushfire risk areas.

The requirements are fully set out in Planning Schemes at Clause 52.47 Bushfire Protection: Planning Requirements (see Further Resources) but are summarised below.

Understanding how these factors influence bushfire can avoid unnecessarily increasing the risk within properties.

Bushfire protection requirements

SITING AND DESIGN

One of the most effective ways to reduce bushfire risk is the appropriate location of a house within a property. Features of the topography can be used to help minimise bushfire spreading into and within the property. Houses should be located away from unmanaged vegetation, steep slopes, saddles or narrow ridge tops. They should ideally be located close to public roads and accessways.

Look at the landscape in and around the property:

- What is the bushfire risk from the surrounding area?
- Is there existing vegetation within or close to the property that will pose a significant bushfire hazard?

Anywhere that embers can lodge or enter a house can start a fire.

There are areas of a house that contribute more to overall bushfire risk than others. These include decks, windows, doors and roof areas. Complex designs that may create nooks and crannies allow dead plant material and embers to drop and accumulate.

DEFENDABLE SPACE

Defendable space is an area of land around a building where vegetation is modified and managed to reduce the effects of flame contact and radiant heat associated with bushfire. It breaks up continuity and reduces the amount of fuel available to a bushfire.

It is one of the most important aspects of preparing properties for bushfire. This is because defendable space separates the bushfire hazard and the house. The greater the separation from the bushfire hazard, the lower the risk.

Defendable space can prevent direct flame contact and minimise the effects of radiant heat on the house. This reduces the risk of house loss during a bushfire, regardless of active defence.

Defendable space:

- comprises an inner and outer zone with different vegetation management requirements
- needs careful garden design that considers the location of all flammable objects
- requires regular maintenance that should be included as part of every Bushfire Survival Plan.

Requirements for defendable space will vary depending on the type of development and the level of bushfire risk to a property. Section 4 provides further detail about defendable space requirements.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Complex house designs allow dead plant material and embers to accumulate.

CONSTRUCTION

The way a building is constructed can help reduce the risk of house loss via radiant heat and ember attack.

Construction standards are linked to defensible space. The greater the area of defensible space, the lower the construction requirement under Australian Standard AS3959-2009: Construction of Buildings in Bushfire-prone Areas.

A bushfire site assessment is required to determine the construction standard that will apply to any house. Details for undertaking a bushfire site assessment in the Bushfire Management Overlay can be found in Department of Planning and Community Development (DPCD) *Practice Note 65: Bushfire Management Overlay and Bushfire Protection: Planning Requirements* (see Further Resources).

PROVISION OF SERVICES

Water is essential for firefighting.

The amount and reliability of water is critical for all properties and must be considered in relation to the bushfire risk.

In all areas the water supply must have appropriate pressure, access and fittings. In the Bushfire Management Overlay, a water supply must be provided.

Access is just as important as it provides a way for residents to get out and the fire services to get in. Roads must be capable of accommodating fire trucks and will require specific construction standards, as well as width and clearance, depending on the property.

For minimum water supply and access requirements that apply to a property in the Bushfire Management Overlay, refer to *CFA Fire Service Guideline: Land Use Planning 0002: Requirements for Water Supply and access in a Bushfire Management Overlay* (see Further Resources).

HOME BUSHFIRE ADVICE SERVICE

Book a free Home Bushfire Advice visit for help assessing bushfire risk at a particular property.

To book an appointment, complete the online form on the CFA website. One of CFA's trained Fire Safety Officers will provide tailored advice, delivered on the property.

Self assessment of bushfire risk can be undertaken by using the Online Household Bushfire Self-Assessment Tool at cfa.vic.gov.au

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Paths provide separation between garden beds.

Water feature

Non-flammable outdoor furniture

Water feature

LANDSCAPING

Once the layout of the property is decided there are some decisions to make about what type of garden will be planted.

Gardening is a personal activity and when planning any garden there are many considerations apart from bushfire.

While this publication focuses on gardening to reduce bushfire risk, any garden must meet the needs of those that are using and maintaining it. If a garden suits the needs of residents it is more likely to be maintained from year to year.

There are many different styles of gardening. Some focus on native vegetation, productive or water-sensitive design.

Whatever style is chosen the garden must be appropriate to the local area. Seek advice from the local council (see Further Resources) about species that are suited to a particular location. This will help to avoid planting environmental weeds or invasive plants.

Consider bushfire risk early in the garden planning process. By incorporating the design principles in Section 4, costs can be minimised and bushfire mitigation will complement other functions of the garden.

When planning a garden some things to consider include:

- budget
- the local growing conditions that may affect plant selection
- ongoing maintenance requirements
- function and style of the garden.

Think about how the features below are incorporated into the overall garden design as they may reduce the spread of fire by providing separation between the house and bushfire hazards. For example:

- paths
- pools or water features
- tennis courts
- vegetable gardens.

EXISTING HOUSES

The information outlined on page 6 about defensible space and landscaping is relevant to planning a garden for existing houses.

However, there are also some specific points that need consideration.

CONSTRUCTION

The resilience of existing houses can be improved by retrofitting some building elements.

More advice can be obtained from *A guide to retrofit your home for better protection from a bushfire* (see Further Resources).

PROVISION OF SERVICES

In high bushfire risk areas, it is recommended that a dedicated water supply is installed for firefighting purposes. Where possible, access should meet the requirements as outlined for new houses.

RULES FOR VEGETATION CLEARANCE AROUND EXISTING HOUSES

Throughout Victoria there are restrictions for vegetation clearance on private property. These are contained in the planning scheme of each municipality. In many cases, a planning permit is required to remove vegetation.

In areas where bushfire is a risk, there are particular circumstances where a permit is not required for vegetation removal around existing houses.

For example, the Victoria Planning Provisions Clause 52.17 Native Vegetation outline exemptions that apply for removing, destroying or lopping native vegetation for fire protection. Clause 52.48 Bushfire Protection: Exemptions refers to the 10/30 and 10/50 rules.

To find out if these exemptions apply to a particular council, refer to the relevant planning scheme (see Further Resources).

The 10/30 rule

The 10/30 rule applies to a building used for accommodation that was:

- constructed before 10 September 2009 or approved by a planning or building permit issued before 10 September 2009.

It allows landowners to:

- Remove, destroy or lop any vegetation within 10 metres of an existing building used for accommodation.
- Remove, destroy or lop any vegetation, except for trees within 30 metres of an existing building used for accommodation.
- Remove, destroy or lop any vegetation for a combined maximum width of 4 metres either side of an existing fence on a boundary. The fence must be between properties of different ownership and have been constructed before 10 September 2009.

The 10/50 rule

The 10/50 rule applies only to land in the Bushfire Management Overlay. It applies to a building used for accommodation that was:

- constructed before 10 September 2009 or lawfully erected before 18 November 2011 without the need for a planning permit
- approved by a planning or building permit before 10 September 2009 and erected before 18 November 2011
- approved by a building permit before 10 September 2009 and erected before 18 November 2011.

The 10/50 rule allows landowners to:

- Remove, destroy or lop any vegetation within 10 metres of an existing building used for accommodation.
- Remove, destroy or lop any vegetation, except trees, within 50 metres of an existing building used for accommodation.
- Remove, destroy or lop any vegetation for a combined maximum width of 4 metres either side of an existing fence on a boundary between properties. The fence must be between properties of different ownership and have been constructed before 10 September 2009.

⚠ IMPORTANT

In high bushfire risk areas properties may need a greater amount of defensible space. Clearance over the distances stipulated in the 10/30 and 10/50 rules require a planning permit.

SECTION 04

DESIGNING A GARDEN

Effective defensible space, house construction, water and access in new and existing gardens can all be compromised by inappropriate landscaping.

The location, type and ongoing maintenance of vegetation within a property have a significant impact on the bushfire risk to any house. These factors can prevent the accumulation of debris and prevent the spread of fire towards a building.

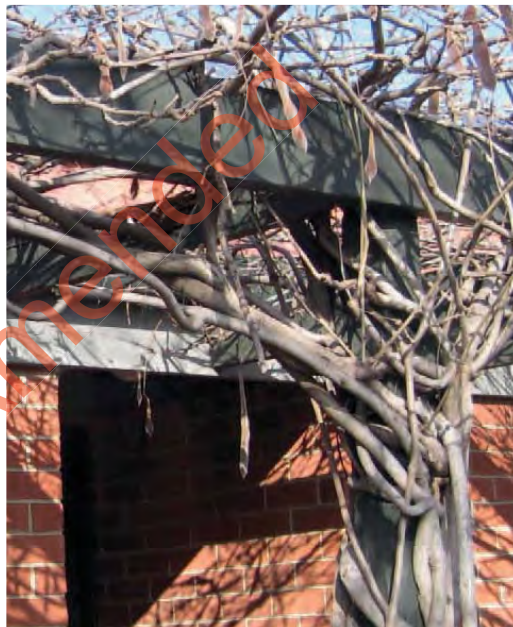
When designing a new or modifying an existing garden, carefully consider the placement of garden beds, trees and other vegetation to reduce the bushfire risk to the house.

When selected and located correctly, plants can filter embers, absorb radiant heat and break up fuel in the path of a bushfire.

However, plants can also contribute to house loss by:

- providing a continual fuel path to the house, allowing direct flame contact
- dropping leaf litter on the ground, which readily ignites and can become embers
- dropping limbs or tree branches onto the house
- adding to fuel loads on or near the house, such as creepers over pergolas, fences or verandahs
- if located too close, producing radiant heat that may ignite the house or cause windows to break, allowing embers into the house
- acting as ladder fuel from the ground into tree canopies, increasing the intensity of the fire.

Vegetation should always be kept clear of access to and from the house and property.



Vines and creepers act as ladder fuels.



Vegetation located too close to a house poses a threat during bushfire.

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Garden bed framed by non-flammable landscape materials.
Australian Garden, Royal Botanic Gardens Cranbourne.

The following design principles outline how defensible space can be used to reduce radiant heat, prevent flame contact and minimise ember attack on the building.

These design principles are based on the bushfire protection requirements within the Bushfire Management Overlay.

These principles should be followed in all types of gardens.

**DESIGN PRINCIPLE 1
CREATE DEFENDABLE SPACE**

**DESIGN PRINCIPLE 2
REMOVE FLAMMABLE OBJECTS
FROM AROUND THE HOUSE**

**DESIGN PRINCIPLE 3
BREAK UP FUEL CONTINUITY**

**DESIGN PRINCIPLE 4
CAREFULLY SELECT,
LOCATE AND MAINTAIN TREES**

To be Approved

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

**DESIGN PRINCIPLE 1
CREATE DEFENDABLE SPACE**

What is it?

Defendable space is an area of land around a building where vegetation is modified and managed to reduce the effects of direct flame contact and radiant heat associated with bushfire. It breaks up continuity and reduces the amount of fuel available to a bushfire.



Managing vegetation within the defendable space does not mean clearing all plants and trees. There may be opportunities to retain existing vegetation depending on its flammability, location and management.

Whether starting from scratch or making changes to an existing garden, there are ways to design an effective defendable space.

Defendable space needs careful garden design and regular maintenance. It consists of an inner and an outer zone:

- ▶ The **inner zone** is the area immediately around the house. It provides separation from fuel sources, reduces radiant heat, eliminates direct flame contact and reduces ember attack. Vegetation needs significant and intensive management. Fuel is managed to a minimum level in this zone.
- ▶ The **outer zone** sits between the inner zone and unmanaged vegetation (beyond the defendable space). Vegetation is managed to a more moderate level to substantially decrease the ground fuel and restrict the fuels available to an approaching bushfire.

How to calculate it

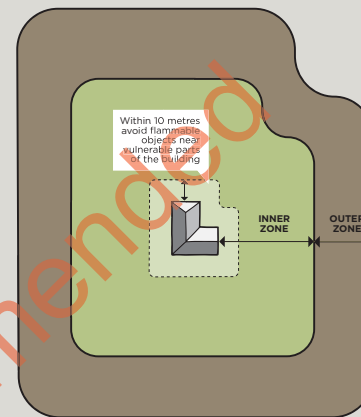
Requirements for defendable space will vary. They depend on the type of development and the level of bushfire risk to the property.

New houses in a Bushfire Management Overlay

As part of the planning permit process, defendable space requirements are determined by a bushfire site assessment. Permit conditions will prescribe the inner and outer zone distances for vegetation management. The site assessment process is outlined in DPCD Practice Note: 65: *Bushfire Management Overlay and Bushfire Protection: Planning Requirements* (see Further Resources).

In the **inner zone** fuel should be managed to the following condition:

- ▶ Within 10 metres of a building, flammable objects such as plants, mulches and fences must not be located close to vulnerable parts of the building such as windows, decks and eaves.
- ▶ Trees must not overhang the roofline of the building, touch walls or other elements of a building.
- ▶ Grass should be no more than 5 centimetres in height. All leaves and vegetation debris are to be removed at regular intervals.
- ▶ Shrubs should not be planted under trees.
- ▶ Plants greater than 10 centimetres in height at maturity must not be placed directly in front of a window or other glass feature.
- ▶ Tree canopy separation of 2 metres and overall canopy cover no more than 15 per cent at maturity.



The **outer zone** fuel should be managed in the following condition:

- ▶ Grass must be no more than 10 centimetres in height and leaf and other debris mowed, slashed or mulched.
- ▶ Shrubs and trees should not form a continuous canopy.
- ▶ Tree branches below 2 metres from ground level should be removed.
- ▶ Trees may touch each other with an overall canopy cover of no more than 30 per cent at maturity, with few shrubs in the understorey.
- ▶ Shrubs should be in clumps no greater than 10 square metres, which are separated from each other by at least 10 metres.

For both the **inner zone** and **outer zone**:

- ▶ Non-flammable features such as tennis courts, swimming pools, dams, patios, driveways or paths should be incorporated into the proposal, especially on the northern and western sides of the proposed building.
- ▶ Features with high flammability, such as doormats and firewood stacks, should not be located near the structure.

Existing houses and houses outside the Bushfire Management Overlay

Defendable space can be calculated using CFA's online Household Bushfire Self Assessment Tool available at cfa.vic.gov.au. Ideal defendable space requirements can be worked out using this tool.

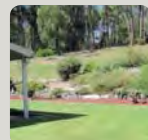
What to include

Plants and other flammable objects provide fuel for bushfires and defendable space requires ongoing maintenance.

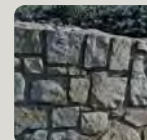
When modifying an established garden, it is critical to consider existing vegetation and other flammable objects within the defendable space.

If planting new vegetation, ensure that it is not compromising the effectiveness of the defendable space by significantly increasing the amount of fuel or adding to its continuity.

Landscaping for bushfire should:



- ▶ Locate areas of low fuel between the house and the bushfire hazard (for example, maintained lawn, ponds, pools and tennis courts).
- ▶ Locate farm machinery, sheds and poison well away from the house (as they too may become fuel in a bushfire).



- ▶ Use landscaping features to provide barriers to wind, radiant heat and embers (such as stone walls and non-combustible fences).
- ▶ Use materials such as brick, earth, stone, concrete and galvanised iron. These can act as radiant heat barriers.



- ▶ Use driveways and paths to create separation between vegetation and the house. Suitable materials include clay, concrete, gravel and pebbles.
- ▶ Locate non-combustible water tanks to act as radiant heat barriers.

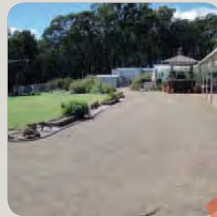
DESIGN PRINCIPLE 2 REMOVE FLAMMABLE OBJECTS FROM AROUND THE HOUSE

The area immediately surrounding a house should be clear of flammable objects that can catch fire during a bushfire.

Within 10 metres of a building, flammable garden materials (such as plants, mulches and fences) must not be located close to vulnerable parts of the building (such as windows, doors, decks, pergolas and eaves). The intention is to prevent flame contact on the house.

There are a number of things that can be done to support this design principle:

- Locate non-flammable surfaces (such as paths, driveways and paved areas) against the house.



- Ensure trees are planted away from the house so they do not cause damage if they fall. They must not overhang the house and should be located 1.5 times their mature height from the house.

For example, if a mature tree height is 8 metres, it should be planted at a minimum of 8 metres x 1.5 = 12 metres away.

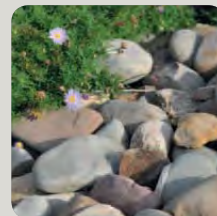
- Maintain grass to no more than 5 centimetres in height in the inner zone and 10 centimetres in the outer zone.



- Use non-combustible, moveable containers and pots that can be relocated in the summer.

- Avoid flammable mulches within the defensible space. Mulch is used to improve the quality of soil, improve water efficiency and keep plants cool and moist in the summer. Most mulch used in gardens can also be a bushfire hazard as it will dry out and burn.

Alternatives include gravel, scoria, pebbles, shells or recycled crushed bricks. These materials provide the same role and come in a variety of shapes and colours.



- Remove other flammable objects from around the house. These include sheds, caravans, outdoor furniture, barbecues, gas bottles, wood piles and organic mulch.

These should not be placed within 10 metres of the house and must have adequate separation from other flammable objects, including plants.

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DESIGN PRINCIPLE 3 BREAK UP FUEL CONTINUITY

One of the most effective ways to reduce the spread of fire within a garden is to create separation between plants, garden beds and tree canopies.

Fire spreads easily when plants are located close together.

When a plant catches fire it can preheat and ignite the vegetation around it through radiant heat or direct flame contact.

If there is continuous vegetation leading up to and surrounding a house, fire is likely to spread throughout the garden to the house. Grouping plants and garden beds with areas of low fuel between them can help avoid this by breaking up fuel continuity.

Ways to reduce fuel continuity include:

- Locating shrubs or other flammable objects away from trees. If planted under trees, vegetation can act as a ladder fuel and carry fire into canopies.
- Clumping shrubs and trees so they do not form a continuous canopy and are separated by areas of low fuel.
- Using gravel paths, non-flammable mulch and mown grass to provide separation and areas of low fuel between plant groupings and garden beds.
- Pruning branches to a minimum of 2 metres above the ground. This increases the vertical separation between fuel at ground level and the canopy.



Paths can be used to break up fuel continuity.
Australian Garden, Royal Botanic Gardens Cranbourne.



Mown grass provides separation between garden beds.
Australian Garden, Royal Botanic Gardens Cranbourne.

DESIGN PRINCIPLE 4 CAREFULLY SELECT, LOCATE AND MAINTAIN TREES

Trees can be useful during a bushfire, provided they are:

- selected carefully
- properly maintained
- located at a safe distance from the house.

Bushfires are often accompanied by strong winds, which may cause branches to break or whole trees to blow over. Trees can also catch fire, burn through and fall over.

Correctly selected and located trees can:

- reduce wind speed
- absorb radiant heat
- filter embers.

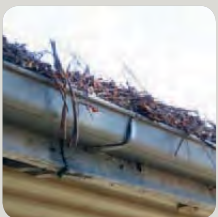
Fire is rarely sustained in the tree canopy, unless there is a fire burning in the plants or leaf litter under the tree.

When implementing this design principle:



- Avoid trees with loose, stringy or ribbon bark.
- Separate tree canopies by at least 2 metres.
- Canopies should cover less than 15 per cent of the inner zone and 30 per cent of the outer zone.

- Prune branches to a minimum of 2 metres above the ground increasing the vertical separation between fuel at ground level and the canopy.
- Locate trees at a safe distance from all other buildings, driveways, water supplies and powerlines. They should be at least 1.5 times their mature height away.
- Do not plant trees near shrubs, as shrubs can carry fire into tree canopies.



- Periodically remove dead leaves, bark and branches as well as leaf litter from underneath trees around the house.

Windbreaks

Trees can also be planted for windbreaks but are most effective in a fire of low to moderate intensity.

However, windbreaks are only one of many factors that affect the speed and progression of a bushfire.

Windbreaks are not a stand alone solution because:

- it takes time for trees to grow and they may not provide protection for some years
- wind direction can change and spot fires occur, allowing bushfires to approach from any direction.

Other things to remember are that:

- there needs to be adequate separation between a building and the windbreak
- a windbreak should not be planted within the defensible space
- trees should be carefully selected and will require ongoing maintenance
- highly flammable trees will become a fire hazard
- the windbreak should be planted at right angles to prevailing winds
- the windbreak should allow some wind to pass through
- the windbreak should have a continuous length of at least 100 metres if possible
- slashed, well-watered grass should be planted underneath the windbreak
- routine maintenance must be carried out to remove leaf litter and other dead plant material from underneath the windbreak.

TYPES OF GARDENS

The following four gardens provide practical examples of landscaping for bushfire, using the design principles outlined earlier in this section.

Plants have been selected for each location for their characteristics of low flammability (see the Plant Selection Key in Section 7).

The example gardens also highlight the importance of proper maintenance.

LEAVING EARLY

In high-risk areas, bushfire behaviour will be driven by the heavily vegetated landscape. While garden design and maintenance can improve the chances of a house surviving a bushfire, do not rely on these in isolation. A garden will not provide protection in a bushfire.

A holistic approach to bushfire preparation is critical. Appropriate water supply, access, house construction and general property maintenance are all important.

On **Severe, Extreme** and **Code Red** days leaving early will always be the safest option.

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**MODEL 1
COASTAL GARDEN**

Establishing and maintaining a garden in a coastal location can be particularly challenging. Strong, seasonal winds, sometimes coupled with high levels of airborne salt, provide difficult growing conditions. These can reduce the height and modify the shape of many garden plants and limit overall growth potential.

Coastal landscapes are also typically exposed to high light conditions and elevated temperatures. These factors, often coupled with sandy, shallow soils with poor water retention, mean that horticultural practices to retain soil moisture, such as addition of organic matter and mulches, become critical for garden success.

Creating microclimates through shelter and screening can minimise these problems and enable a larger range of plants to be grown successfully.

When planning a coastal garden, consider the local site's topography, aspect and neighbouring vegetation.

Gardens located on slopes are more likely to experience the effects of strong winds than those in protected locations.

North-facing gardens are more likely to rapidly dry out during hot summer days. Those in a southerly aspect are more protected.

Natural vegetation growing near the coast is often highly flammable and in some places will be in close proximity to a home garden.

In any of these situations the application of the design principles, such as incorporation of a defendable space and location and arrangement of plants, is particularly important.

EXAMPLE: COASTAL MODEL GARDEN

The numbers here refer to the illustration below and those on pages 20-21.

The paved sitting area ①, lawn ② and low-sitting wall ③ provide separation between the house and the direction of the most likely fire hazard.

A small tree ④ is located well away from the house. It provides shade and may also catch embers during a fire. Planting beneath the tree has been kept very low and short. The lower branches of the tree are pruned up to 2 metres from ground level to prevent a fire from moving into the canopy. Behind the tree, a fleshy-leaved hedge ⑤ is managed as a long, barrier planting. This will also help catch embers.

The area within the property that is most likely to be impacted first by fire has been planted out as a vegetable garden ⑥ and orchard ⑦. Good separation is provided between all trees and garden beds to help slow fire spread. The entire area is irrigated to keep plants lush over hot summer days. The service area ⑧, with a shed and washing line, is kept well away from the house in the garden's south-west corner.

Large steel pots with upright succulent plants ⑨ soften the paved area and can be moved away from the house during summer. The low stone wall acts as a radiant heat barrier and forms an attractive garden feature.

The area north of the house ⑩ includes smaller growing succulents that minimise the amount of flammable material near the carport ⑪. Both the carport and the pergola against the house ⑫ are constructed of steel. Using this material avoids adding fuel close to the house. The driveway and carport ⑬ have 4 metres vertical and horizontal clearance for vehicle access.

Small deciduous trees ⑭ have been planted well away from the house and carport. This ensures there are no overhanging branches and they do not obstruct the driveway. Good separation between the canopies has been provided. Other characteristics such as smooth bark and an open habit contribute to the low flammability rating of these trees.

The gravel driveway ⑮ and portions of the front garden include bands of decorative stone as a design feature. The front garden also includes strips of lawn ⑯ between the beds of low shrubs and groundcovers. This provides good separation between plantings and reduces potential fire movement across the garden.

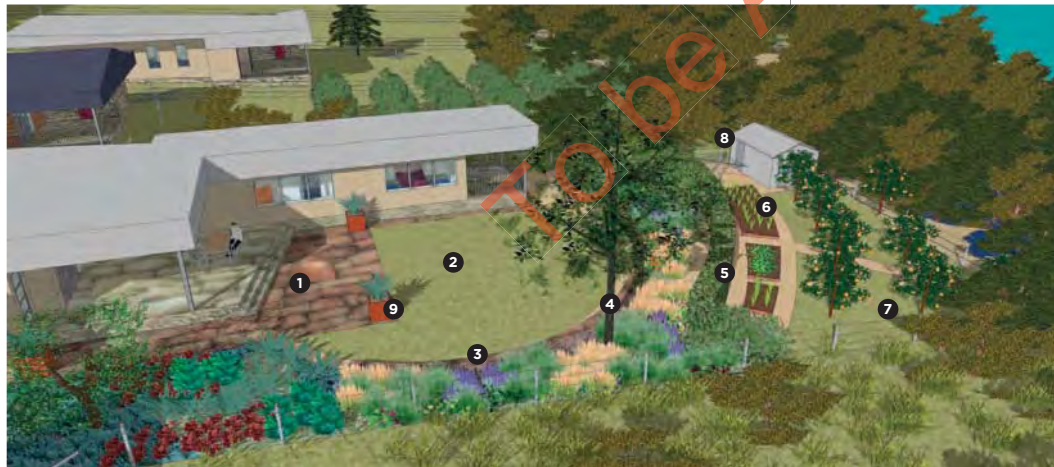
Plants chosen for the model garden have been selected for their firewise properties.

SMALL ORCHARD AND VEGETABLE GARDEN

Located on the coastal side of the property, this area adjoins the remnant indigenous vegetation. The orchard includes widely spaced *Citrus* trees (Lemon, Orange) and a lawn of *Stenotaphrum secundatum* 'Sir Walter' (Sir Walter Buffalo Grass). The vegetable garden includes small soil-raised beds edged by rock and is drip irrigated from tank water on site.

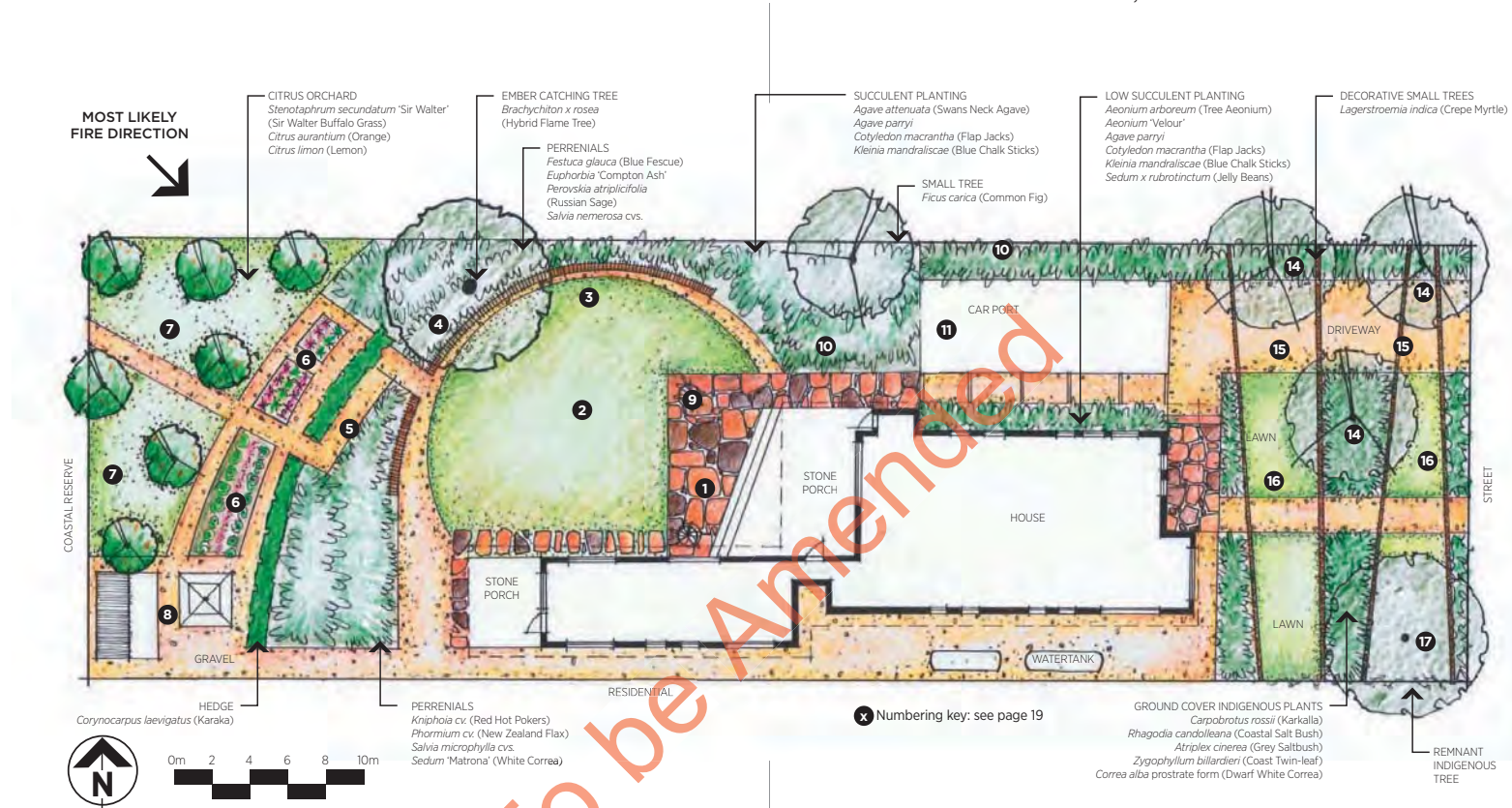
HEDGE

The plant used for the medium-sized hedge (2m x 1m) is *Corynocarpus laevigatus* (Karaka). It is a fleshy, evergreen shrub from New Zealand. While maintenance of the hedge is important to reduce plant litter build-up, it is a good example of a firewise plant. This species retains very little dead foliage and has low levels of oils, waxes and resins in the plant tissues.



See also next page.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



PERENNIALS

A decorative mix of evergreen and herbaceous perennials and short grasses are planned for this part of the garden to provide colour and textural qualities for most of the year. Where located near the tree, they will be maintained to a low height to ensure good separation.

Plants selected include *Festuca glauca* (Blue Fescue), *Euphorbia* (Compton Ash), *Kniphofia* cv. (Red Hot Pokers), *Perovskia atriplicifolia* (Russian Sage), *Phormium* cv. (New Zealand Flax), *Salvia nemerosa* (Woodland Sage), *Salvia microphylla* (Baby Sage) and *Sedum* (Matrona).

SMALL TREES

The trees are planted across the garden with low, herbaceous vegetation planted beneath them. This planting arrangement will maximise separation between the vegetation and their canopies. The canopies will also be maintained 2 metres apart to reduce fire spread.

Brachycton x rosea (Hybrid Flame Tree) has been placed more than 10 metres from the house. It has an open, branching habit, fleshy stems and plays a role in ember catching.

Ficus carica (Common Fig) is a small, deciduous, productive tree with an open habit, smooth bark, large leaves stems and plays a role in ember catching.

Lagerstroemia indica (Crepe Myrtle) is also a deciduous tree with smooth bark and open habit. In this garden it will be managed as a pollarded tree (a tree whose

LOW SUCCULENT PLANTINGS

top branches have been cut back to the trunk so that it produces a dense growth of new shoots). This treatment reduces its overall height, as well as keeping lower branches and canopy clear from the ground.

A small linear bed planting of succulents is planted near the house and carport. In the example above, the succulent plants are low in height, have very low flammability and are set well below the house windows. This provides good separation between succulent plantings and vulnerable areas of the house.

Species used here include: *Agave attenuate* (Swans Neck Agave), *Agave parryi*, *Aeonium arboreum* (Tree Aeonium), *Cotyledon macrantha* (Flap Jacks), *Klelia mandraliscae* (Blue Chalk Sticks), *Aeonium* 'Velour' and *Sedum x rubrotinctum* (Jelly Beans).

GROUND COVER INDIGENOUS PLANTS

These consist of low-growing, indigenous ground cover plants. They have low flammability features, such as leaf and stem succulence and low litter carrying.

They include *Carpobrotus rossii* (Karkalla), *Rhagodia candolleana* (Coastal Salt Bush), *Atriplex cinerea* (Grey Saltbush), *Zygophyllum billardieri* (Coast Twin-leaf) and *Correa alba* prostrate form (Dwarf White Correa).

TURF AREAS

The turf species used here is *Stenotaphrum secundatum* 'Sir Walter' (Sir Walter Buffalo Grass), a soft, low-growing and drought-tolerant grass.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

**MODEL 2
HILLS GARDEN**

The foothills and mountains of Victoria generally provide exceptional conditions for growing gardens. They typically have higher rainfall, cooler temperatures, deeper soils and well-drained sites. This environment enables a wide range of plants to be grown successfully.

As a result, hills gardens often display great diversity and layers of vegetation, from large trees and shrubs through to ground covers and herbaceous perennials.

The design of a hills garden should carefully consider the local site and context. Many gardens will be located in areas adjoining native forests or tall trees that are highly flammable. In these high-risk sites bushfire can move readily across the landscape (see page 17). Leaving early is the safest option.

Dual-access driveways and multiple entry points should be considered in the design of a garden. This will improve access into and from the site. Using stone or masonry retaining walls is preferable to timber structures. Terracing should be considered on very steep sites to support level areas.

Good garden maintenance is essential in a hills garden. These gardens can produce large amounts of plant growth, including litter, bark and dead leaves.

To reduce fuel load build-up, removal of litter through tree and shrub canopies, such as dry bark hanging from trees and on the ground, is an important garden maintenance task. Pruning trees to raise the canopy 2 metres from the ground and placing trees to ensure canopies are at least 2 metres apart reduces potential fire spread into and between the canopies.

The most suitable vegetation to plant around the house is irrigated, green lawns. Any trees should be placed at least 1.5 times their mature height from the house. Choose low flammable and lush vegetation, particularly in high-risk areas. Locate plants in clumps, away from the house and other flammable structures.

Remember fire can spread from any direction, regardless of slope and aspect.

EXAMPLE: HILLS MODEL GARDEN

The numbers here refer to the illustration below and those on pages 24 and 25.

This hills garden is located within steeply sloping, dense *Eucalyptus regnans* (Mountain Ash) forest. It is typical of many areas including the Dandenongs and the Macedon and Kinglake Ranges.

Some indigenous eucalypts have been retained within the property 1 but only those that are located more than 10 metres from the house. They have been retained in clumps and do not overhang the house. Any hanging bark and litter from these trees will be removed from surrounding garden plants during the summer months to help prevent fire ladders into the high canopies 2.

The vegetation chosen beneath these trees 3 includes herbaceous ground covers. They ensure maximum separation between vegetation and the canopy. These have been carefully chosen for their low flammability and dense, lush summer growth.

The orchard trees 7 are planted with 2 metres between the mature canopies to reduce potential fire spread. The extensive lawn areas slope downwards to the house 5 and those at the property's southern end 6 provide areas of low fuel within the defensible space. They will be irrigated and mown low over summer.

Stone terracing 4 reduces the steepness of the slope and makes necessary maintenance easier. The house has been located along the eastern side of the property to provide maximum separation between the house and the main fire hazard to the west.

A vegetable garden 8 and orchard 7 sit in a series of terraces between the unmanaged vegetation and the house. They have been included in the defensible space because of their low flammability. They will be kept well-watered over summer using the adjacent steel water tanks 9.

The retaining walls on the slope 5 are all constructed of stone. Stone paving 10 and a lawn area 11 located between the house and potential fire hazard maximise separation opportunities. The eastern side of the house 12 is maintained with gravel as a vehicle storage area and includes steel retaining walls 13.

The caravan in this space would be moved off the property during summer and the clothes line and wood shed 14 have both been located well away from the house.

Plants chosen for the model garden have been selected for their firewise properties.

FEATURE TREE

The small feature tree in the main lawn, *Parrotia persica* (Persian Ironwood), has been chosen for its attractive autumn foliage and summer shade. It also has a deciduous lifecycle, smooth bark, open, diffuse habit and low leaf-litter production over summer – all low flammability characteristics.

GROUND COVERS

Herbaceous plants are used in the front garden to provide ground cover throughout the year and seasonal colour over winter, spring and summer. All are shade-tolerant perennials with a low-growing habit (to 30 centimetres in height) and have leaves that maintain a high moisture content.

They include: *Ajuga reptans* (Carpet Bugle), *Anemone nemorosa* (Wood Anemone), *Helleborus x hybridus* (Lenten Rose), *Iris x germanica* (Bearded Iris), *Liriope muscari* (Turf Lily), *Ophiopogon japonicus* (Mondo Grass) and *Stachys byzantina* 'Big Ears' (Lamb's Ears).

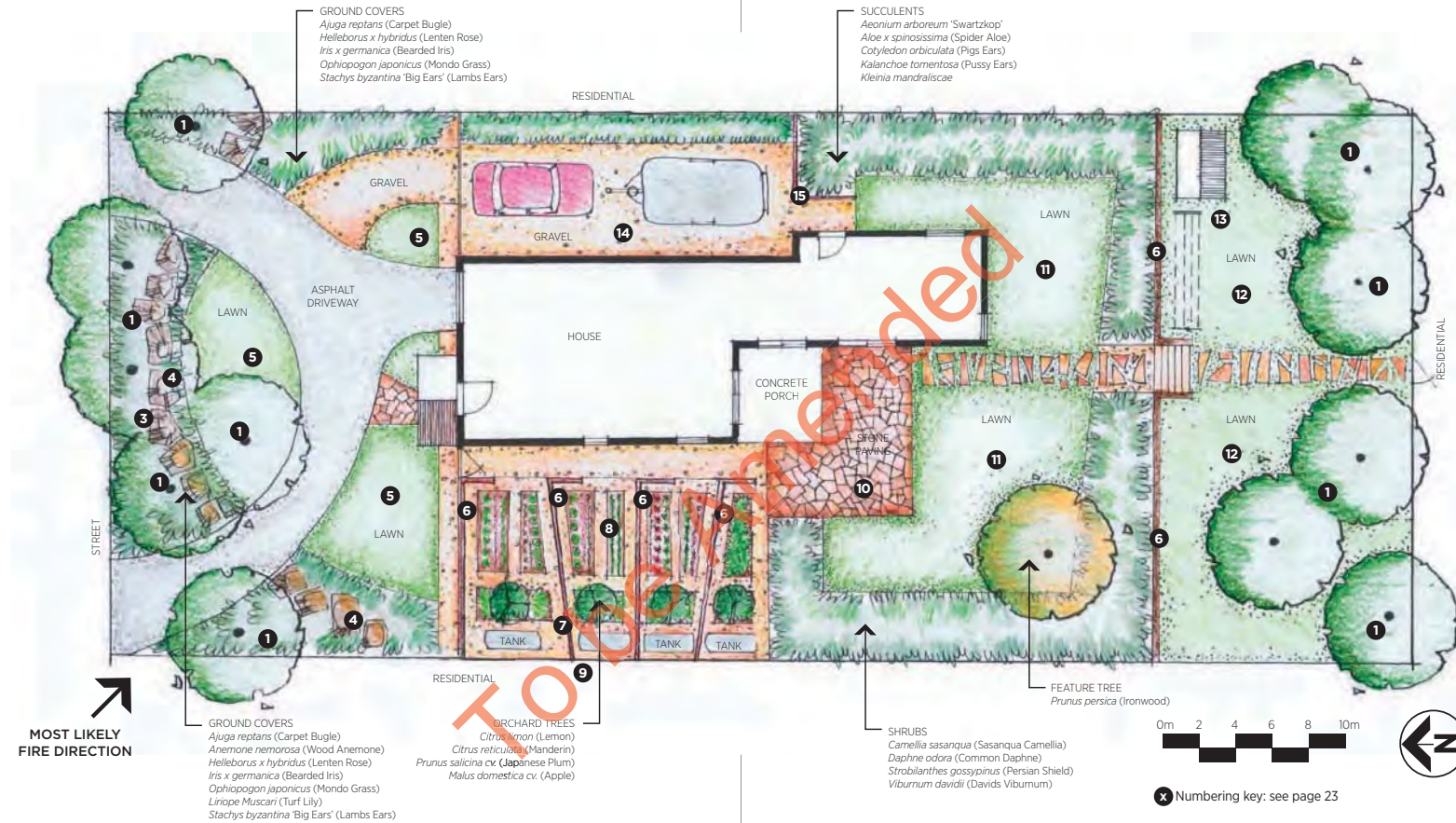
TURF

The lawn areas are planted with *Stenotaphrum secundatum* 'Sir Walter' (Sir Walter Buffalo Grass), a soft-leaf, hard-wearing turf species. It can be managed to a low height and will be irrigated over summer. This maintenance helps create a defensible space.



See also next page.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



ORCHARD AND VEGETABLE GARDEN

This includes raised beds of vegetables and a collection of small productive fruit trees. They include a *Citrus limon* (Lemon), *Citrus reticulata* (Mandarin), two *Prunus salicina* (Japanese Plum cultivars) and two *Malus domestica* (Apple cultivars). The vegetables and trees are all irrigated using water supplied from the adjacent steel water tanks.

SHRUBS

Groupings of shade-tolerant evergreen shrubs are planted on the boundary of the garden's middle terrace. They include *Camellia sasanqua* (Sasanqua Camellia), *Daphne odora* (Common Daphne), *Strobilanthes gossypinus* (Persian Shield) and *Viburnum davidii* (Davids Viburnum).

Their broad and fleshy leaves, open habit and coarse texture are low flammability characteristics. All shrubs will be pruned regularly to maintain their height to below 2 metres.

SUCCULENTS

Close to the eastern side of the house are garden beds containing low-growing succulent plants. They include *Aeonium arborium* (Swartzkop), *Aloe x spinosissima* (Spider Aloe), *Cotyledon orbiculata* (Pigs Ears), *Kalanchoe tomentosa* (Pussy Ears), and *Kleinia mandraliscae* (Blue Chalk Sticks).

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

**MODEL 3
RURAL GARDEN**

When planning a rural garden, consider house and garden location, the placement of other structures, elements and services, and good planting design strategies.

Many rural gardens are on larger farming properties surrounded by pasture paddocks and grasses. These can dry rapidly over summer, causing fire to spread from the paddock to the garden.

Other rural gardens are located just outside cities and larger towns. They generally form part of a small 'farmlet', with larger productive and/or ornamental gardens.

One of the most effective ways to reduce fire risk in rural sites is to have defensible space around the house.

Placing farm dams in the direction of the most likely path of a fire provides a fuel-free area and further separation between the bushfire hazard and the house. Dams also form a useful irrigation source for the garden. Keeping plants well hydrated will help reduce heat stress over summer when they often become more flammable.

Sheds and outbuildings should always be located well away from the house, particularly those used for storage of chemicals, fertilisers or hay.

Planting design solutions in the rural garden include the use of lawns, gravel surfaces and kitchen gardens.

These features ensure there are areas of low fuel directly around the house.

Careful placement of all vegetation in the garden is important. In particular, break up the continuity of fuel available to any fire and provide adequate separation between vegetation and the house. This includes locating trees at least 1.5 times their mature height from the house and locating other plants away from vulnerable areas (such as windows, decks and eaves).

The strategic placement of windbreak trees or hedges outside the defensible space of the house block can reduce wind speed and catch embers produced by the fire. Tree selection should consider low flammability characteristics and good maintenance practices need to be applied.

Effective ways to minimise the spread of fire within the garden is by using irrigated, well-spaced orchard trees and good separation of plantings throughout the garden. This can also be achieved with vertical and horizontal separation of garden plantings. In particular, separation between shrubs and trees will remove ladder fuels and break up direct fuel corridors to the house.

EXAMPLE: RURAL MODEL GARDEN

The numbers here refer to the illustration below and those on pages 28 and 29.

The garden and home paddock design aims to reduce spread of a grassfire to the house from surrounding paddocks and properties. It also aims to limit the spread of fire within the garden to the house.

In this garden example, the most likely direction of fire is from the north-west. However, fire can spread from any of the paddocks surrounding the house. Therefore, landscaping for bushfire design principles should be applied throughout.

The farm dam 1 is placed in the most likely direction of the fire. The front lawn 4, tennis court 9, front driveway 5, turning circle 6, and kitchen garden 8 all provide further separation and areas of low fuel between the fire hazard and the house.

A mass planting of irrigated ornamental orchard trees 2 acts as a windbreak and helps provide protection from ember attack in the home paddock. Shrub masses 3 between the house and these trees are ornamental and are kept away from the tree canopies to prevent them acting as ladder fuels. There is also good separation provided between the shrub beds to break up the spread of fire.

Planting has been kept away from the house with lawn and gravel paths. Planting near the driveway 7 softens the view from the house with low succulent plants. These are also planted away from vulnerable areas of the house. Decks around the house are replaced with non-flammable materials, such as concrete and steel.

Densely planted windbreaks are provided on the southern and western boundaries 14 outside the defensible space. While these are common features on rural properties, choosing low flammable species in this example reduces the fire risk.

The shed with chemical stores 11, clothes line 10 and fire wood 13 are all located well away from the house. Non-combustible water tanks (concrete or corrugated iron) are fed off the roof of the shed 12 and may provide an additional water source during a fire. Grapes and berry plants 15 are located at the rear of the property near the shed and are kept well-watered over the summer months to reduce their flammability.

Plants chosen for the model garden have been selected for their firewise properties.

TREES

In the orchard, a mixed collection of small fruiting trees have irrigated lawn beneath.

They include *Prunus avium* (Sweet Cherry), *Prunus salicina* (Japanese Plums) and *Prunus domestica* (European Plums). All are trained to an open form and maintained with their lower branches pruned to provide separation.

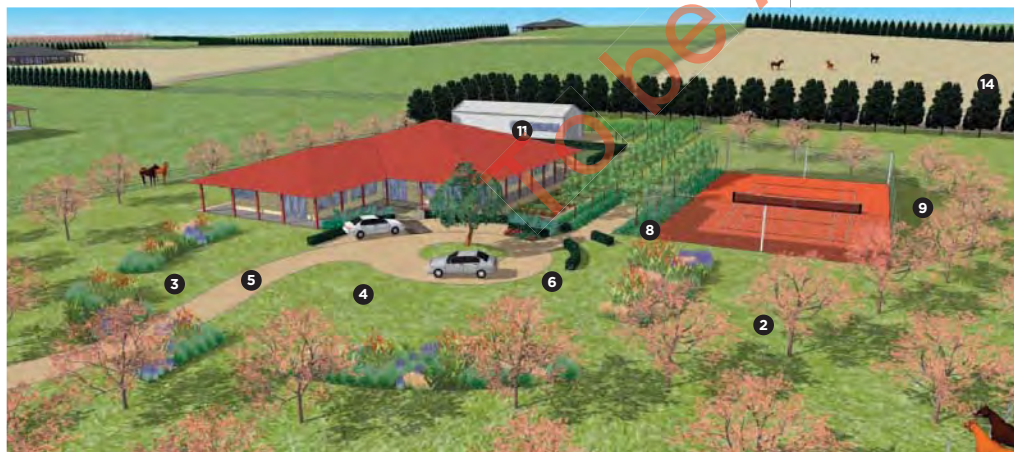
A small, decorative tree *Arbutus x andrachnoides* (Hybrid Strawberry Tree) is located in the lawn turning circle. With smooth bark, an open habit, attractive flowers and form, this display specimen is easily viewed from the house.

BOUNDARY WINDBREAKS

At the outer perimeter of the home paddock on two sides are windbreak plantings.

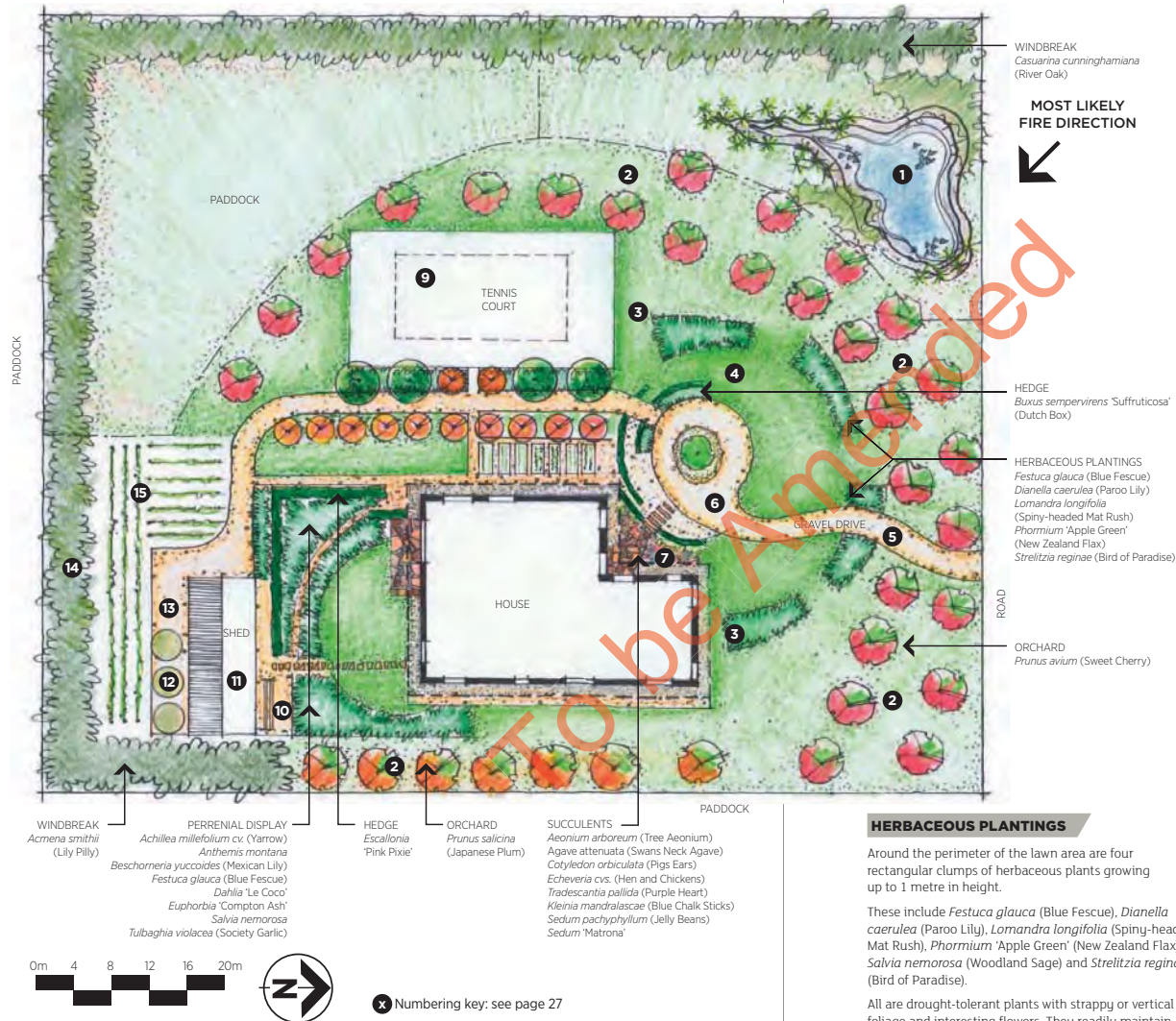
The species selected includes *Acmena smithii* (Lily Pilly) on the southern boundary and *Casuarina cunninghamiana* (River Oak) on the western boundary of the home paddock.

These trees have a moderately dense habit and retain little dead leaves or twigs. The grass beneath these trees is mowed low and is well-watered during summer.



See also next page.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



PLANTING AT FRONT DOOR

Closer to the house, flanking the front door are beds of drought-tolerant succulent plants. These have been chosen for their colourful foliage, low-growing habit, fleshy leaves and ease of cultivation.

They include *Aeonium arborescens* (Tree Aeonium), *Agave attenuata* (Swans Neck Agave), *Cotyledon orbiculata* (Pigs Ears), *Echeveria* cvs. (Hens and Chickens), *Tradescantia pallida* (Purple Heart), *Kleina mandraliscae* (Blue Chalk Sticks), *Sedum pachyphyllum* (Jelly Beans) and *Sedum* (Matrona).

HEDGES

Two hedges are used in the garden. These were selected for their low flammability characteristics. In particular, the absence of oils, waxes and resins in the leaves and stems, and their low retention of dead foliage after pruning.

At the front of the house a low hedge (to 50 centimetres in height) of *Buxus sempervirens* 'Suffruticosa' (Dutch Box) is planted either side of the pathway. This is a low-growing form of the Common Box with a medium texture and a moderately dense habit.

At the rear of the house a low hedge to 1 metre high is planted to frame the house garden. This hedge uses *Escallonia* (Pink Pixie). This is a low-growing hybrid form of this compact species that has fleshy leaves year-round. Like all hedging plants both these species require regular maintenance.

PERENNIAL DISPLAY PLANTING AT REAR OF HOUSE

Within the house garden towards the rear are mixed plantings. These contain drought-tolerant, flowering herbaceous perennials, which range from 30 centimetres to 1 metre in height. Plants include *Achillea* cultivars, *Anthemis montana*, *Beschorneria yuccoides* (Mexican Lily), *Festuca glauca* (Blue Fescue), 'Purple Emperor', *Dahlia* 'Licoco', *Euphorbia* (Compton Ash), *Penstemon* cultivars, *Salvia nemorosa*, *Sedum* cultivars, and *Tulbaghia violacea* (Society garlic). These will be irrigated to ensure a lush habit over summer, and mulched with pea gravel – a type of non-flammable mulch.

LAWN

The lawn species is *Pennisetum clandestinum* (Kikuyu Grass). It is tough, hard wearing and able to be managed at a low height. These lawns will be irrigated over summer to assist in maintaining a green, defensible space.

HERBACEOUS PLANTINGS

Around the perimeter of the lawn area are four rectangular clumps of herbaceous plants growing up to 1 metre in height.

These include *Festuca glauca* (Blue Fescue), *Dianella caerulea* (Paroo Lily), *Lomandra longifolia* (Spiny-headed Mat Rush), *Phormium* 'Apple Green' (New Zealand Flax), *Salvia nemorosa* (Woodland Sage) and *Strelitzia reginae* (Bird of Paradise).

All are drought-tolerant plants with strappy or vertical foliage and interesting flowers. They readily maintain a green and lush habit over summer.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

**MODEL 4
SUBURBAN GARDEN**

In recent years, severe fires have moved beyond the rural fringe and into metropolitan suburbs of Canberra and Melbourne.

Planning a garden using the principles in Section 4 can help reduce the bushfire risk in suburban areas. However, a garden only forms one component of preparing for bushfire. There are many other things to consider (see Section 1).

The hard landscaping in a garden involves making changes to material selection. Use brick, stone, steel or concrete materials for retaining walls and garden edging. Gravel products are suitable for pathways and mulches. These design selections can reduce fire risk from within the garden.

In most areas timber should be avoided as this can provide a way of directly moving a fire further into the property. In a garden in a high bushfire risk area, timber fences should be replaced with non-combustible options.

Swimming pools or ponds can help when creating a defensible space if placed between the most likely direction of a fire and the house.

Removing other potential fuel sources from directly around the house is important. This includes sheds, garden tools and machinery areas, woodpiles, outdoor furniture, clothes lines and shade screens. These should all be positioned at least 10 metres away from the house.

Planting design should focus on plants that have low flammable characteristics that are placed away from the house. Plants in containers can be an effective way to create seasonal interest and bring productivity into the suburban garden. They can also be readily moved away from the house.

EXAMPLE: SUBURBAN MODEL GARDEN

The numbers here refer to the illustration below and those on pages 32 and 33.

Existing indigenous trees of *Eucalyptus polyanthemos* (Red Box) have been retained in the suburban garden ① but those within 10 metres of the house have been removed. Vegetation beneath the trees is confined to shortly-mown lawn, very low shrub and fleshy ground cover plantings. These plantings avoid ladder fuels that can carry fire into the canopy. Any low hanging branches have also been removed up to 2 metres as part of the regular garden maintenance.

A dual access driveway ② at the front of the property has been provided. The pool ③ has been placed between the house and a possible fire front. It includes a small area of adjoining timber decking ④ that is well separated from the house. Stone paving ⑤ and gravel pathways ⑥ are used in the area directly surrounding the house. The pathways have been designed to provide separation between garden beds and areas of low fuel around the house.

The slope of the site has been partially terraced using large rocks ⑦. Both the rear portion of the garden ⑧ and the lawn area to the east of the house ⑨ are maintained as open lawns. This design element reduces fuel loads within the defensible space.

Garden beds are separated by areas of maintained lawn that break up fuel continuity. The lawn also allows easy access for maintenance throughout the garden.

The clothes line and shed ⑩, which includes swimming pool chemicals and fire wood, are located in this area well away from the house. The eastern boundary of the garden has three large non-combustible water tanks ⑪ adjoining the fence. These help shelter the house from radiant heat and provide water for the adjacent vegetable garden ⑫. The vegetation is low around the tanks so that they can be accessed if there is a fire.

Plants chosen for the model garden have been selected for their firewise properties.

POOL AREA

At the back of the pool area is a mixed display planting of short grasses and ornamental shrubs. These include *Festuca glauca* (Blue Fescue), *Cotinus 'Grace'* (Smoke bush), *Echium candicans* (Pride of Madeira), *Euphorbia characias* subsp. *wulfenii* (Wulfen Spurge) and *Senecio vira-vira*.

Adjoining the paving area (between the house and the pool) are low-growing (to 30 centimetres in height), drought-tolerant herbaceous plants. These include *Aloe x spinosissimum* (Spider aloe), *Chrysocephalum apiculatum* (Common Everlasting), *Coreopsis 'Moonbeam'*, *Dianthus caryophyllus* (Pinks) and *Nepeta fassenii* (Catmint).

SIDE PLANTING IN THE FRONT YARD

A mix of grouped shrub plantings (0.5-2 metres in height) is located away from the house. These shrubs are pruned after flowering to maintain an open form, reduce plant litter and encourage repeat flowering.

These Australian native plants include *Alyogyne huegii* (Native Hibiscus), *Banksia blechnifolia* (Creeping Banksia), *Correa pulchella* (Salmon Correa), *Crowea exalata*, *Eremophila maculata* (Emu Bush) and *Philothea* (Bounda Beauty).



See also next page.

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PLANTINGS UNDER THE LARGE EUCALYPTUS

To the front of the property and under the medium-sized *Eucalyptus polyanthemos* (Red Box) are small clipped hedges. These are maintained to a maximum height of 1 metre. They include *Acacia acinaea* (Golddust Wattle), *Syzygium fancissii* 'Little Gem' (Dwarf Lilly Pilly) and *Westringia fruticosa* (Native Rosemary).

Adequate separation between these low shrubs and the mature trees is ensured by under-pruning any low branches and regular maintenance of the hedges.

Low-growing, drought-tolerant Australian herbaceous perennials (to 30 centimetres in height) are planted to the front of the hedges. They include *Brachyscome multifida* (Cut-leaf Daisy), *Chrysocephalum apiculatum* (Common Everlasting), *Dampiera linearis* (Common Dampiera) and *Scaevola albida* 'Mauve Clusters' (Fan Flower).

VEGETABLE GARDENS

Close to the house are raised, steel-edged vegetable gardens. These contain a mix of annual vegetables.

TURF

Pennisetum clandestinum (Kikuyu Grass) – a tough, hard-wearing turf grass – is planted in the lawn areas. It is managed at a low height and is irrigated over summer. This helps to maintain a defensible space.

SECTION 05

CHOOSING SUITABLE PLANTS

After planning and designing, the next task is to choose suitable plants for the garden. Some plants have intrinsic characteristics that reduce the likelihood of ignition. Choosing these plants and locating them correctly will help reduce bushfire risk within a garden.

There are a number of characteristics that influence how flammable a plant is. It is important to know which factors contribute to plant flammability. This will assist in making informed decisions when selecting plants for a garden.

A consistent approach for determining the flammability rating of a plant is provided by the Plant Selection Key (see Section 7).

The key takes the user through a series of questions about the characteristics of the plant and provides:

- an overall flammability rating
- firewise rating
- maintenance requirements
- advice on where to locate that plant within a garden.

Before working through the key, there are elements of plant flammability that should be further explained.

PLANT FLAMMABILITY

Determining the flammability of plants is not straightforward. Although it can be tested under controlled circumstances in a laboratory, the flammability of a plant may vary in a bushfire, where the conditions are often unpredictable. Some plants are more flammable than others but all plants in a garden – living and dead – can provide fuel for a bushfire.

Plant flammability is described as a combination of:

- the time taken for a plant to ignite
- how readily it burns when the ignition source is removed
- how much material there is to burn
- how long it takes for all available fuel to be consumed.

Flammability will vary depending on:

- a plant's age, health, physical structure and chemical content

- the daily and seasonal climatic variations
- location of the plant in relation to other vegetation and flammable objects
- the specific part of a plant – some parts of plants are also more flammable than others.

PLANT MOISTURE CONTENT

Foliage moisture content is the most critical factor that determines plant flammability. It influences how readily a plant will ignite.

Plants with high foliage moisture content will not burn until sufficient moisture in its foliage has been removed.

Plants with low moisture content will ignite more rapidly and continue to burn when the ignition source is removed.

Plants in the path of an oncoming bushfire will dry out as a result of the radiant heat and wind generated by the fire. Even fully hydrated plants will eventually dry out and burn if they are exposed to bushfire heat for long enough.



This succulent ground cover has a high moisture content.

REMEMBER

The arrangement of vegetation within a garden, rather than the flammability of individual plants, has a greater impact on how a bushfire will spread.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Thick, succulent leaves

Soft, fleshy leaves

Moisture content depends on a number of interacting factors:

The time of day

- Before sunrise, plants will typically have their maximum moisture content (influenced by the moisture content of the soil and humidity).
- As they transpire during the day their foliage moisture content decreases until the plant stops transpiring after sunset.
- Generally plants are most flammable in the mid- to late-afternoon when their foliage moisture content is at its lowest.

The season

- During summer as the soil dries out, the moisture content of the plant will decrease and the flammability of the plant will increase.

The part of the plant

- The leaves and new growth on a plant will generally have a higher moisture content than the stems or branches.
- Dead leaves and twigs have a very low moisture content that is driven by the relative humidity. On hot, dry days they become highly flammable as fine fuels.

Where it is planted

- The amount of sun or shade, the availability of water, drainage and soil type will affect plant moisture content.

Environmental conditions

- High temperatures, low humidity and periods of drought will increase the flammability of plants.

The age of the plant and its growth stage

- Many plants start as moisture-rich shoots but become woody as they age. As plants approach the end of their life they tend to dry out.
- New growth on a plant will usually be soft and fleshy and become woody after the growing season.

ENVIRONMENTAL WEEDS

In most high bushfire risk areas, houses are located in close proximity to unmanaged vegetation. Some popular garden plants have become environmental weeds by escaping to the bush and displacing native species. Environmental weeds often contribute to high fuel loads, which increases bushfire risk. Priority should be given to removing environmental weeds within the property.

Avoid planting environmental weeds. Contact local council to find out which weed species are a problem in the area. The Department of Primary Industries also has information about weed species at dpi.vic.gov.au

When selecting plants, consider using local native species with low flammability. These are well suited to local conditions and will add to the habitat value of the bushland.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

CHARACTERISTICS

The following plant characteristics are used throughout the Plant Selection Key. They all contribute to plant flammability to varying degrees and should not be considered in isolation.

BRANCHING PATTERN

This influences the distribution and density of foliage within the plant.



➤ Choose plants with open and loose branching as well as leaves that are thinly spread.



➤ Plants with closely packed leaves and branches have more fuel available within the plant and are usually more flammable.



➤ Plants with branches at least 2 metres above the ground are better than those with continuous foliage from the ground to the canopy. Under-pruning increases separation.



➤ Separation between ground fuel and foliage on the rest of the plant prevents lower branches acting as ladder fuels.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

TEXTURE

This describes the overall appearance of the plant.

In coarse textured plants, it is easy to distinguish each branch or leaf from a distance of 3 metres.

Plants with a coarse texture have a lower surface-area-to-volume ratio making them less flammable than plants with a fine texture.



➤ Coarse textured plants



➤ Medium textured plants



➤ Fine textured plants



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

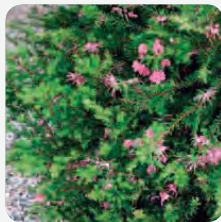
CHARACTERISTICS

DENSITY

This describes the amount and arrangement of fuel within the plant.

A dense plant is difficult to place a hand into and is not easy to see through.

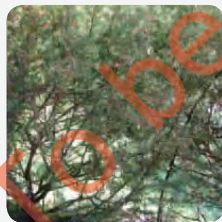
Plants that are very dense are often more flammable as there is a higher fuel load readily available to burn.



➤ Very dense



➤ Moderately dense



➤ Sparsely dense



LEAVES

The fineness, size and shape of leaves affect their flammability.



- Wide, flat and thicker leaves (such as those on maples, camellias and oaks) and those that are soft and fleshy have more plant tissue in their leaves. This usually means a higher moisture content relative to their surface area.



- Leaves with a high moisture content take longer to dry out and therefore longer to catch fire.



- Small, thin and narrow leaves have a high surface-area-to-volume ratio, which tends to make them more susceptible to drying out.

- Generally, the higher the surface-area-to-volume ratio, the more flammable a leaf will be. Some plants with high surface-area-to-volume have leaves with high levels of oils (such as paperbark, tea trees, eucalypts) or resins (conifers such as pine trees). These combined properties increase flammability.



- The shape of leaves influences how easily they are caught in vegetation when they fall off the plant. If leaves are caught within plants it will increase that plant's flammability as leaf litter dries out and ignites readily. Dead pine needles are a good example of leaves that readily catch in other plants.

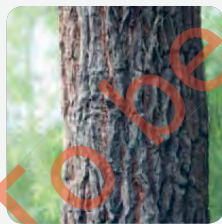
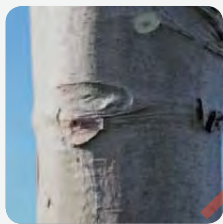
CHARACTERISTICS

BARK TYPE

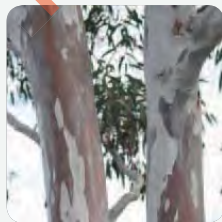
Some bark types ignite more readily than others.



- Bark that is loose, stringy or fibrous will ignite easily and can break off to create burning embers that are carried ahead of a bushfire.
- These types of bark can also act as ladder fuels that carry fire into the canopy of a tree, increasing the intensity of the fire. Examples of such plants include stringybark eucalypts and some paperbarks.



- Bark that is attached tightly to the trunk or is smooth is usually less flammable because it is more difficult to ignite and will not be easily carried as an ember, for example Box Barks.



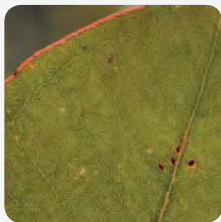
- However, some smooth-barked trees shed their bark annually and trap large ribbons of bark in their branches or on the ground below. These ribbons of bark are highly flammable, can be carried as embers and can also act as a ladder fuel, for example Manna Gums.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

OILS, WAXES AND RESINS

Some chemicals that are found naturally in plants will increase their flammability.

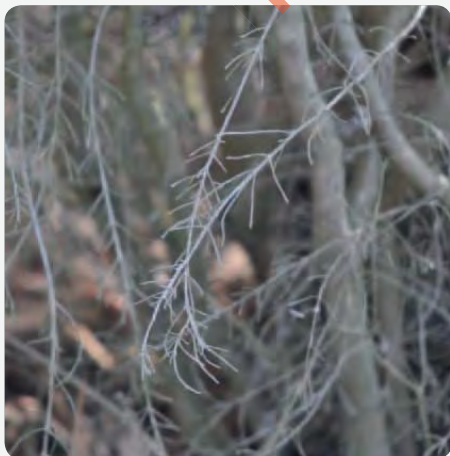
The leaves of plants containing significant amounts of oils, waxes and resins will often have a strong scent when crushed. For example rosemary, lavender and eucalyptus have oil in their foliage and pines can have high resin content.



- Waxes and resins have a similar effect of increasing flammability of plants although there are a number of characteristics that contribute to the overall flammability of a plant.
- Plants with high amounts of resins or oils should be limited and placed carefully within a garden.



RETENTION OF DEAD MATERIAL



- Dead leaves, twigs, bark and branches that are retained on the plant or accumulate on the ground or in shrubs can increase the flammability of an otherwise firewise plant.
- Regular pruning and maintenance of all trees and shrubs to remove these fine fuels is necessary.

SECTION 06

MAINTAINING THE GARDEN

Remember that establishing a garden takes time. Buildings may not change but the plants in a garden will. To ensure a garden is effective over many years it will require ongoing maintenance of the defendable space around the house.

Replacement planting will need to be considered, as well as the periodic assessment of the suitability of the plants within the garden. Use the Plant Selection Key in Section 7 to assess plant flammability.

Diseased, stressed or dead plants are more flammable and moisture content will be lower in summer when bushfires are most prevalent.

Regular maintenance of the garden must be carried out and should be included as part of overall preparation for bushfire.

Incorporate maintenance into a Bushfire Survival Plan to ensure the garden is ready for the upcoming bushfire season.

Regular maintenance actions:

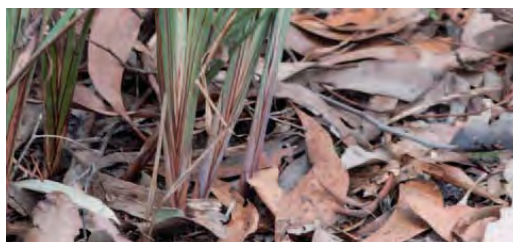
- Clear ground fuel from underneath plants, on and around the house.
- Prune plants with low hanging branches, providing separation of at least 2 metres above the ground.
- Replace plants that die or become diseased.
- Keep plants well hydrated through watering and mulch. Watering less frequently but for longer encourages the plants to develop deep roots reducing moisture loss during dry periods.
- Replace or cover organic mulch such as woodchips, straw or dead plant matter with non-flammable mulches.
- Remove other flammable objects from your defendable space.
- Remove any fine, dead material that might accumulate in plants.
- Remove weeds from defendable space as these often contribute to high fuel loads.



Branches should be pruned up to 2 metres above ground level to increase separation from ground fuels.



Use non-flammable mulch.



Remove fine, dead material.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PLANT SELECTION KEY

About the key

The Plant Selection Key is a practical tool developed to guide you in choosing plants suitable for use in a garden in a high bushfire risk area.

The key comprises a series of questions and information about plant characteristics and their relative flammability. The key provides:

- › an overall flammability rating
- › a firewise rating
- › advice about maintenance
- › advice about whether the plant is appropriate for a garden.

An interactive version of this key is available online at cfa.vic.gov.au/plants

This Plant Selection Key is based on Behm AL, Long AJ, Monroe MC, Randall CK, Zipperer WC, Hermansen-Baez LA (2004) *Fire in the Wildland-Urban Interface: Preparing a Firewise Plant List for WUI Residents*. Circular 1453, School of Forest Resources and Conservation, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida.

Address: Southern Center for Wildland-Urban Interface Research and Information, 408 W. University Ave., Suite 306, USDA Forest Service, Gainesville, FL 32601. Email (ahermansen@fs.fed.us) or fax (1-352-376-4536).

The Plant Selection Key has been customised to better suit Australian conditions and is intended to provide an indication of plant flammability. The flammability of plants is highly variable and in periods of drought or in the path of an oncoming bushfire, plants will dry out and become highly flammable. If there is uncertainty about the results this key produces, seek professional advice from a plant specialist.

SECTION 07

PLANT SELECTION KEY

USING THE KEY: A THREE STEP PROCESS

1. Make a list of plants to be used in the garden

As a starting point, make an initial list of plants you want to plant in a garden. In doing this, it is important to:

- Choose plants that are suited to the local growing conditions.
- Check with your local council about legislative controls that may apply to your property. These may influence what and where you can plant.
- Check for characteristics that influence flammability. These are outlined in Section 5.
- Identify the plant species, including both the common name and the scientific name. This is important as even closely related plants in the same genus can vary greatly in their flammability.
- Take note of the size and form of the plant at maturity. Plant labels often focus on plant size within five to ten years of planting and may not be reliable for this assessment.
- Note how the plant will look in summer and whether it is susceptible to disease, insects or pests. This information can be obtained from plant websites, books, the local nursery or council.

2. Work through the key

- Begin at 1. *What type of plant is it?* and follow the prompts to the next number.
- Record how many 'Less Firewise' or 'Not Firewise' results the plant receives in the record sheet on page 62 at the end of the key.
- Collate the results in the record sheet.

3. Rate each plant for its suitability in the garden

The table on page 45 outlines four firewise ratings – Not Firewise, At-Risk Firewise, Moderately Firewise and Firewise – and a corresponding flammability rating. The flammability rating of individual plants depends on the number of 'Less' or 'Not Firewise' results you record.

Once you have established the firewise and flammability rating for each plant, you can determine the plant's suitability for use within a garden, where it should be planted (presuming it is suitable) as well as maintenance requirements.

FIREWISE AND FLAMMABILITY RATINGS

NOT FIREWISE

If you record any **NOT FIREWISE** results, regardless of any **LESS FIREWISE** results, then that plant is **NOT FIREWISE**.

- **Flammability = Extreme**
- Where to plant: These plants should not be planted in a garden or used when landscaping for bushfire.

AT-RISK FIREWISE

If you recorded three or more **LESS FIREWISE** results, then that plant is **AT-RISK FIREWISE**.

- **Flammability = High**
- Where to plant: Avoid using these plants in a garden. If you are on a large property, they may be planted outside the defensible space.

MODERATELY FIREWISE

If you recorded one or two **LESS FIREWISE** results, then that plant is **MODERATELY FIREWISE**.

- **Flammability = Moderate**
- Where to plant: These plants can be used in a garden but they need regular maintenance to keep them in a less flammable condition.

FIREWISE

If after finishing the key you had no **LESS FIREWISE** results, then that plant is **FIREWISE**.

- **Flammability = Low**
- Where to plant: These plants can be used in a garden as they are not known to be particularly flammable.

**BEGIN
PLANT
SELECTION KEY** >>

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PLANT SELECTION KEY

1. What type of plant is it?



Tree

- Has single or multiple woody trunks and grows from 5-30 metres or over at maturity.
- Single-stem trees typically branch well above the ground, while multiple-stemmed trees typically branch close to the ground.
- Foliage is concentrated in the canopy allowing other vegetation to grow underneath.
- Has highly variable leaf and bark types.

Go to 2



Palm or palm-like

- Vary greatly in height.
- Generally have a single woody trunk topped by fronds.
- Many species retain dead fronds which can be flammable.
- Australian palm-like plants include tree-ferns, screw-palms, cycads and grass-trees. They can grow several metres tall and also have a 'skirt' of dead fronds or leaves close to the ground. This is an important flammability characteristic as it can act as a ladder fuel.

Go to 3



Shrubs

- Are shorter and generally more compact than trees, typically 3-4 metres in height with branching close to the ground.
- Have dense, bushy foliage and woody stems.
- Because of this structure, shrubs can carry fire from the ground to the tree canopy.

Go to 13



Vines and climbers

- Have soft or woody stems and are climbing or scrambling plants. Are often grown over fences, pergolas or trellises and can grow over other plants.
- Can be deciduous or evergreen. Some accumulate large amounts of dead leaves.
- Can act as ladder fuel and carry flames up into shrubs, trees or supporting structures.
- Examples include grapes, Virginia Creeper, Coral pea, Running Postman or Happy Wanderer.

Go to 17



Herbaceous plants

- Have soft and fleshy leaves with non-woody stems.
- Are low-growing, often less than 50 centimetres tall.
- Include most smaller flowering plants grown in gardens. Can look 'shrubby', form clumps or grow as groundcovers.
- Moisture content is usually higher than most woody shrubs. Often droop when dry.
- Examples include violets and pansies.

Groundcovers

- Are woody or herbaceous. Woody groundcovers spread without climbing.
- Are generally less than 50 centimetres tall.

Grasses or grass-like

- Leaves are usually long, fine or strappy.
- Vary from a few centimetres to over 2 metres tall. Clump size can be up to 1 metre in diameter.
- Most grasses grown in gardens are perennial rather than annual. Many of these form clumps called tussocks. Examples include Wallaby Grass and Canary Grass.
- Perennial tussock grasses accumulate dead material mixed with the living leaves and are quite flammable, although they usually only burn for a short time.
- Other grasses grow as a continuous mat, such as lawn grasses.
- Leaves of grass-like plants are often coarse and thick and may accumulate dead leaves in the living clump. Examples include Mat rush, New Zealand Flax, Iris and Gladiolus.

Go to 18

2. What type of tree is it?



Eucalypts

- Can have woolly fibrous bark (stringy bark), deeply corrugated and dense bark (iron bark), 'chippy' or platy bark (box bark) or smooth (gum bark).
- All flower and have leaves that hang vertically.
- Their bark can be extremely flammable.
- Examples include trees from the genera *Eucalyptus*, *Corymbia* (includes Flowering Gums) and *Angophora* (includes Smooth Barked Apple and Dwarf Apple that are similar in appearance to smooth barked gums).

Go to 3



Conifer or conifer-like

- Develop woody cones and have needle-like or scale-like leaves.
- Examples include pines, hemlocks, spruces, junipers, cedars and cypress.
- Native Australian examples include Cypress Pine, Cherry Ballart and she oaks.

Go to 7



Other tree types

- This category contains all trees that are not eucalypts, conifers or conifer-like.
- Leaf type can vary greatly. For example:
 - the small leaves and phyllodes (lea-like structures) of wattles such as Blackwood and Silver Wattle
 - the medium-sized leaves of Lilly Pilly and Southern Sassafras
 - the deeply lobed leaves of Silky Oak
 - the wider, broad leaves of Kurrajong and non-native species such as maples, oaks and elms.

Go to 11

3. What type of bark does the tree have?



Stringybark eucalypt with coarse, loose fibrous bark

- Examples include Messmate and Red Stringybark.

Go to 4



Sheds large ribbons or sheets of bark annually

- Strips or ribbons of bark are caught and held in the tree.
- Examples include many smooth or gum-barked eucalypts such as Manna Gum and Mountain Grey Gum.

Go to 8



Does not have stringy bark or ribbons of bark

- Examples include iron bark, some gum-bark species, box bark and peppermint bark eucalypts.

Go to 5

4. NOT FIREWISE



- Trees with this type of bark are extremely flammable.
- This type of bark acts as a ladder carrying fire into the canopy of the tree and produces masses of embers.

For more information, see *Section 3: Rules for vegetation clearance around existing houses* or *Section 5: Choosing suitable plants*.

Go to 29 (END)

5. What is the height of the lowest branch?



Low Branches are less than 2 metres above the ground.

Go to 6



Good separation At least 2 metres between ground and branches.

Go to 20

6. LESS FIREWISE



- Trees must be under-pruned up to 2 metres if possible and dead branches and fronds removed to ensure a more firewise characteristic.

Go to 11

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

7. Does it shed large amounts of leaves or needles?



Yes The conifer sheds large amounts of leaves or needles. For example, Monterey Pine.

Go to 8



No The conifer or conifer-like tree does not shed large quantities of leaves or needles. Examples may include native Cypress Pine, she-oak and Cherry Ballart.

Go to 9

8. LESS FIREWISE



- Pine needles need to be periodically removed from roofs, other plants and the ground near structures.
- Eucalypt bark and foliage should also be routinely removed from the tree and the ground.

Go to 9

9. What is the height of the lowest branch or frond?



Low Branches or fronds are less than 2 metres above the ground.

Go to 10



Good separation At least 2 metres between ground and branches.

Go to 11

10. LESS FIREWISE



- Trees must be under-pruned to a height of 2 metres if possible and dead branches and fronds removed to ensure a more firewise characteristic.

Go to 11

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

11. Does it have papery or loose bark?



Yes Trunk has papery bark or loose fibrous bark.
For example tea-trees and most paper barks.

Go to 12



No Trunk does not have papery bark or loose fibrous bark.

Go to 20

12. LESS FIREWISE



- Papery bark and fibres may act as ladder fuels.
- Requires appropriate placement in your garden.

Go to 20

13. What is the plant's texture?



Fine texture

- Texture is used to describe the overall appearance of the plant from a distance.
- From a distance of about 3 metres it is not easy to distinguish individual leaves or branches on plants with a fine texture.
- Examples include diosma and some paper barks with thin, narrow leaves. The fineness of foliage (the surface area-to-volume-ratio) is a very important determinant of flammability.

Go to 14



Medium texture

- This category includes many azalea and holly species as well as the natives Sarsaparilla and Hairpin Banksia.

Go to 15



Coarse texture

- It is easy to distinguish each individual leaf or branch from a distance of about 3 metres.
- Examples include hydrangea, cotoneaster, hazel pomaderris and blanket leaf.

Go to 15

14. LESS FIREWISE



- Plants with a fine texture have a higher surface-area-to-volume ratio and tend to dry out more readily than medium- and coarse-textured plants. This makes them generally more flammable.
- Require appropriate placement and routine pruning.

Go to 15

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

15. How dense is the plant?



Very dense

- So dense that it is very difficult to place a hand in the plant and touch the main stem. These plants have dense branches.
- Examples include shrubby grevilleas and junipers.

Go to 16



Moderately dense

- Sufficiently dense to not be able to see through the plant, but reasonably easy to place a hand into the plant and touch the main stem.
- Examples include some lavenders, rosemary and some correas.

Go to 20



Sparsely dense

- May have open branching patterns, making it easy to see through the plant.
- Examples include many wattles, rhododendrons and some hydrangeas.

Go to 20

16. LESS FIREWISE



- Dense plants have a larger amount of fuel packed closely together, which encourages the spread of flames within the plant.
- Require appropriate placement and routine pruning.

Go to 20

17. NOT FIREWISE

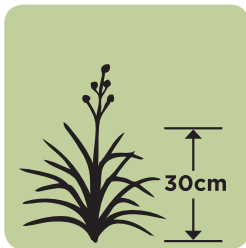


- Vines are extremely flammable as they typically add fuel directly to a structure. As such, they act as ladder fuels bridging gaps between surface fuels and canopy fuels.

For more information, see *Section 3: Rules for vegetation clearance around existing houses* or *Section 5: Choosing suitable plants*.

Go to 29 (END)

18. Is it a grass greater than 30 centimetres tall?



Yes Grass is greater than 30 centimetres tall (for example grass in the Family Poaceae or Gramineae).

Go to 19



No Short grasses and all other herbaceous plants or grass-like plants.

Go to 20

19. NOT FIREWISE



- Regardless of how many **LESS FIREWISE** results you may get, tall grasses are extremely flammable because they readily dry out and rapidly carry fire.

For more information, see *Section 3: Rules for vegetation clearance around existing houses* or *Section 5: Choosing suitable plants*.

Go to 29 (END)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

20. Does the plant retain dead leaves or twigs?



Yes Plant retains dead leaves or twigs mixed with the living leaves.

- Retention of dead leaves or twigs increases the flammability of a plant. Fine fuels readily dry out and increase the fuel available within the plant for fire.

Go to 21



No Plant does not usually retain dead leaves or twigs, except when shedding leaves.

Go to 22

21. NOT FIREWISE



- Regardless of how many **LESS FIREWISE** results you receive for this plant, plants that retain dead foliage throughout the year are extremely flammable.
- Dead foliage has very low leaf moisture content and is therefore highly susceptible to ignition.

For more information: see *Section 3: Rules for vegetation clearance around existing houses* or *Section 5: Choosing suitable plants*.

Go to 29 (END)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

22. Are the leaves waxy or oily?



Yes Leaves have a waxy coating or numerous oil glands dotted on the leaves.

- The leaves of plants containing significant amounts of oils and waxes will often have a strong scent when crushed. The presence of these chemicals often contributes to plant flammability.
- Plants with waxy leaves are often grey, silver or whitish and the waxy 'bloom' can be scraped off the leaf with a fingernail. For example, Wax Myrtle and gallberry.
- Plants in the families Myrtaceae, Rutaceae, Lamiaceae and Pinaceae are examples of plants with numerous oil glands. [Go to 23](#)



No Leaves do not have a waxy coating or numerous oil glands.

[Go to 24](#)

23. LESS FIREWISE



- Plants with large amounts of oils and waxes are more flammable than those without these chemicals.
- Require appropriate placement and routine pruning.

[Go to 24](#)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

24. Is the species seriously susceptible to disease, insects or pests?



Yes Species is known to be seriously susceptible to disease or insect pests.

- Plants seriously susceptible to disease are likely to become stressed and have less vigorous growth.
- When this happens, there is a lower foliage moisture content and a greater number of dead leaves are retained. This in turn makes the plant more flammable. For example, elm trees. [Go to 25](#)



No Species is not known to be particularly susceptible to disease or insect pests.

[Go to 26](#)

25. LESS FIREWISE



- Routine monitoring and appropriate treatment for the disease or pest is recommended.

[Go to 26](#)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

26. Is the plant deciduous or evergreen?



Deciduous Plants drop all leaves once a year and the new leaves usually have higher moisture content than evergreen plants.

Go to 29



Evergreen Plants retain leaves for several years.

Go to 27

27. Are the leaves soft, thick or fleshy?



Yes Plant leaves are soft, thick, succulent or fleshy.

- These types of leaves often have a higher moisture content than hard, thin and needle-like leaves, making them less flammable.
- Moisture can often be seen on the exposed edge of torn leaves. Examples include cactus, agave, some myoporums such as Creeping Myoporum, many Lilies, some saltbush species and geraniums.

Go to 29



No Plant leaves are not obviously succulent; they may have various shapes and vary in thickness.

Go to 28

28. LESS FIREWISE






- Require appropriate placement and routine pruning.

Go to 29

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

29. END

How many LESS FIREWISE ratings did your plant score?	Then your plant is:	What does this mean?
None	FIREWISE	<ul style="list-style-type: none"> ➤ Flammability = Low ➤ Where to plant: These plants can be used in a garden as they are not known to be particularly flammable.
 or 	MODERATELY FIREWISE	<ul style="list-style-type: none"> ➤ Flammability = Moderate ➤ Where to plant: These plants can be used in a garden but they need regular maintenance to keep them in a less flammable condition.
 or more	AT-RISK FIREWISE	<ul style="list-style-type: none"> ➤ Flammability = High ➤ Where to plant: Avoid using these plants in a garden. If you are on a large property, they may be planted outside the defensible space.
Was your plant NOT FIREWISE?	NOT FIREWISE	<ul style="list-style-type: none"> ➤ Flammability = Extreme ➤ Where to plant: These plants should not be planted in a garden or used when landscaping for bushfire.

WHAT TO DO NEXT

- It is important to consider the role that plant selection plays in enhancing defensible space.
- If the plant is 'Firewise' or 'Moderately Firewise', locate it according to the design principles as outlined in Section 4. Remember, the location and arrangement of plants has a significant effect on reducing the bushfire risk within your garden, but during summer as soil dries out, the moisture content of plants will decrease and their flammability will increase.
- If the plant is 'At Risk' or 'Not Firewise' it should not be planted within the defensible space. For further information, see *Section 3: Rules for vegetation clearance around existing homes* or *Section 5: Choosing suitable plants*.
- You can also book a free Home Bushfire Advice Service visit where a member of CFA will assess your property and provide a range of options to assist you to develop your Bushfire Survival Plan. Go to cfa.vic.gov.au/hbas for information and bookings.

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

RECORD SHEET

► Use this sheet to record the plant name and how many 'Less Firewise' or 'Not Firewise' results the plant receives as you work through the Plant Selection Key.

Plant name	NOT FIREWISE Circle the questions that had a Not Firewise outcome	LESS FIREWISE Circle the questions that had a Less Firewise outcome	Firewise Rating	Flammability
			NOT FIREWISE (any Not Firewise results)	Extreme
			AT-RISK FIREWISE (3 or more Less Firewise results)	High
			MODERATELY FIREWISE (1 or 2 Less Firewise results)	Moderate
			FIREWISE (no Less Firewise results)	Low
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		
	4. 17. 19. 21.	6. 8. 10. 12. 14. 16. 23. 25. 28.		

To Be Amended

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SECTION 08

FURTHER RESOURCES

CFA

cfa.vic.gov.au

Fire Ready Kit

On the Land: Agricultural Fire Management Guidelines

A guide to retrofit your home for better protection from a bushfire

Fire Service Guidelines:

- *Land Use Planning 0002: Requirements for Water Supply and Access in a Bushfire Management Overlay*
- *Land Use Planning 0003: Assessing Vegetation in a Bushfire Management Overlay*

OTHER

dpcd.vic.gov.au/planning/bushfire

Fact Sheet: Planning and Building for Bushfire Protection

Advisory Note 39: Amendment VC83 Bushfire Protection Vegetation Exemptions

Advisory Note 40: Amendment VC83 Bushfire Protection Bushfire Planning Provisions

Practice Note 64: Local Planning for Bushfire Protection

Practice Note 65: Bushfire Management Overlay and Bushfire Protection: Planning Requirements

planningschemes.dpcd.vic.gov.au

Clause 13.05 Bushfire

Clause 44.06 Bushfire Management Overlay

Clause 52.17 Native vegetation

Clause 52.43 Interim Measures for Bushfire Protection

Clause 52.47 Bushfire Protection: Planning Requirements

Clause 52.48 Bushfire Protection: Exemptions

Planning for Bushfire in Victoria (CFA and DPCD, forthcoming)

Department of Sustainability and Environment

dse.vic.gov.au

land.vic.gov.au

Department of Primary Industries

dpi.vic.gov.au

Municipal Association of Victoria

Council details can be found at mav.asn.au/about-local-government/council-details

Ramsay, C and Rudolph, L, 2003 *Landscape and Building Design for Bushfire Areas*, CSIRO, Melbourne.

Standards Australia AS 3959-2009: Construction of Buildings in Bushfire-prone Areas

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To be Amended

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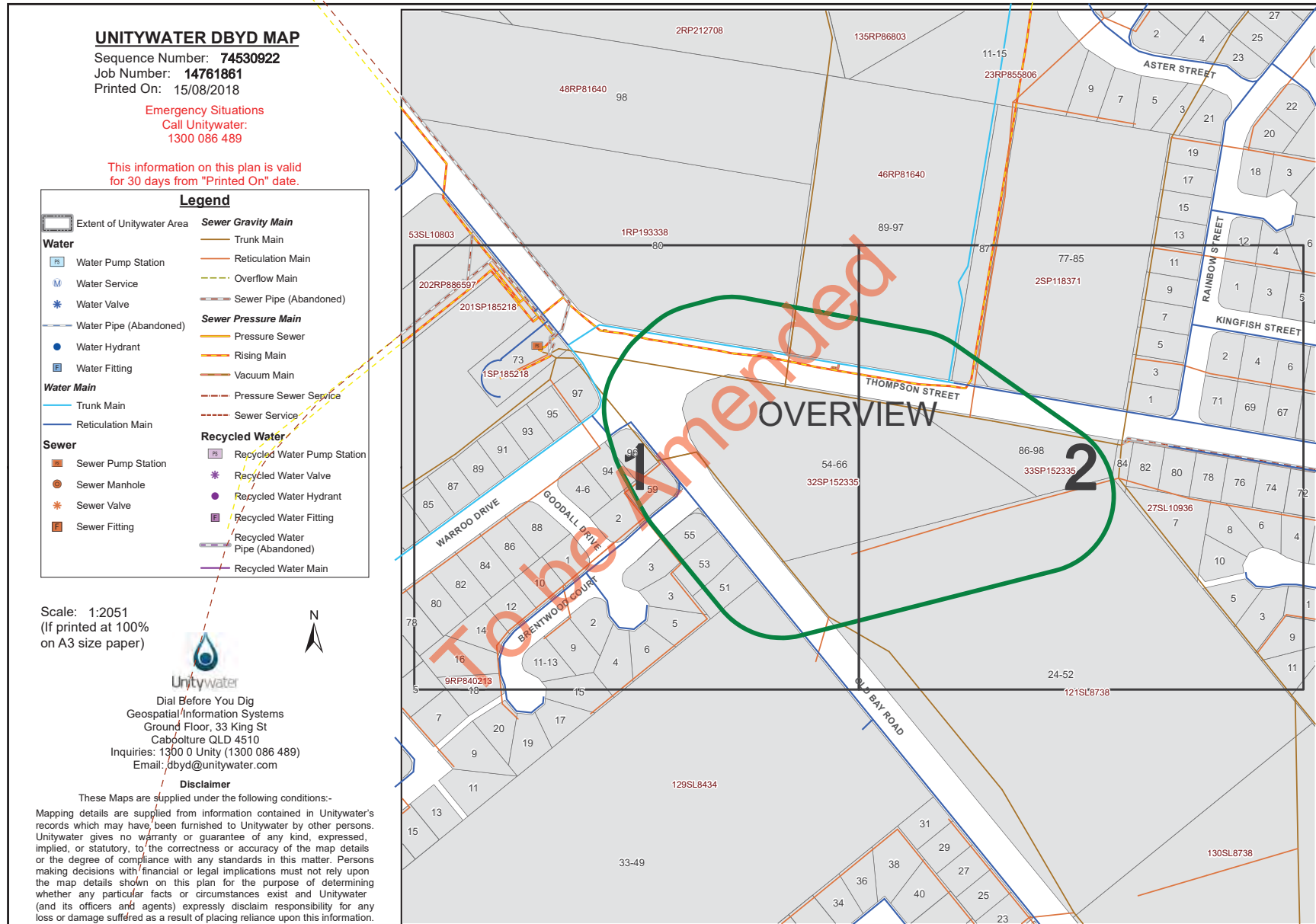
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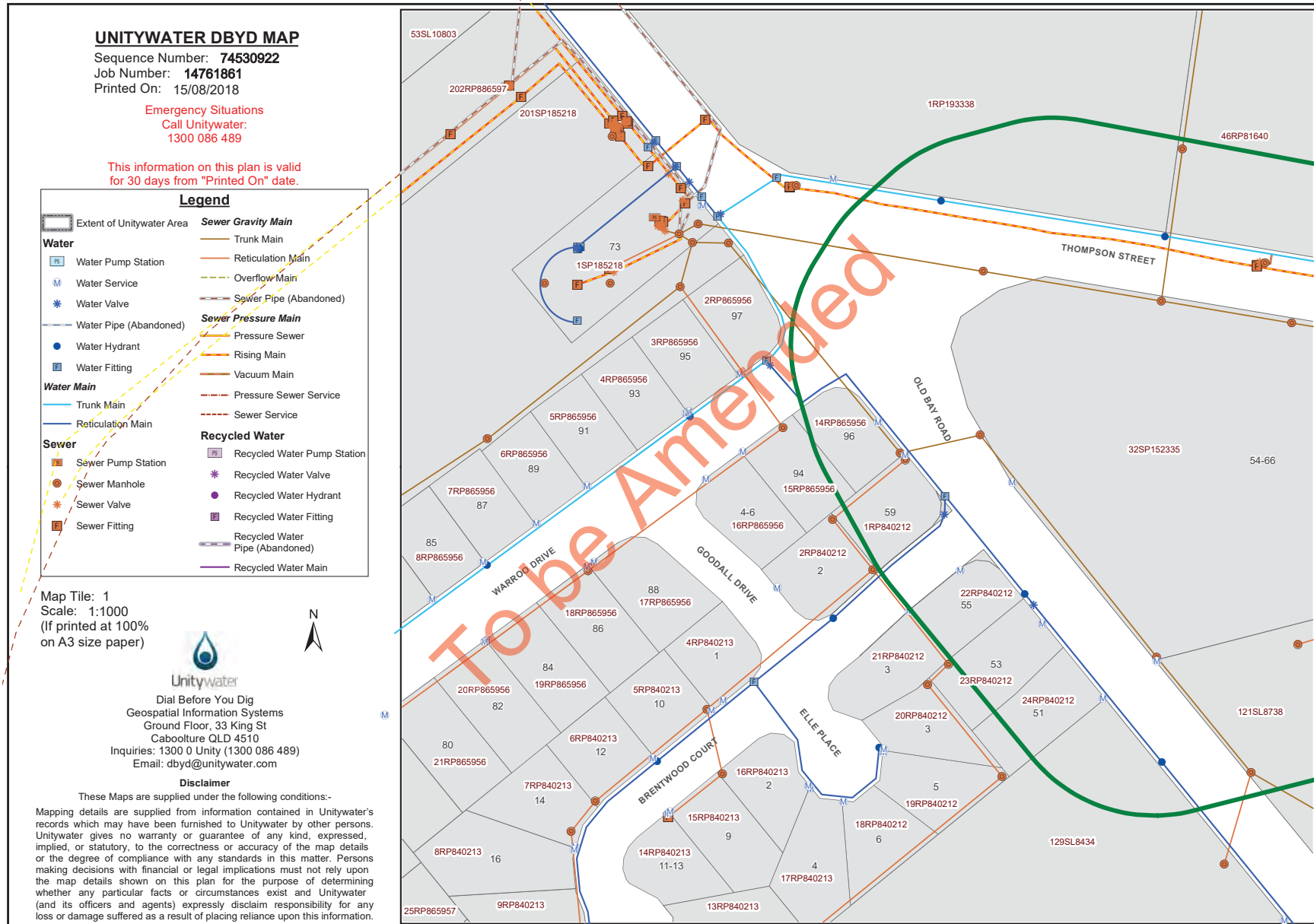
Appendix F –
Unity Water Utilities Map

To be Amended

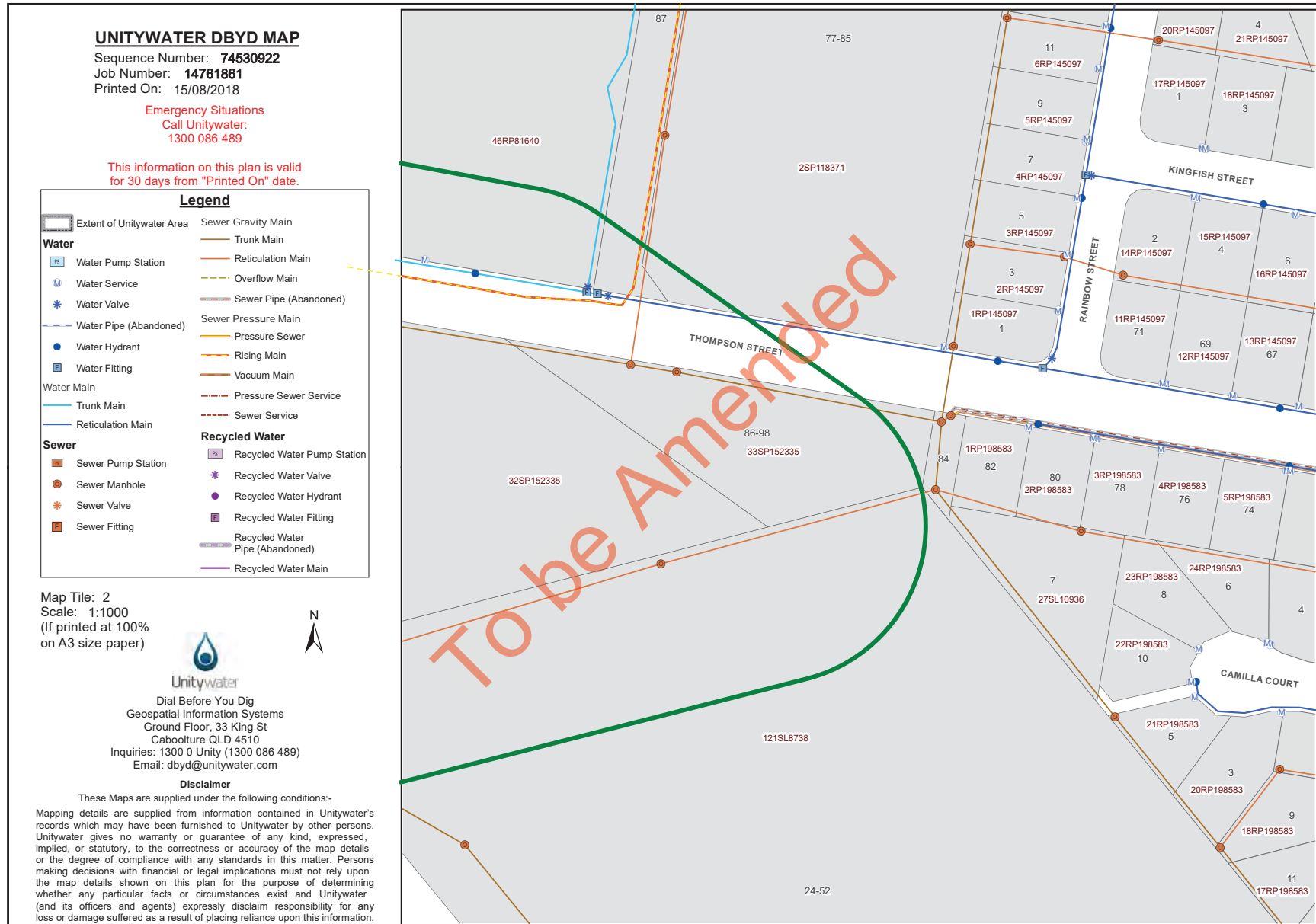
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DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

54-66 OLD BAY ROAD, DECEPTION BAY

SITE BASED STORMWATER MANAGEMENT PLAN

19 September 2018

To be Amended

ACN 105 078 377

5/541 Old Cleveland Rd, CAMP HILL QLD 4152

Ph (07) 3398 4992 Fax (07) 3398 4993

www.stormw.com.au

STORM
Water Consulting Pty
Ltd

Moreton Bay Regional Council

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Job No: J6010

Job Name: 54-66 Old Bay Road, Deception Bay

Report Name	Date	Report No.
Site Based Stormwater Management Plan	19 September 2018	6010-2.0

Project Engineer: Jack Hu
BE Civil (Hons), MIEAust
E jack@stormw.com.au

Reviewed By: Darren Rogers
BE Civil (Hons), MIEAust, RPEQ 5016
Director
E darren@stormw.com.au
M 0410 314 115

To be Amended

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1.0 INTRODUCTION

Storm Water Consulting Pty Ltd was commissioned by DL and Associates Pty Ltd to complete a Site Based Stormwater Management Plan for the proposed childcare centre development on 54-66 Old Bay Road, Deception Bay.

This report seeks to address the following flooding and stormwater issues associated with the development:

- Flood extent and maximum site development extent;
- Minimum design levels;
- Stormwater quantity management;
- Stormwater quality management;
- Flood Hazard Overlay Code assessment.

To be Amended

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2.0 SITE CONDITIONS

2.1 Existing Site

The subject site is 16,381 m² in area and is covered with dense vegetation and trees. A two-storey dwelling is located on the southern corner of the subject site. The subject site is bounded by Old Bay Road to the west, Thompson Road to the north and by Progress Park to the south and east. A locality plan is presented in Figure 2.1 below. Photographs of the existing site condition are presented in Appendix B.



Figure 2.1 – Locality Plan

2.2 Developed Site

A childcare centre is proposed to be constructed on the site. Development plans are presented in Appendix F.



3.0 FLOOD MODELLING – HYDROLOGIC ANALYSIS

The subject site is affected by a 146 ha Catchment A to the west, under Old Bay Road (Point-1) and by a 137 ha Catchment B to the east, under Thompson Street (Point-2).



Figure 3.1 – Catchment Plan

Rational Method calculations were undertaken of each catchment (in accordance with QUDM 2016). A summary of the total catchment flow is presented in Table 3.1. Detailed Rational Method calculations are presented in Appendix C.

Table 3.1 – Total Catchment Flow

AEP %	Catchment A Flows m ³ /s	Catchment B Flows m ³ /s
63%	11.4	10.7
39%	15.7	14.8
18%	22.9	21.6
10%	27.5	25.9
5%	33.6	31.7
2%	43.9	41.4
1%	51.6	48.6



URBS hydrologic modelling was undertaken to produce inflow hydrographs for input into the TUFLOW hydrodynamic model. A schematic representation of the URBS model is presented below. URBS data files are presented in Appendix D. A summary of the adopted URBS parameters is presented in Table 3.2 below.

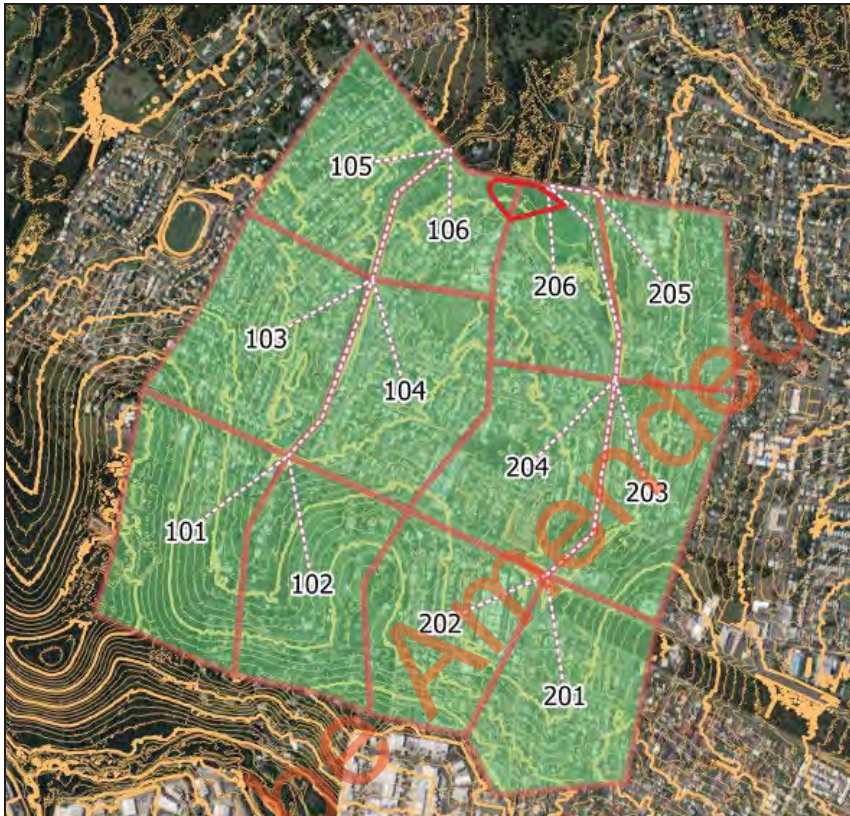


Figure 3.2 – URBS Model Schematic

Table 3.2 – Catchment URBS Model Parameters

AEP	Storage Coefficient	Non-Linearity Index	Initial Rainfall Loss	Continuing Rainfall Loss
%	α	β	mm	mm/hr
1%	1.2	0.8	0.0	2.5

The URBS model peak 1% AEP catchment runoff, adopting the above model parameters, was modelled to be **51.2 m³/s** at Point-1 and **44.3 m³/s** at Point-2. These flows compare favourably with the Rational Method calculated flows. The critical storm duration is the 60-minute storm.

Figure 3.3 on the following page presents the 1% AEP 60-min inflow hydrographs for input into the TUFLOW hydrodynamic model.

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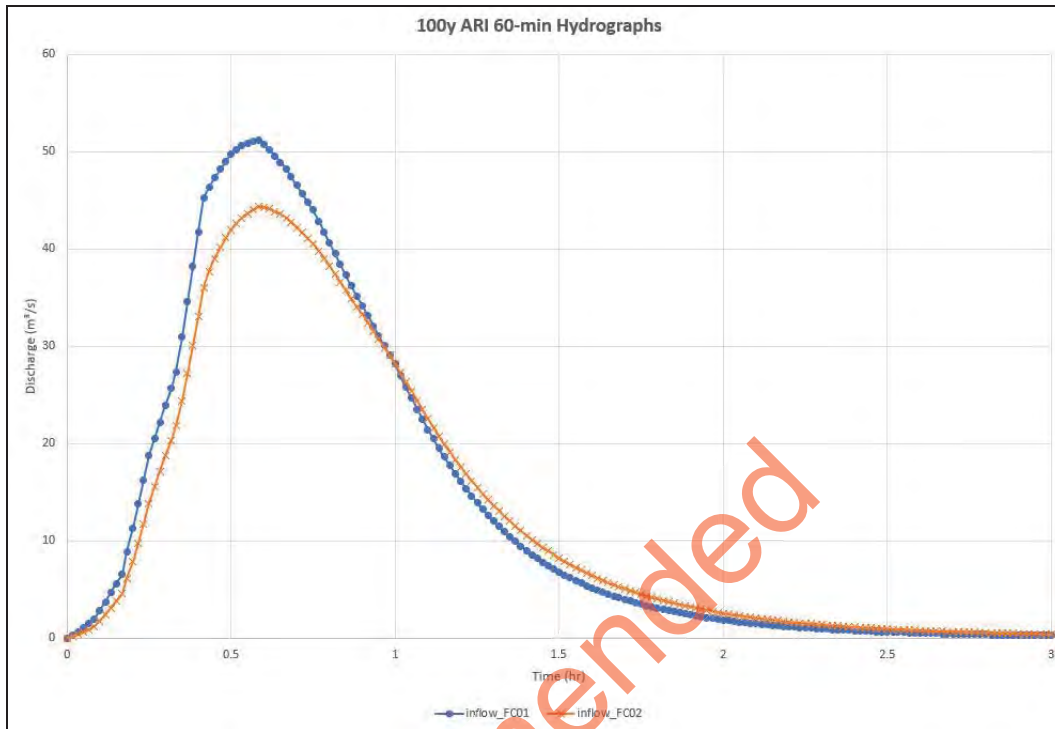


Figure 3.3 – Inflow Hydrographs for TUFLOW

To be Amended



4.0 FLOOD MODELLING – HYDRODYNAMIC ANALYSIS

TUFLOW hydrodynamic modelling was undertaken to identify the maximum extent of development on the site.

4.1 TUFLOW Model Setup – Existing

Model Extents

Figure 4.1 below presents the existing model set up.



Figure 4.1 – Existing Model Extents

The Digital Elevation Model (DEM) was based on ALS survey data obtained from the Department of Natural Resources and Mines, supplemented with the recently completed detailed site survey. The DEM consists of 2 metre cell sizes, orientated to align with the general direction of flow.

Materials

The roads were modelled with a Manning’s roughness of $n = 0.020$. Dense vegetation areas were modelled with a Manning’s roughness of $n = 0.080$. The remainder of the model was modelled with a Manning’s roughness of $n = 0.035$, representing average grass.

Boundary Conditions

The inflow hydrographs presented in Figure 3.3 of this report were input as discharge-time (QT) inflows at the top end of the model. The downstream boundary condition was set as a height-discharge (HQ) boundary with a nominal flood slope of 1 in 100.

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Culvert Structures (1d network)

The culverts included in the model are summarised below. The dimensions of these culverts were sourced from Moreton Bay Regional Council (refer Appendix E). Photographs of these culverts are presented in Appendix B.

Below Old Bay Road:

- 7 / 1200W x 600H mm RCBC
- 3 / 1200W x 450H mm RCBC

Below Thompson Road:

- 4 / 1200W x 900H mm RCBC

Model Simulation

The existing model was run with a timestep of 1 second for a period of 1.5 hours (i.e. well past the peak of the hydrographs). The results of the TUFLOW model around the subject site is presented in the following section.

To be Amended



4.2 TUFLOW Model Results – Existing

The following figures present the existing 1% AEP inundation levels, inundation depths, velocities and velocity-depth products around the subject site.



Figure 4.2 – Existing 1% AEP Inundation Levels (m AHD)



Figure 4.3 – Existing 1% AEP Inundation Depths (metres)

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Figure 4.4 – Existing 1% AEP Velocities (m/s)



Figure 4.5 – Existing 1% AEP Velocity-Depth Products (m^2/s)



4.3 Discussion of Results

The TUFLOW model results indicate that the upstream 1% AEP flood level on the site is 4.0 m AHD. This corresponds closely to the 1% AEP flood level recorded on the Flood Check Development Report of 4.1 m AHD.

For sites affected by the 1% AEP flood extent, the Flood Hazard Overlay Code limits the footprint of development to outside the 1% AEP flood extent. The proposed childcare centre development incorporates car parking and driveway along the rear of the development. It is considered that flooding of up to 300 mm depth is acceptable within the rear car park and driveway area. No filling or excavation is proposed within the rear car park and driveway.

The site plans and floor plans in Appendix F show an *RPEQ – Q100* line (also refer to Figure 4.6 below). This line is based on the 1% AEP (Q100) flood results of the TUFLOW analysis. No filling or excavation is proposed past this line. The same plans also show an *RPEQ – 300 mm development line*. This line indicates the extent of the site which experiences less than or equal to 300 mm of flood depth in a 1% AEP event (based on the results of the TUFLOW analysis). This line sets out the maximum extent of the car park and driveway area.

The majority of the proposed development is located outside of the Medium Risk Flood Hazard overlay. The car park and driveway areas within the Medium Risk Flood Hazard overlay would not require filling or excavation works. It is therefore considered that the proposed development would not result in adverse hydraulic impacts to the existing creek or on adjoining sites.

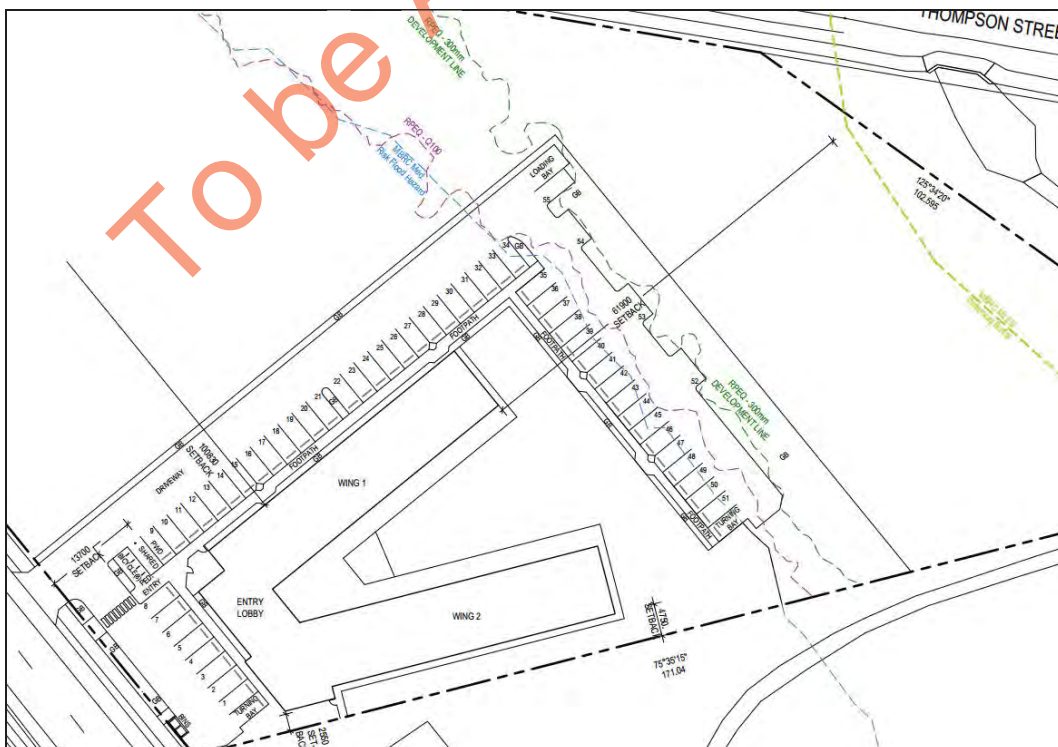


Figure 4.6 – Extract of Site Plan



5.0 MINIMUM DESIGN LEVELS

The Flood Check Development Report states that the Defined Flood Level is 4.1 m AHD for the subject site. This is slightly higher than the modelled 4.0 m AHD from the TUFLOW model. The computer model used to generate the Defined Flood Level would most likely incorporate additional allowances for catchment condition, predicted sea level rise, blockage to drainage systems and climate change. As such, the level of 4.1 m AHD would be utilised to set minimum design levels for the childcare centre development.

The subject site is located east of the Bruce Highway and outside of the Erosion Prone Area in the Coastal hazard overlay. As such, the minimum freeboard required is 300 mm. The minimum design level, i.e. Flood Planning Level, is the summation of the Defined Flood Level and the minimum required freeboard. Table 5.1 below is an extract from the Flood Check Development Report which summarises the minimum design level requirements (refer Appendix A for a copy of the full report).

Defined Flood Level (m AHD)	Freeboard (mm)	Flood Planning Level (m AHD)
4.1	300	4.4

Figure 5.1 – Extract from Flood Check Development Report

The minimum design level for the childcare centre buildings is **4.4 m AHD**. Non-habitable areas such as car parks would not need to meet minimum design levels but would need to incorporate materials which have high water resistance.

The lowest finished floor level proposed for the childcare centre buildings is 5.3 m AHD. This is 900 mm above the minimum design level required.

The maximum flow velocity, as identified in the Flood Check Development Report, is 0.82 m/s. This flow velocity is less than 1.5 m/s and site development is therefore able to satisfy the Queensland Development Code MP 3.5.



6.0 STORMWATER QUANTITY MANAGEMENT

The proposed childcare centre development involves hardstand buildings, car parks and driveways. These additional hardstand areas would likely result in adverse impacts downstream. As such, on-site detention is proposed to mitigate the increase in the development’s peak discharge.

URBS hydrologic models were set up to identify a suitable on-site detention system to mitigate the increase in peak discharge. The following sections present the analysis and results of the URBS modelling.

6.1 Hydrologic Calculations

Rational Method calculations were undertaken of the subject site under existing and developed site conditions (in accordance with QUDM 2016). The following parameters were adopted as part of the calculation:

- Area: 0.52 ha
- Time of Concentration:
 - Existing 18 mins
 - Developed 7.5 mins
- C10 Runoff Coefficient
 - Existing 0.74
 - Developed 0.86

A comparison of the site discharge is presented in Table 6.1 below. Detailed Rational Method calculations are presented in Appendix C.

Table 6.1 – Comparison of Site Discharge

AEP %	Existing Site m ³ /s	Developed Site m ³ /s	Increase m ³ /s
63%	0.06	0.10	0.04
39%	0.08	0.14	0.06
18%	0.12	0.19	0.07
10%	0.14	0.23	0.09
5%	0.17	0.28	0.11
2%	0.22	0.36	0.14
1%	0.26	0.41	0.15

The above results indicate that the proposed childcare centre would result in increases in peak discharge, which could adversely impact the downstream properties if not appropriately mitigated. The following sections present the URBS hydrologic modelling utilised to size an appropriate on-site detention system.



6.2 URBS Modelling – Developed Unmitigated Model (Dev)

A schematic representation of the developed model is presented in Figure 1, Appendix A. The adopted URBS parameters are presented in Table 6.2 below. URBS data files are presented in Appendix D (including urbanisation and impervious fraction parameters).

Table 6.2 – Developed URBS Model Parameters

AEP	Storage Coefficient	Non-Linearity Index	Initial Rainfall Loss	Continuing Rainfall Loss
%	α	β	mm	mm/hr
63%	1.2	0.8	25	2.5
39%	1.2	0.8	25	2.5
18%	1.2	0.8	25	2.5
10%	1.2	0.8	25	2.5
5%	1.2	0.8	25	2.5
2%	1.2	0.8	5	2.5
1%	1.2	0.8	0	2.5

Table 6.3 below presents a comparison of the developed URBS model peak flows and the Rational Method developed site condition peak flows.

Table 6.3 – Comparison of Peak Developed Rational Method and URBS Flows

AEP	Developed Flows Rational Method	Developed Flows URBS (Unmitigated)	Difference
%	m ³ /s	m ³ /s	m ³ /s
63%	0.10	0.11	0.01
39%	0.14	0.15	0.01
18%	0.19	0.24	0.05
10%	0.23	0.28	0.05
5%	0.28	0.33	0.05
2%	0.36	0.36	0.00
1%	0.41	0.41	0.00

The results in the table above indicate that the developed URBS model, using the parameters shown in Table 6.2, produces peak flows that correspond with the developed site condition Rational Method flows presented in Section 6.1.



6.3 URBS Modelling – Developed Mitigated Flows (Dev1)

An underground detention tank is proposed to mitigate the impacts of site development. Due to the differences in ground elevation, the rear half of the car park and driveway is not able to discharge via gravity toward the detention tank. These areas have therefore been modelled as bypassing the detention tank. The remainder of the site, including all buildings and grass play areas, will discharge directly into the detention tank.

Figure 2, Appendix A presents a schematic site catchment plan, which shows which part of the site bypasses the detention tank and which part of the site discharges into the detention tank. The proposed tank specifications are presented in Table 6.4 below.

Table 6.4 – Specification of Proposed Underground Detention Tank

Description	Specification
Dimension	Total Volume 130 kL Tank Internal Height 1.0 m Surface level of ground above tank RL 5.0 m AHD Tank Footprint 130 m ² Invert Level 3.6 m AHD
Internal Outlet Control	300 mm dia. orifice at tank IL 3.6 m AHD (orifice to be limited to 70% capacity by covering top 100 mm of orifice with plate) 300 mm dia. orifice at RL 4.3 m AHD (no plate over) Min. 900 x 900 mm pit at obvert of tank for emergency overflow
Outflow Pipe	Sized to discharge 1% AEP outflow of 0.21 m ³ /s from tank Pipe size to be confirmed during detailed design*

* Approx. 450 mm dia. pipe required to convey the 1% AEP outflow

A comparison between the peak mitigated developed URBS flows and the peak existing Rational Method flows at the downstream end of the development is presented below.

Table 6.5 – Comparison of Existing Rational Method Flows & Mitigated URBS Flows

AEP	Existing Flows Rational Method	Developed Flows URBS (Mitigated)	Increase
%	m ³ /s	m ³ /s	m ³ /s
63%	0.06	0.06	0.00
39%	0.08	0.08	0.00
18%	0.12	0.11	-0.01
10%	0.14	0.14	0.00
5%	0.17	0.16	-0.01
2%	0.22	0.20	-0.02
1%	0.26	0.26	0.00

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Results in Table 6.5 indicate that peak flows discharging from the development are decreased through provision of the underground detention tank. A potential location for the underground detention tank is shown in development plans presented in Appendix F.

Detailed URBS model results are presented in Appendix D. The 1% AEP level inside the tank is 4.66 m AHD, which means flows up to and including the 1% AEP event would be contained within the tank. The lowest finished floor level proposed for the childcare centre buildings is 5.3 m AHD, which is 640 mm above the 1% AEP level within the tank.

The detention tank also provides for stormwater quality treatment via tertiary cartridge-style treatment devices. These devices would be located within the detention tank. Flows discharging from the tank will be treated to meet water quality objectives. Details of the stormwater quality management for the site are presented in Section 8.0 of this report.

The inflows into the tank will first flow into a compartment containing the SPELFilter cartridges. Treated flows and overflows from the SPELfilter compartment will end up within the detention component of the tank and receive attenuation. The two 300 mm diameter orifices will be located near the outlet of the tank. Flows discharging from the two orifices will then exit the tank via a 1% AEP outflow pipe (approx. 450 mm diameter).

The obvert of the tank is 4.6 m AHD, hence a surface level of 5.0 m AHD above the tank provides 400 mm depth for tank lid (200 mm) and soil for grass growth (200 mm). The exact location of the tank and outlet pipe, as well as scour erosion protection measures will be detailed during operational works stage.

To be Amended



7.0 WATER QUALITY

7.1 State Planning Policy (July 2017)

The State Planning Policy (SPP) sets out the requirements for water quality in the interest of the State. Developments which trigger the requirements summarised in Table 7.1 below would need to meet water quality objectives listed in Table B, Appendix 3 of the SPP.

Table 7.1 – Development Applications affecting Receiving Waters

State Planning Policy Criteria	Application to Development
(1) A material change of use for urban purposes that involves a land area greater than 2500 square metres that: (a) will result in an impervious area greater than 25 per cent of the net developable area, or	Criterion is applicable to development.
(b) will result in six or more dwellings, or	Criterion is NOT applicable to development.
(2) Reconfiguring a lot for urban purposes that involves a land area greater than 2500 square metres and will result in six or more lots, or	Criterion is NOT applicable to development.
(3) Operational works for urban purposes that involve disturbing more than 2500 square metres of land.	Criterion is NOT applicable to development.

The proposed development triggers the SPP, hence water quality objectives indicated in Table B, Appendix 3 of the SPP would need to be met.



7.2 Water Quality – Construction Phase

During the construction phase of a development, the pollutants listed in Table 7.2 are typically generated. Measures are required during the construction phase to manage each of these pollutants. These measures may include but are not limited to; bins and mini-skips, erosion and sediment control measures (discussed below), wash down and spill containment areas, bunds, spill clean-up kits, street sweeping and chemical agents.

Table 7.2 – Pollutants Generated during the Construction Phase

Pollutant	Source
Litter	Paper, construction packaging, food packaging, cement bags, off-cuts
Sediment	Unprotected exposed soils and stockpiles during earthworks and building operations
Hydrocarbons	Fuel and oil spills leaks from construction equipment
Toxic materials	Cement slurry, asphalt primer, solvents, cleaning agents, wash waters (e.g. from tile works)
pH altering substances	Acid sulphate soils, cement slurry and wash waters

7.2.1 Erosion and Sediment Control

During the construction phase of the development, an Erosion and Sediment Control Program (E&SCP) is required to minimise water quality impacts. Such an E&SCP should provide complete and detailed instructions on the following procedures;

- Before construction activities begin, sediment fences should be constructed on the downstream site boundaries and at the base of all proposed soil stockpiles;
- Areas for plant and construction material storage should be designated. Runoff from these areas should be directed to small holding ponds in case of spillages;
- Catch drains at the downstream boundary of construction activities should also be created to ensure that any sediment-laden runoff is contained and directed into a sediment basin and not permitted to flow unmitigated to downstream areas;
- Sediment basins should be constructed at appropriate locations to collect sediment at the downstream ends of the catch drains that convey runoff from exposed areas;
- Site personnel should be educated on the sediment and control measures implemented on site; and
- Following rainfall events greater than 20mm, inspection of silt fences, sedimentation basins and other erosion control measures should be carried out. Where necessary, collected material should be removed and damaged equipment should be replaced immediately.

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7.3 Water Quality – Operational Phase

During the operational (post-construction) phase of the proposed development, the following pollutants are typically generated;

- Sediment,
- Litter,
- Faecal coliforms,
- Hydrocarbons,
- Heavy Metals,
- Thermal Pollution,
- Nutrients (N & P) and
- Surfactants.

7.3.1 Water Quality Objectives

Key pollutant levels will be reduced to the levels indicated in Table B, Appendix 3 of the State Planning Policy. The Water Quality Objectives are summarised in Table 7.3 below.

Table 7.3 – Water Quality Objectives for South East Queensland

Parameter	Load-based Reduction
Total Suspended Solids (TSS)	80%
Total Phosphorus (TP)	60%
Total Nitrogen (TN)	45%
Gross Pollutants > 5mm	90%

Note that the percentage reduction refers to a comparison between the un-mitigated developed site and the mitigated developed site.

To be Amended



8.0 WATER QUALITY MODELLING

A stormwater treatment train is proposed to meet the WQOs stated in Section 7.3.1. The Stormwater Quality Improvement Devices (SQIDs) for the treatment train were selected based on site constraints, opportunities and practicality.

All site flows which are directed toward the detention tank will receive treatment via SPELfilter cartridges located within the tank. The car park and driveway flows will first be captured by pits fitted with Stormsacks prior to discharging toward the detention tank. The car park and driveway areas which bypass the detention tank will sheet flow toward the landscape areas along the rear of the development. A portion of this bypass area will be able to be captured by pits fitted with Stormsacks prior to discharging toward the landscape areas.

8.1 Source Nodes

The MUSIC sub-catchments, their areas and impervious proportions are summarised in Table 8.1 below. Figure 3, Appendix A presents a schematic of the sub-catchments.

Table 8.1 – Source Node Fractions Impervious

Source Node	Area	Type	Fraction Impervious
Roof (to tank)	0.147 ha	Commercial Roof	100%
Road (to tank)	0.111 ha	Commercial Roads	90%
Landscape (to tank)	0.130 ha	Commercial Ground	80%
Bypass Road (to pit)	0.038 ha	Commercial Road	90%
Bypass Road (to swale)	0.091 ha	Commercial Road	90%

Rainfall-runoff parameters were assigned to the source nodes in accordance with the Water by Design MUSIC Modelling Guidelines Version 1.0 – 2010 Commercial Use of the site. These parameters are summarised in Table 8.2.

Table 8.2 – Rainfall – Runoff Parameters

Parameter		Commercial
Impervious Area Properties	Rainfall threshold (mm/day)	1
	Soil storage capacity (mm)	18
Pervious Area Properties	Initial storage (% of capacity)	10
	Field Capacity (mm)	80
	Infiltration Capacity Coefficient – a	243
	Infiltration Capacity Exponent – b	0.6

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Groundwater Properties	Initial depth (mm)	50
	Daily recharge rate (%)	0
	Daily base flow rate (%)	31
	Daily deep seepage rate (%)	0.0

Pollutant export parameters were assigned according to the Water by Design MUSIC Modelling Guidelines Version 1.0 – 2010. The pollutant export parameters adopted in the MUSIC model are summarised in Tables 8.3.

Table 8.3 – Pollutant Export Parameters (Commercial)

Source		Log ₁₀ TSS (mg/L)		Log ₁₀ TP (mg/L)		Log ₁₀ TN (mg/L)	
		Base flow	Storm flow	Base flow	Storm flow	Base flow	Storm flow
Roof	Mean	NA	1.30	NA	-0.89	NA	0.37
	Std Dev	NA	0.38	NA	0.34	NA	0.34
Road	Mean	0.78	2.43	-0.60	-0.30	0.32	0.37
	Std Dev	0.39	0.38	0.50	0.34	0.30	0.34
Ground	Mean	0.78	2.16	-0.60	-0.39	0.32	0.37
	Std Dev	0.39	0.38	0.50	0.34	0.30	0.34

To be Amended



8.2 Treatment Node – Stormsacks

Stormsacks are primary treatment devices which predominantly capture gross pollutants and sediments, as well as a small fraction of the nitrogen and phosphorous within the stormwater. Stormsacks are a cost-effective solution for maintaining the efficiency of the underground detention tank and tertiary treatment device (i.e. SPELfilter).

Stormsacks are proposed to be located in all on-site field inlets and gully pits. The input parameters utilised in MUSIC are presented in Table 8.4 and 8.5 below.

Table 8.4 – MUSIC Input Parameters for Stormsacks

Inlet Properties	GPT
Low Flow Bypass (m ³ /s)	0
High Flow Bypass (m ³ /s)	0.011 x No. Stormsacks

Table 8.5 – MUSIC Transfer Functions for Stormsacks

Transfer Functions	In	Out
Total Suspended Solids (TSS)	0	0
	1000	680
Total Nitrogen (TN)	0	0
	50	31
Total Phosphorus (TP)	0	0
	5	3.15
Gross Pollutants	0	0
	15	0

A minimum of 5 Stormsacks are required for all pits which capture flows for discharge into the detention tank. A minimum of 1 Stormsack is required for the single pit which capture flows for discharge toward the grass swale.

8.2.1 Maintenance

Refer to Stormsack Maintenance Guidelines available from SPEL Environmental following product installation.



8.3 Treatment Node – SPELFilter

SPELFilters are proposed to be located inside the underground detention tank. The input parameters utilised in MUSIC are presented in Table 8.6 and 8.7 below.

Table 8.6 – MUSIC Input Parameters for SPELFilter

Inlet Properties	GPT
Low Flow Bypass (m ³ /s)	0
High Flow Bypass (m ³ /s)	0.01692 m ³ /s

Table 8.7 – MUSIC Transfer Functions for SPELFilter

Transfer Functions	In	Out
Total Suspended Solids (TSS)	0	0
	1000	130
Total Nitrogen (TN)	0	0
	50	29
Total Phosphorus (TP)	0	0
	5	2.25
Gross Pollutants	0	0
	15	0

A total filtration rate of 16.92 litres/second is required of the SPELFilters. A total of **twelve (12) SPELFilters** are required to achieve this filtration rate.

8.3.1 Maintenance

Refer to SPELFilter Maintenance Guidelines available from SPEL Environmental following product installation.



8.4 Treatment Node – Swale

The landscape areas between the individual parallel parking spaces toward the rear of the development, as shown on plans in Appendix F, were modelled as grass swales. The car park and driveway toward the rear of the development will sheet flow toward the grass swales. The parameters of the combined swales modelled in MUSIC are summarised below.

Table 8.8 – MUSIC Properties for Swale

Storage Properties	Value
Length	33 m
Bed Slope	0.5 %
Base Width	1 m
Top Width	2 m
Depth	0.15 m
Vegetation Height	0.10 m
Exfiltration Rate	0 mm/hr

To be Amended



8.5 MUSIC Analysis

The quality of stormwater runoff and the impact of the proposed SQIDs were analysed using MUSIC version 6.2 in accordance with the water quality objectives from Table B, Appendix 3 of the State Planning Policy. MUSIC model was based on the 1980 to 1989 rainfall series for Dayboro (40063) with 6 minute time steps. The MUSIC model schematic is presented in Figure 8.1 below. The MUSIC modelling results are presented in Table 8.9 below.

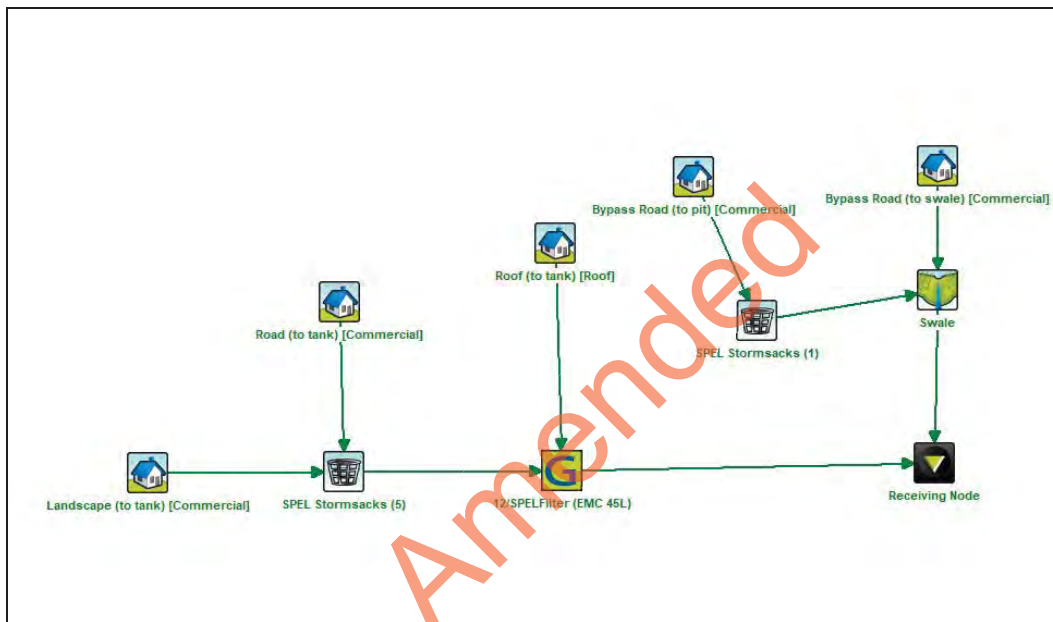


Figure 8.1 – MUSIC model schematic

Table 8.9 – MUSIC model results

Indicator	Annual Loads (kg/yr)		Reduction	
	Without SQIDs	With SQIDs	Actual	Target
TSS	1310	210	84%	80%
TP	2.62	0.878	67%	60%
TN	17	9.43	45%	45%
GP	112	2.16	98%	90%

The results above indicate that the required water quality objectives are met for the development.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
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9.0 CONCLUSIONS

This Site Based Stormwater Management Plan was prepared to address the following flooding and stormwater issues associated with the childcare centre development 54-66 Old Bay Rod, Deception Bay:

- **Flood extent and maximum site development extent**
 - Refer Sections 3.0 and 4.0 of report.
- **Minimum design levels**
 - Refer Section 5.0 of report
- **Stormwater quantity management**
 - Refer Section 6.0 of report
- **Stormwater quality management**
 - Refer Section 8.0 of report
- **Flood Hazard Overlay Code assessment**
 - Refer Appendix G of report



Darren Rogers
BE Civil (Hons), MIE Aust, RPEQ 5016
Director

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
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APPENDIX B – Photographs

APPENDIX C – Rational Method Calculations

APPENDIX D – URBS Model Files

APPENDIX E – Stormwater Pipe Plan

APPENDIX F – Development Plans

APPENDIX G – Flood Hazard Overlay Code Response

To be Amended



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

APPENDIX A

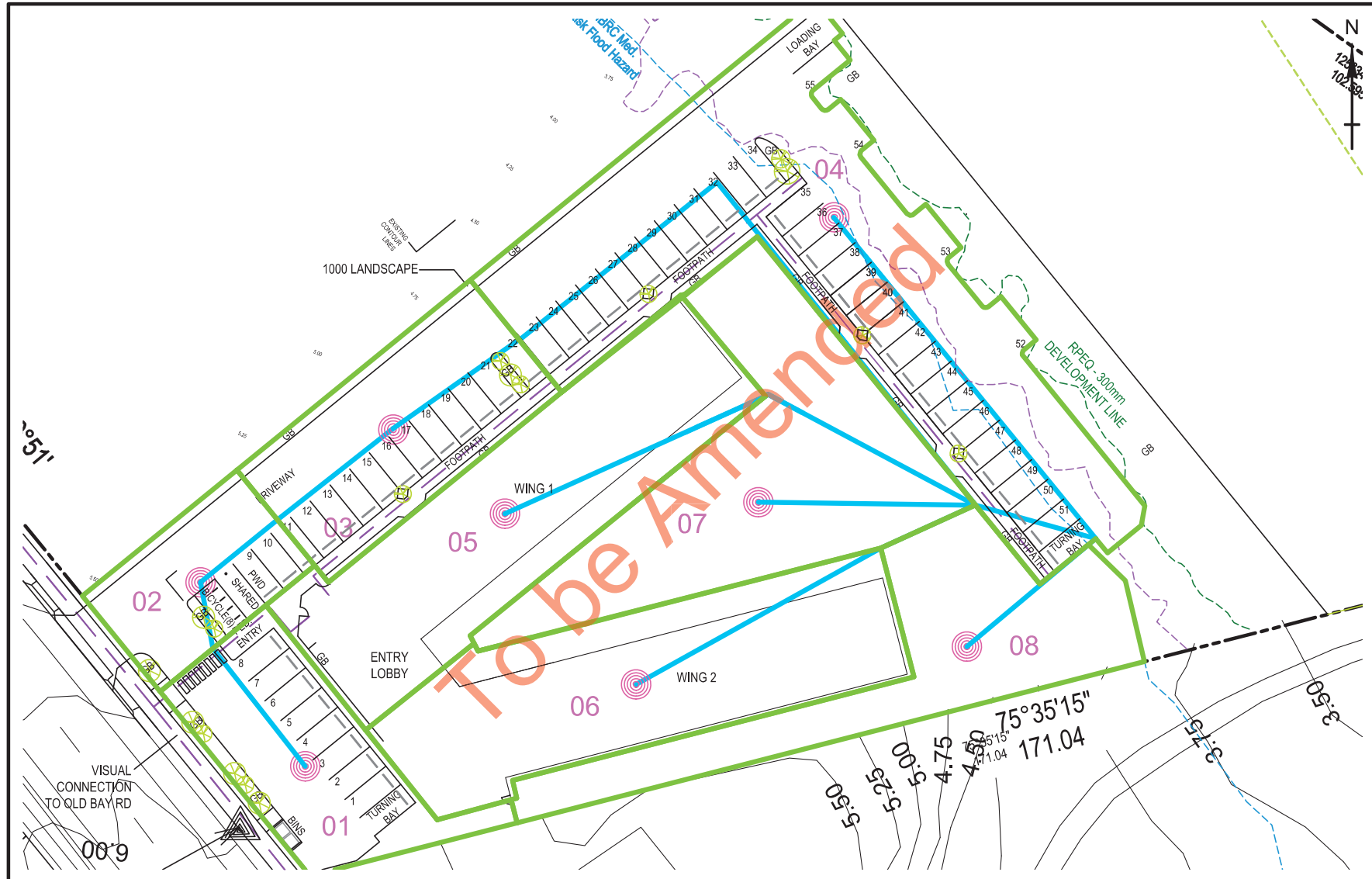
Figures


To be Amended



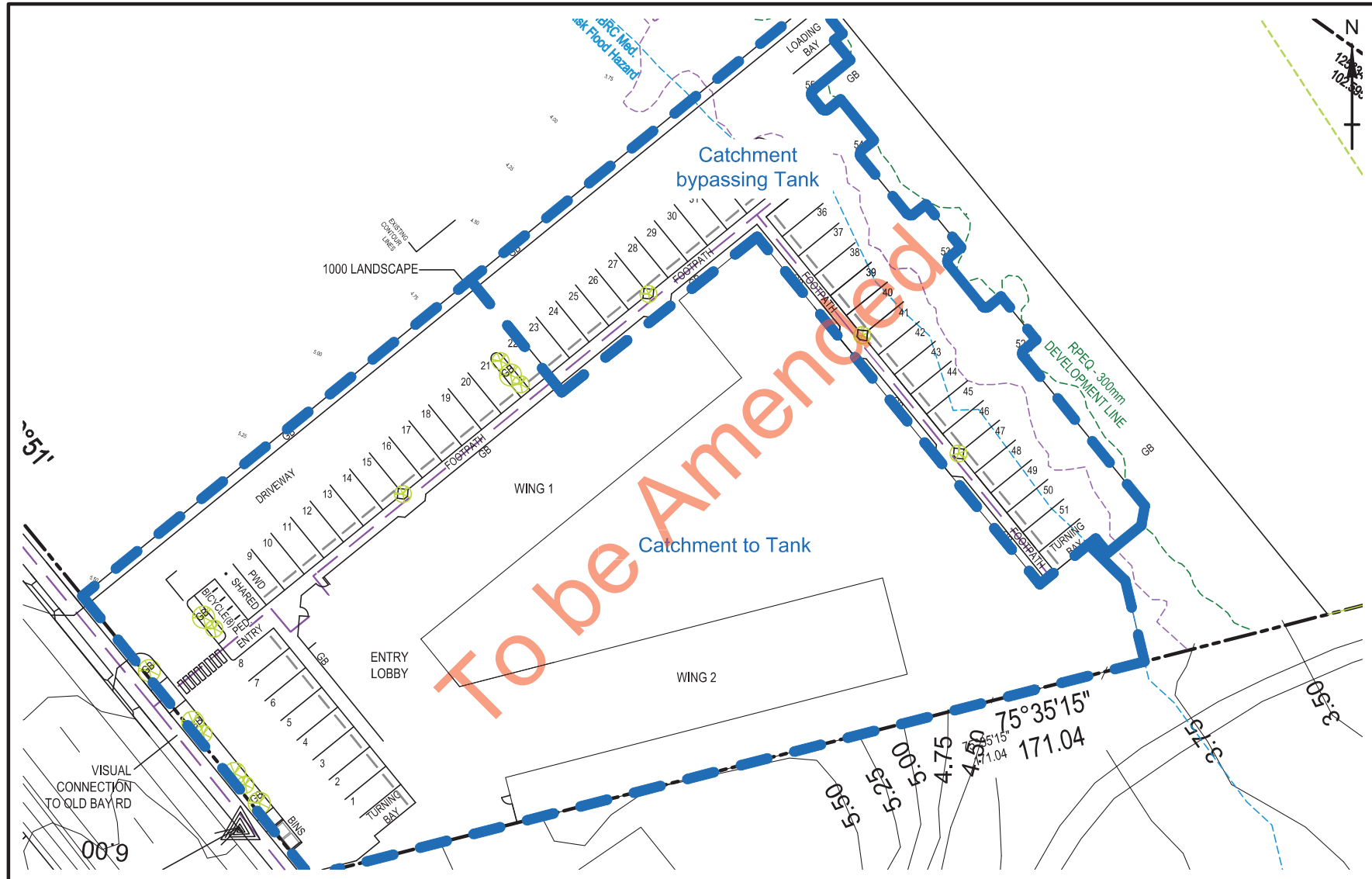
Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



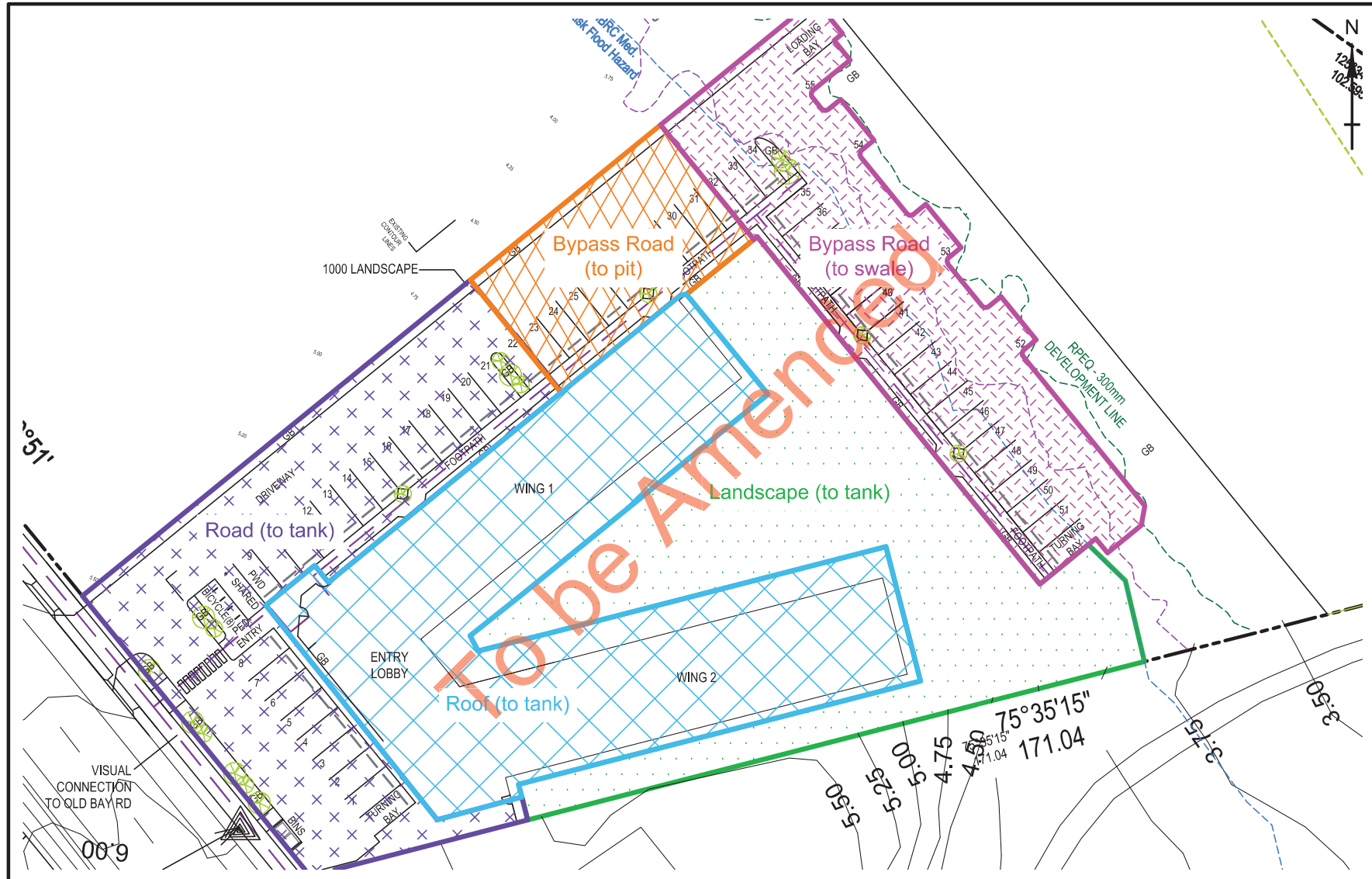
 <p>5/541 Old Cleveland Rd Camp Hill QLD 4152 Phone (07) 3398 4992 Fax (07) 3398 4993</p>	Drawn	JH	54 Old Bay Road, Deception Bay
	Checked	DWR	
	Date	19/09/18	
	Scale	1:500 A4	
Job No.		J6010	Figure 1 URBS Sub-Catchment Schematic


ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



	5/541 Old Cleveland Rd Camp Hill QLD 4152 Phone (07) 3398 4992 Fax (07) 3398 4993	Drawn JH Checked DWR Date 19/09/18 Scale 1:500 A4	54 Old Bay Road, Deception Bay Job No. J6010	Figure 2 Site Catchment Schematic
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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



 <p>5/541 Old Cleveland Rd Camp Hill QLD 4152 Phone (07) 3398 4992 Fax (07) 3398 4993</p>	Drawn	JH	54 Old Bay Road, Deception Bay
	Checked	DWR	
	Date	19/09/18	
	Scale	1:500 A4	
Job No.		J6010	Figure 3
			MUSIC Sub-Catchment Schematic

*ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
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APPENDIX B

Photographs

To be Amended



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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Photograph 1 – Existing site condition



Photograph 2 – Existing house

J6010 Report 2.0.doc
19 September 2018

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Photograph 3 – Culverts below Thompson Street



Photograph 4 – Culverts below Old Bay Road

*ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
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APPENDIX C

Rational Method Calculations

To be Amended



Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

STORM <small>Water Consulting</small>	RATIONAL METHOD CALCULATIONS	Table C 1 a
Project: 54 Old Bay Rd, Deception Bay	6010	
Location: Old Bay Rd Culverts, Point-1		
Comments: Developed Catchment		

Time of Concentration	
Upper Catchment Slope	6.0%
Standard Inlet Time	13 min
Travel Length	1700 metres
Fall	12 metres
Travel Time (Argue)	16 min
Delta for	2.0
Time of Concentration	45.0 min

Rainfall Data:
Rainfall Intensity Frequency Duration data for; Brisbane City Council

Sub-Areas and Runoff Coefficients														
	Area			Condition	Areas included in Calculations				Separate c100 > 1.0 and c100 < 1.0					
	ha	Exist	Dev		Area	C10	C10 x A	C10	C10	C10 x A	C10 x A	Area	Area	
A	145.77	0.00	0.82	Developed	145.77	0.82	119.53	0.82		119.53		145.77		
B	137.51	0.00	0.82											
					145.77					119.53	0.00	145.77	0.00	
								0.820		119.533		145.772		
							0.820	0.000	119.533	0.000	145.772	0.000		

STORM <small>Water Consulting</small>	RATIONAL METHOD CALCULATIONS	Table C 1 b
Project: 54 Old Bay Rd, Deception Bay	6010	
Location: Thompson St Culverts, Point-2		
Comments: Developed Catchment		

Time of Concentration	
Upper Catchment Slope	6.0%
Standard Inlet Time	13 min
Travel Length	1700 metres
Fall	12 metres
Travel Time (Argue)	16 min
Delta for	2.0
Time of Concentration	45.0 min

Rainfall Data:
Rainfall Intensity Frequency Duration data for; Brisbane City Council

Sub-Areas and Runoff Coefficients														
	Area			Condition	Areas included in Calculations				Separate c100 > 1.0 and c100 < 1.0					
	ha	Exist	Dev		Area	C10	C10 x A	C10	C10	C10 x A	C10 x A	Area	Area	
A	145.77	0.00	0.82	Developed	137.51	0.82	112.76	0.82		112.76		137.51		
B	137.51	0.00	0.82											
					137.51					112.76	0.00	137.51	0.00	
								0.820		112.759		137.511		
							0.820	0.000	112.759	0.000	137.511	0.000		

Discharge Calculations			
tc	45.0		
C100>1	Average	c10	0.000
	Area (ha)		0.00
C100<1	c10 - 2	Average	0.820
	Area (ha)		145.77

Total Catchment
145.77 ha

Depth mm	ARI years	Fy	Runoff Coefficients		Rainfall (mm/hr)	Discharge m ³ /s		
			C100>1	C100<1		1	2	Total
32	1	0.80	0.00	0.66	42.8	0.00	11.38	11.4
42	2	0.85	0.00	0.70	55.6	0.00	15.68	15.7
54	5	0.95	0.00	0.78	72.4	0.00	22.85	22.9
62	10	1.00	0.00	0.82	82.8	0.00	27.49	27.5
72	20	1.05	0.00	0.86	96.5	0.00	33.64	33.6
86	50	1.15	0.00	0.94	114.9	0.00	43.88	43.9
97	100	1.20	0.00	0.98	129.4	0.00	51.55	51.6

Frequent ARI's	Discharge m ³ /s	% of Q _i
1mth	2.844	25%
2mth	4.550	40%
3mth	5.688	50%
4mth	6.826	60%
6mth	8.532	75%
9mth	10.238	90%
12mth	11.376	100%

Discharge Calculations			
tc	45.0		
C100>1	Average	c10	0.000
	Area (ha)		0.00
C100<1	c10 - 2	Average	0.820
	Area (ha)		137.51

Total Catchment
137.51 ha

Depth mm	ARI years	Fy	Runoff Coefficients		Rainfall (mm/hr)	Discharge m ³ /s		
			C100>1	C100<1		1	2	Total
32	1	0.80	0.00	0.66	42.8	0.00	10.73	10.7
42	2	0.85	0.00	0.70	55.6	0.00	14.79	14.8
54	5	0.95	0.00	0.78	72.4	0.00	21.56	21.6
62	10	1.00	0.00	0.82	82.8	0.00	25.93	25.9
72	20	1.05	0.00	0.86	96.5	0.00	31.74	31.7
86	50	1.15	0.00	0.94	114.9	0.00	41.40	41.4
97	100	1.20	0.00	0.98	129.4	0.00	48.63	48.6

Frequent ARI's	Discharge m ³ /s	% of Q _i
1mth	2.683	25%
2mth	4.292	40%
3mth	5.366	50%
4mth	6.439	60%
6mth	8.048	75%
9mth	9.658	90%
12mth	10.731	100%

*ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
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APPENDIX D

URBS Model Files

To be Amended



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



URBS Files for Section 3.0 Flood Modelling – Hydrologic Analysis

6010 Ex.DAT – Catchment Parameters

```
"Index", "Area", "UL", "UF", "I"
#101,0.29667,1.00,0.00,0.50
#102,0.26206,1.00,0.00,0.50
#103,0.28627,1.00,0.00,0.50
#104,0.27140,1.00,0.00,0.50
#105,0.21057,1.00,0.00,0.50
#106,0.13075,1.00,0.00,0.50
#201,0.26314,1.00,0.00,0.50
#202,0.25044,1.00,0.00,0.50
#203,0.21958,1.00,0.00,0.50
#204,0.25270,1.00,0.00,0.50
#205,0.20045,1.00,0.00,0.50
#206,0.18880,1.00,0.00,0.50
```

6010 Ex.U – Routing

```
54 Old Bay Road, Deception Bay - Existing
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=6010_Ex.dat

Rain #101 L=0.387
Store.
Rain #102 L=0.396
Get.
Route thru #103 L=0.606
Store.
Rain #103 L=0.371
Store.
Rain #104 L=0.356
Get.
Get.
Route thru #105 L=0.483
Store.
Rain #105 L=0.308
Store.
Rain #106 L=0.245
Get.
Get.
Print. FC01
Store.
Rain #201 L=0.370
Store.
Rain #202 L=0.357
Get.
Route thru #203 L=0.664
Store.
Rain #203 L=0.357
Store.
Rain #204 L=0.377
Get.
Get.
Route thru #206 L=0.663
Store.
Rain #205 L=0.380
Route thru #206 L=0.152
Store.
Rain #206 L=0.309
Get.
Get.
Print. FC02
Get.
Print. TOTAL
end of catchment details.
```

TO be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



URBS Files for Section 6.0 Stormwater Quantity Management

6010_Dev.DAT – Catchment Parameters

```
"Index", "Area", "UL", "UM", "I"
#1,0.00040,1.00,0.00,0.90
#2,0.00026,1.00,0.00,0.90
#3,0.00084,1.00,0.00,0.90
#4,0.00090,1.00,0.00,0.90
#5,0.00074,1.00,0.00,1.00
#6,0.00073,1.00,0.00,1.00
#7,0.00075,1.00,0.00,0.20
#8,0.00055,1.00,0.00,0.20
```

6010_Dev.U – Routing

```
54 Old Bay Road, Deception Bay - Dev
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=6010_Dev.dat

Rain #1 L=0.015
Route thru #2 L=0.007
Add Rain #2 L=0.010
Route thru #3 L=0.027
Add Rain #3 L=0.029
Route thru #4 L=0.044
Store.
Rain #5 L=0.029
Route thru #5 L=0.024
Store.
Rain #7 L=0.022
Store.
Rain #6 L=0.029
Route thru #6 L=0.011
Get.
Get.
Get.
Route thru #4 L=0.013
Store.
Rain #8 L=0.017
Store.
Rain #4 L=0.029
Get.
Get.
Print. POINT-1
end of catchment details.
```

6010_Dev1.DAT – Catchment Parameters

```
"Index", "Area", "UL", "UM", "I"
#1,0.00040,1.00,0.00,0.90
#2,0.00026,1.00,0.00,0.90
#3,0.00084,1.00,0.00,0.90
#4,0.00090,1.00,0.00,0.90
#5,0.00074,1.00,0.00,1.00
#6,0.00073,1.00,0.00,1.00
#7,0.00075,1.00,0.00,0.20
#8,0.00055,1.00,0.00,0.20
```

6010_Dev1.U – Routing

```
54 Old Bay Road, Deception Bay - Dev1
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=6010_Dev1.dat

Rain #1 L=0.015
Route thru #2 L=0.007
Add Rain #2 L=0.010
```

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



```

Route thru      #3      L=0.015
Add Rain       #3      L=0.015
Route thru     #4      L=0.068
Store.
Rain          #5      L=0.029
Route thru     #5      L=0.024
Store.
Rain          #7      L=0.022
Store.
Rain          #6      L=0.029
Route thru     #6      L=0.011
Get.
Get.
Get.
Route thru     #4      L=0.013
Store.
Rain          #8      L=0.017
Get.
Print. B1-IN
DAM ROUTE VBF=0 NUMBER=30
0.000000 0.000000
0.006500 0.004633
0.013000 0.009267
0.019500 0.013900
0.026000 0.023655
0.032500 0.033833
0.039000 0.042000
0.045500 0.051333
0.052000 0.058333
0.058500 0.070000
0.065000 0.075833
0.071500 0.081667
0.078000 0.087500
0.084500 0.091000
0.091000 0.094500
0.097500 0.104619
0.104000 0.115905
0.110500 0.127191
0.117000 0.145793
0.123500 0.165000
0.130000 0.181333
0.130056 0.199333
0.130106 0.214000
0.130156 0.235333
0.130206 0.248333
0.130256 0.259000
0.130306 0.269667
0.135247 0.341399
0.140247 0.466481
0.145247 0.626292
Print. B1-OUT
Store.
Rain          #4      L=0.042
Get.
Print. POINT-1
end of catchment details.
    
```

TO be Amended

AEP	URBS Basin				Inundation	
	Inflow	Outflow	Level	Depth	Area	Volume
%	m3/s	m3/s	m AHD	m	m2	m3
63%	0.07	0.04	3.89	0.29	130.0	37.8
39%	0.10	0.06	4.00	0.40	130.0	52.0
18%	0.17	0.08	4.14	0.54	130.0	70.8
10%	0.20	0.09	4.25	0.65	130.0	84.1
5%	0.24	0.11	4.38	0.78	130.0	100.9
2%	0.27	0.15	4.52	0.92	130.0	119.0
1%	0.30	0.20	4.66	1.06	1.0	130.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

APPENDIX E

Stormwater Pipe Plan

To be Amended

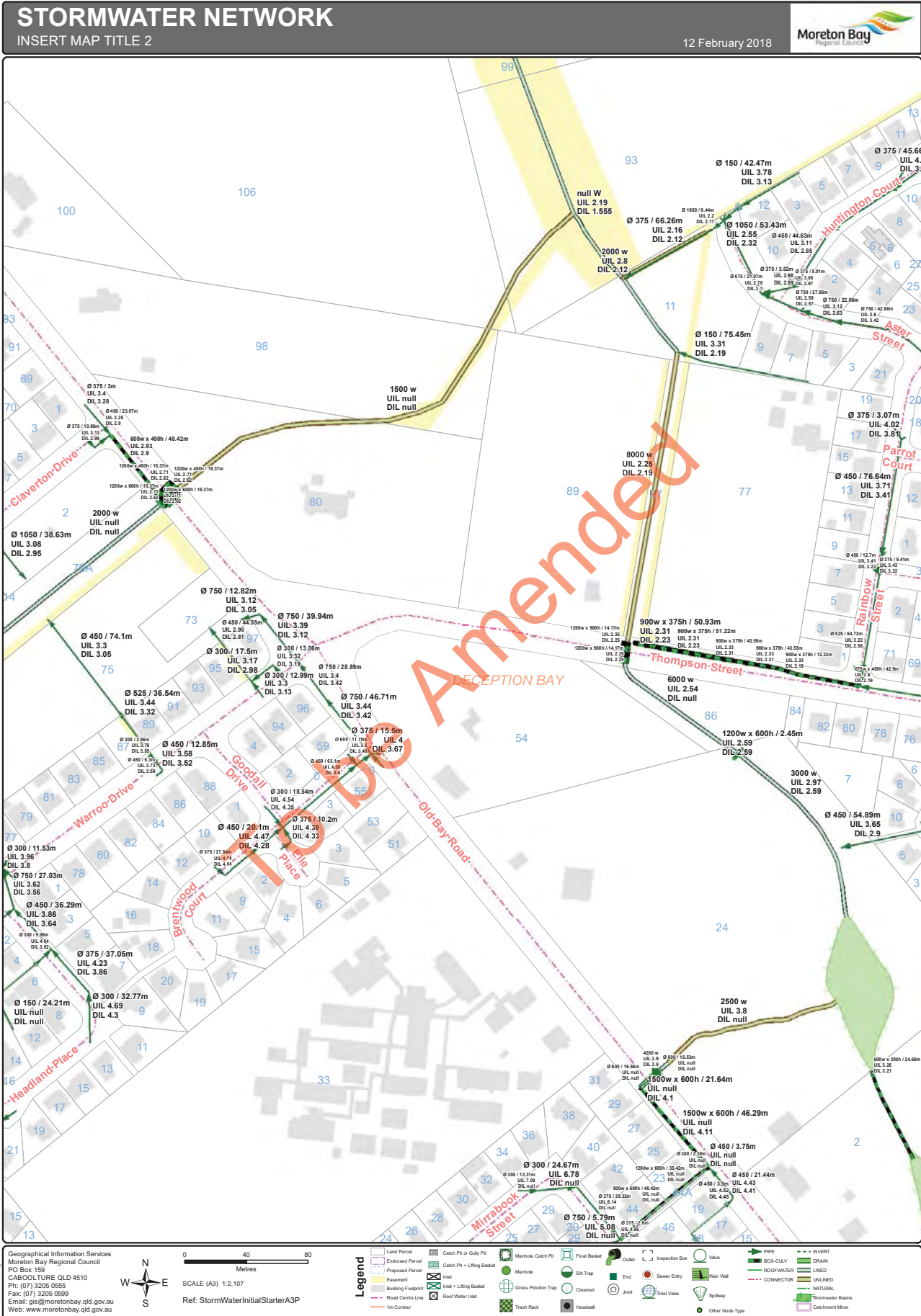


Moreton Bay Regional Council

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19 March 2019

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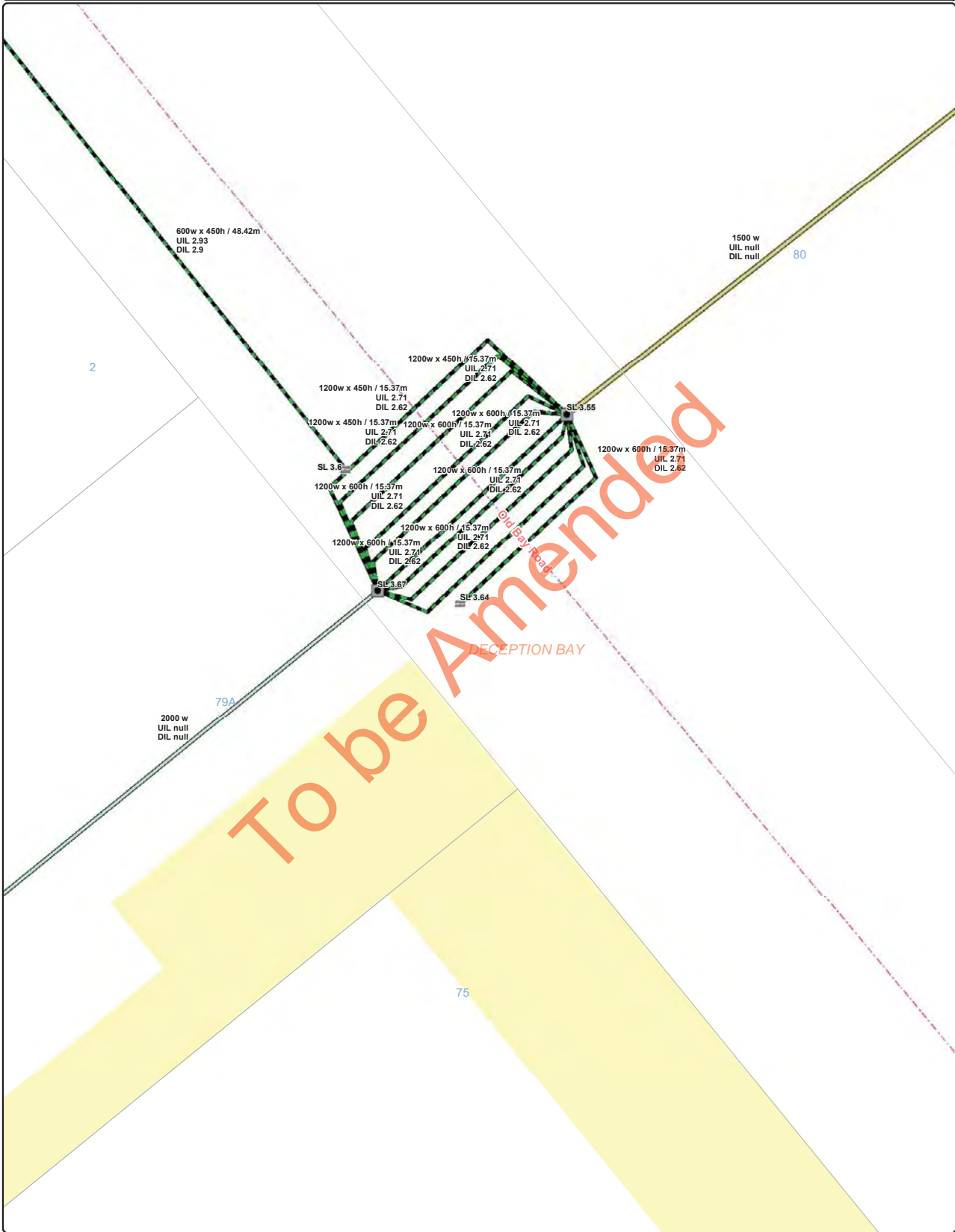
ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



COORDINATION COMMITTEE MEETING
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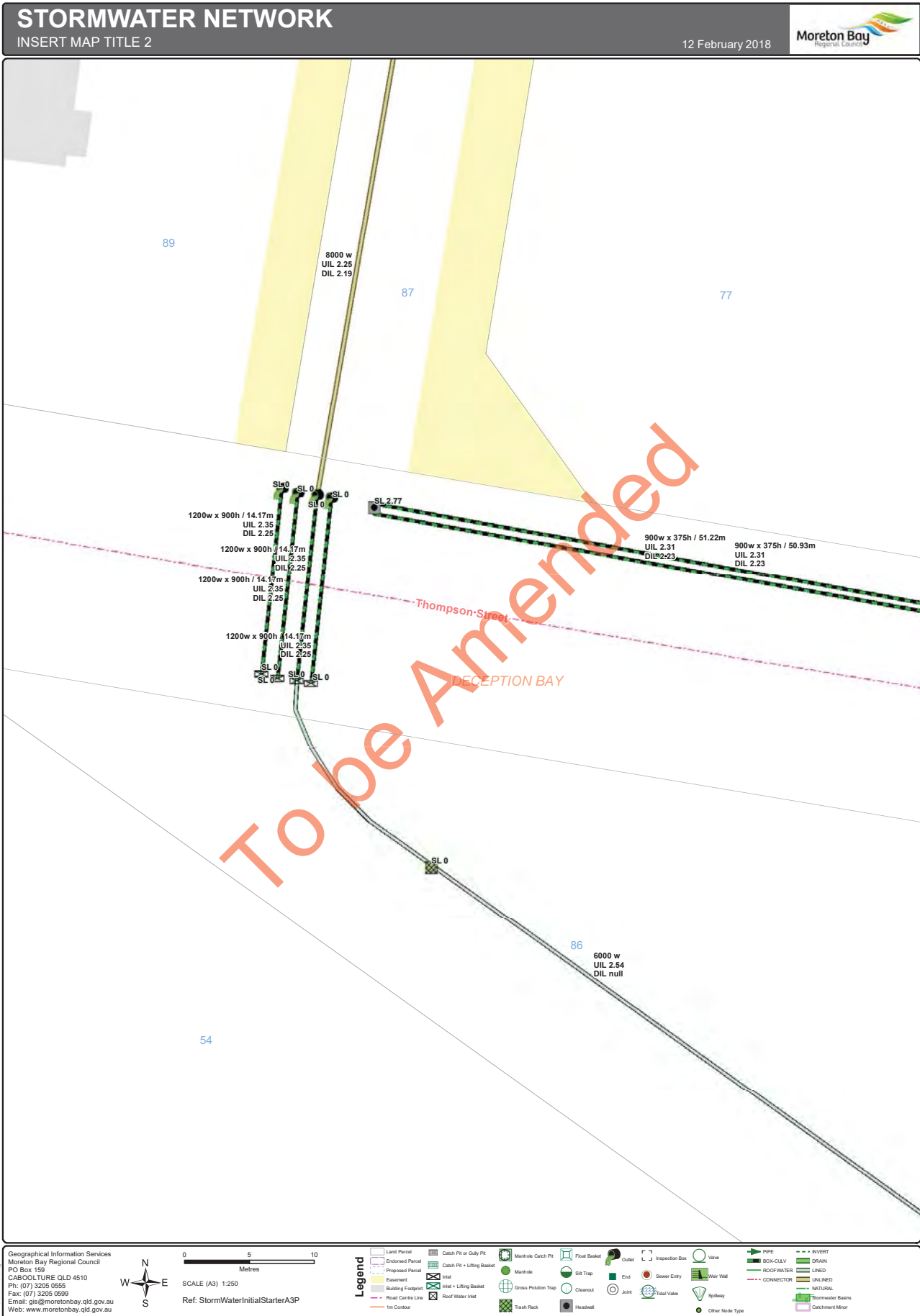
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STORMWATER NETWORK
INSERT MAP TITLE 2 12 February 2018 



<p>Geographical Information Services Moreton Bay Regional Council PO Box 159 CABOOLTURE QLD 4510 Ph: (07) 3205 0555 Fax: (07) 3205 6599 Email: gis@moretonbay.qld.gov.au Web: www.moretonbay.qld.gov.au</p>	<p>0 4 8 Metres</p> <p>SCALE (A3) 1:200 Ref: StormWaterInitialStarterA3P</p>	<p>Legend</p> <table border="0"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>																										<table border="0"> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>										

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

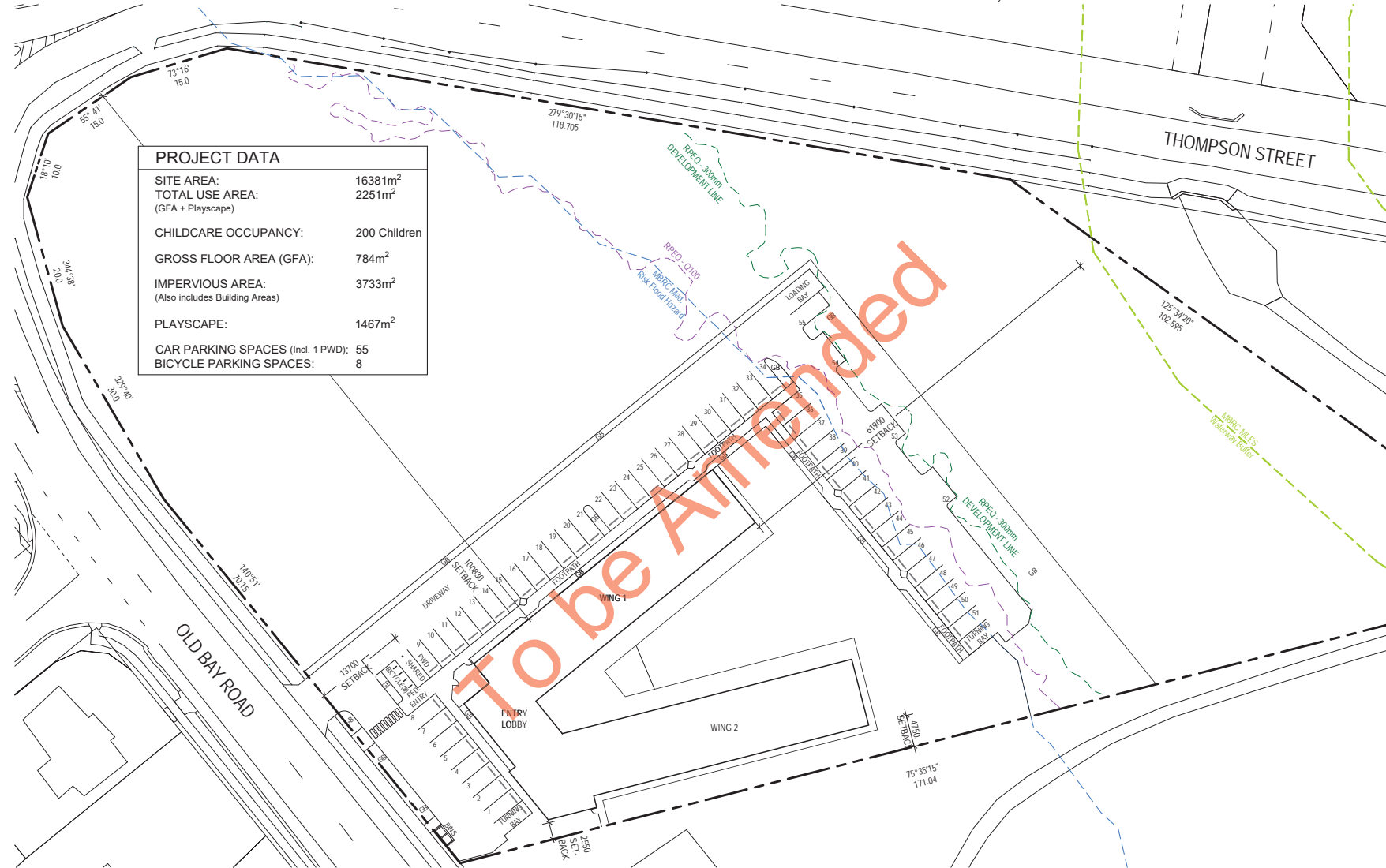
APPENDIX F

Development Plans

To be Amended



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



PROJECT DATA	
SITE AREA:	16381m ²
TOTAL USE AREA: (GFA + Playscape)	2251m ²
CHILDCARE OCCUPANCY:	200 Children
GROSS FLOOR AREA (GFA):	784m ²
IMPERVIOUS AREA: (Also includes Building Areas)	3733m ²
PLAYSCAPE:	1467m ²
CAR PARKING SPACES (Incl. 1 PWD):	55
BICYCLE PARKING SPACES:	8

DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



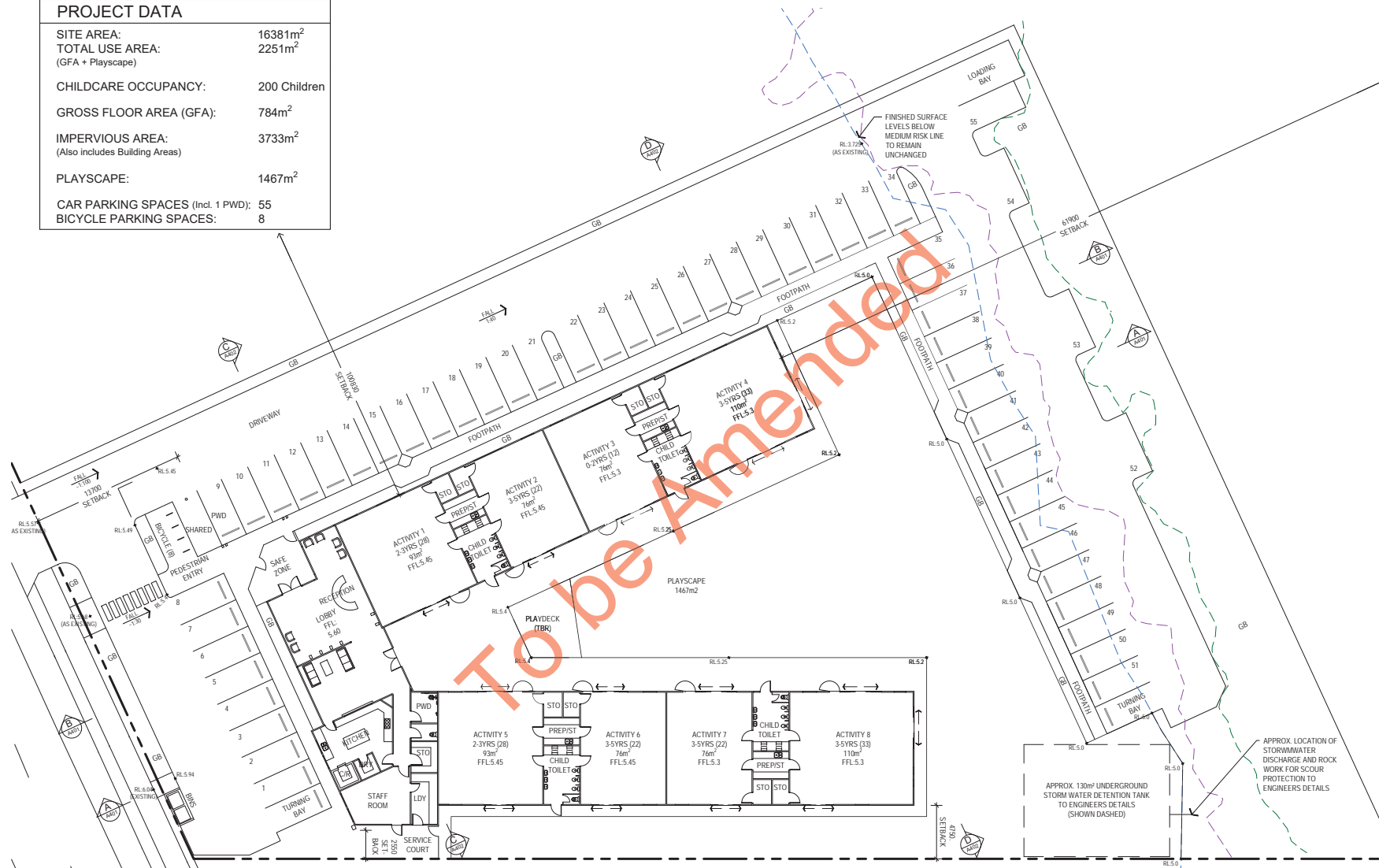
SCALE:
1:500@A3
DATE:
18-SEP '18

THIS DRAWING:
PROPOSED SITE PLAN

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-103 (W)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

PROJECT DATA	
SITE AREA:	16381m ²
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DESIGN BY:
whiteroom
architects
ph: 07 3366 9946

CLIENT:
DL AND ASSOCIATES
PTY LTD

PROJECT:
PROPOSED
CHILD-CARE CENTRE

LOCATION:
54-66 OLD BAY RD,
DECEPTION BAY, QLD
LOT 32 ON SP 152335



SCALE:
1:300@A3
DATE:
18-SEP '18

THIS DRAWING:
**GROUND FLOOR PLAN
(MACRO)**

PURPOSE:
PRELIMINARY
PROJECT NUMBER:
P_072
DRAWING (ISSUE):
A-202 (W)

Copyright 2018 Whiteroom Architects Pty Ltd (WRA). This drawing is copyright protected & remains the property of WRA. Not for construction unless noted otherwise. Use figured dimensions. Promptly notify Architect of all errors & omissions.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

APPENDIX G

Flood Hazard Overlay Code Response

To be Amended



Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Table 8.2.2.2 Assessable development - Flood hazard overlay

Performance outcomes	Acceptable outcomes	AO Compliance – Yes – No See PO or – NA	Justification for compliance
Material change of use or building work for a dwelling house ⁽²²⁾			
<p>PO1</p> <p>Development in the High risk flood hazard area included in the Limited development zone for:</p> <ul style="list-style-type: none"> a. a material change of use and associated building work for a Dwelling house⁽²²⁾ does not occur; b. building work not associated with a material change of use for a Dwelling house⁽²²⁾ only occurs for an existing lawful use. 	No acceptable outcome provided.	NA	

To be Amended

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>PO2</p> <p>Development is resilient to flood events by ensuring design and built form account for the potential risks of flooding.</p> <p>Note - New buildings within the High risk area or Medium risk area will require a structural engineering design capable of withstanding the nature of the hazard(s) to which the building will be subject consistent with the requirements of the relevant building assessment provisions, to be supported by a report (or multiple reports) prepared by a Registered Professional Engineer Queensland that identifies the flood hazard and the structural approach to be utilised. Information on the flood hazard for individual sites is available on Council's Floodcheck website via https://www.moretonbay.qld.gov.au/floodcheck/.</p> <p>Note - Reporting to be prepared in accordance with Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p>AO2.1</p> <p>Development ensures that a habitable floor is located, designed and constructed to at least the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals'.</p> <p>Note - The highset 'Queenslander' style house is a resilient low-density housing solution. Higher density residential development should also ensure only non-habitable rooms (e.g. garages) are located on the ground floor.</p> <p>Note - New buildings within the High risk area or Medium risk area will require a structural engineering design capable of withstanding the nature of the hazard(s) to which the building will be subject consistent with the requirements of the relevant building assessment provisions, to be supported by a report (or multiple reports) prepared by a Registered Professional Engineer Queensland that identifies the flood hazard and the structural approach to be utilised. Information on the flood hazard for individual sites is available on Council's Floodcheck website via https://www.moretonbay.qld.gov.au/floodcheck/.</p> <p>Note - Reporting to be prepared in accordance with Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p>NA</p>	
	<p>AO2.2</p> <p>Development ensures that building work for non-habitable rooms below the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals' has a high water resistance.</p> <p>Note - The Queensland Government Fact Sheet 'Rebuilding after a flood' provides information about</p>	<p>NA</p>	

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

	<p>water resilient products and building techniques. Available at http://www.hpw.qld.gov.au/SiteCollectionDocuments/WaterResilientProductsAndBuildingTechniquesForRebuildingAfterAFlood.pdf</p>		
<i>Development in the High risk area or Medium risk area</i>			
	<p>AO2.3</p> <p>Development ensures that a fence is at least 50% permeable.</p>	NA	
<p>PO3</p> <p>Development maintains a functional and attractive relationship with the adjacent street frontage.</p> <p>Note - This is particularly relevant for commercial uses in centres with a strong 'town-centre' pedestrian realm that also may be affected by flood, or for residential uses to maintain an attractive presentation to the street.</p>	<p>AO3</p> <p>Development for a residential dwelling where pier and pole construction is utilised:</p> <ul style="list-style-type: none"> a. uses screening around the understorey of the dwelling to ensure the understorey is not visible from the street; b. allows for the flow of flood water through the understorey 	NA	
<i>If in the High risk area or Medium risk area of the Flood planning area</i>			
<p>PO4</p> <p>Development does not increase the potential for erosion, scour or flood damage either on the premises or on other premises, public land, watercourses, roads or infrastructure or elsewhere in the floodplain.</p> <p>Note - To demonstrate achievement of the performance outcome, an engineering report is to be prepared by a suitably qualified person. Guidance on the matters to be addressed in the report is provided in Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p>AO4.1</p> <p>Earthworks do not occur in the High risk area or Medium risk area of the Flood planning area.</p>	NA	
<i>If in the Balance flood planning area</i>			
	<p>No acceptable outcome provided.</p>	NA	

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

For material change of use or building work (excluding material change of use or building work for a dwelling house) in the Balance flood planning area		
<p>PO5</p> <p>Development is resilient to a flood hazard event by ensuring design and built form account for the potential risks of flooding.</p>	<i>Development involving building work for a residential use</i>	
	<p>AO5.1</p> <p>Development ensures that a habitable floor is located, designed and constructed to at least the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals'.</p>	<p>NA</p>
	<i>Development involving building work for a non-residential use</i>	
	<p>AO5.2</p> <p>Development ensures that the finished floor level is located, designed and constructed to at least the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals'.</p>	<p>Yes</p> <p>Finished floor level is above the flood planning level.</p>
<p>AO5.3</p> <p>Development ensures that a non-habitable room below the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals' has a high water resistance.</p> <p>Note - The Queensland Government Fact Sheet 'Rebuilding after a flood' provides information about water resilient products and building techniques. Available at http://www.hpw.qld.gov.au/SiteCollectionDocuments/WaterResilientProductsAndBuildingTechniquesForRebuildingAfterAFlood.pdf</p>	<p>Yes</p>	<p>No rooms are below the flood planning level.</p>

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>PO6</p> <p>Development ensures earthworks complies with the requirements of Table 8.2.2.4 'Fill Requirements' and does not:</p> <ul style="list-style-type: none"> a. directly, indirectly and cumulatively cause any increase in water flow velocity or level; b. increase the potential for erosion, scour or flood damage either on the premises or other premises, public land, watercourses, roads or infrastructure or elsewhere in the floodplain; c. change the timing of the flood wave or impact on flood warning times. <p>Note - To demonstrate achievement of the performance outcome, an engineering report is to be prepared by a suitably qualified person. Guidance on the matters to be addressed in the report is provided in Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p>No acceptable outcome specified.</p>	<p>Yes</p>	<p>No filling or excavation is located in the Medium Risk Flood Hazard Area.</p>
<p>PO7</p> <p>Development ensures that a use which requires an interface with the public realm, including a commercial and residential use, maintains a functional and attractive relationship with the adjacent street frontage.</p> <p>Note - This is particularly relevant for commercial uses in centres with a strong 'town-centre' pedestrian realm that also may be affected by flood, or for residential uses to maintain an attractive presentation to the street.</p>	<p>AO7.1</p> <p>Development for a residential use where pier and pole construction is utilised:</p> <ul style="list-style-type: none"> a. uses screening around the understorey of the dwelling that is a minimum of 50% permeable to ensure the understorey is not visible from the street; b. allows for the flow of flood water through the understorey. 	<p>NA</p>	

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

	<p>AO7.2</p> <p>Development for a commercial building or structure maintains an active street frontage through:</p> <ul style="list-style-type: none"> a. providing clear pedestrian access from any adjacent footpath to the floor level of the commercial activity; b. providing a retail or food and beverage use, if consistent with the overall outcomes of the applicable zone and precinct, which interfaces with and overlooks the street; c. urban design treatments which screen the understorey of the building from view from the adjacent street frontage must not impede flood flow. 	<p>Yes</p>	<p>Clear pedestrian access is achieved.</p>
<p>PO8</p> <p>Development ensures that public safety and risk to the environment are not adversely affected by a detrimental impact of floodwaters up to the Defined Flood Event on a hazardous chemical located or stored on the premises.</p>	<p>AO8</p> <p>Development ensures that a hazardous chemical is located or stored at least above the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals'.</p> <p>Note - Refer to the <i>Work Health and Safety Act 2011</i> and associated Regulation and Guidelines, the <i>Environmental Protection Act 1994</i> and the relevant building assessment provisions under the <i>Building Act 1975</i> for requirements related to the manufacture and storage of hazardous substances.</p>	<p>NA</p>	

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

For all other material change of use or building work			
<p>PO9</p> <p>Development is:</p> <ul style="list-style-type: none"> a. limited in the High risk flood hazard area included in the Limited development zone to avoid the extremely unacceptable intolerable risk of the flood hazard; b. managed in the High risk flood hazard area not included in the Limited development zone to mitigate the unacceptable intolerable risk of the flood hazard; c. managed in the other sub-categories of the Flood planning area to mitigate the tolerable risk of the flood hazard. <p>Note - The overall outcomes of this code identify the development outcomes which are intended so as to avoid or mitigate the intolerable or tolerable risk of the flood hazard applicable to the premises in the relevant sub-categories of the Flood planning area.</p>	<p>No acceptable outcome provided.</p>	<p>Yes</p>	<p>No development is located in the High Risk Flood Hazard area.</p> <p>The maximum 1% AEP flood depth is 300 m within the rear car park area, which is a tolerable risk.</p>

To be Amended

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>PO10</p> <p>Development maintains personal safety at all times, such that:</p> <ul style="list-style-type: none"> a. a vulnerable land use (flood and coastal) is not located in the High risk flood hazard area or Medium risk flood hazard area; b. new buildings are not located in the High risk flood hazard area included in the Limited development zone; c. a residential accommodation building is located in the following: <ul style="list-style-type: none"> i. Balance flood planning area; or ii. the Medium risk area where located in the Medium risk storm tide inundation area of the Coastal hazard overlay or Balance coastal planning area of the Coastal hazard overlay ; d. evacuation capability from the development or other premises is not hindered or made more complicated and there is no significant additional burden placed on emergency services personnel; e. the isolation of persons in the Defined Flood Event is avoided. 	<p>No acceptable outcome provided.</p>	<p>Yes</p>	<p>The buildings of the development are not located in the medium or high risk flood hazard area.</p> <p>Evacuation capability from the development is not hindered or made more complicated.</p> <p>Persons on site would not be isolated during a DFE.</p>
<p>PO11</p> <p>Development is resilient to a flood hazard event by ensuring design and built form account for the potential risks of the flood hazard event.</p> <p>Note - New buildings within the High risk or Medium risk area will require a structural engineering design capable of withstanding the nature of the hazard(s) to which the building will be subject consistent with the requirements of the relevant building assessment provisions, to be supported by a report (or multiple reports) prepared by a Registered Professional Engineer Queensland that identifies the flood hazard and the structural approach to be utilised. Information on the flood hazard for individual</p>	<p><i>Development involving building work for a residential use</i></p> <p>AO11.1</p> <p>Development ensures that a habitable floor is located, designed and constructed to at least the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals'.</p> <p>Note - New buildings within the High risk area or Medium risk area will require a structural engineering design capable of withstanding the nature of the hazard(s) to which the building will be subject consistent with the requirements of the relevant building</p>	<p>NA</p>	

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>sites is available on Council's Floodcheck website via https://www.moretonbay.qld.gov.au/floodcheck/.</p> <p>Note - Reporting to be prepared in accordance with Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p>assessment provisions, to be supported by a report (or multiple reports) prepared by a Registered Professional Engineer Queensland that identifies the flood hazard and the structural approach to be utilised. Information on the flood hazard for individual sites is available on Council's Floodcheck website via https://www.moretonbay.qld.gov.au/floodcheck/.</p> <p>Note - Reporting to be prepared in accordance with Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>		
<i>Development involving building work for a non-residential use</i>			
<p>AO11.2</p> <p>Development ensures that the finished floor level is located, designed and constructed to at least the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals'.</p> <p>Note - New buildings within the High risk area or Medium risk area will require a structural engineering design capable of withstanding the nature of the hazard(s) to which the building will be subject consistent with the requirements of the relevant building assessment provisions, to be supported by a report (or multiple reports) prepared by a Registered Professional Engineer Queensland that identifies the flood hazard and the structural approach to be utilised. Information on the flood hazard for individual sites is available on Council's Floodcheck website via https://www.moretonbay.qld.gov.au/floodcheck/.</p>	<p>Yes</p>	<p>The finished floor level is higher than the flood planning level.</p>	
<i>Development involving building work for all uses</i>			
<p>AO11.3</p> <p>Development ensures that a fence is at least 50% permeable.</p>	<p>Yes</p>	<p>Fencing within the flooded area will be at least 50% permeable.</p>	

Moreton Bay Regional Council

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

	<p>AO11.4</p> <p>Development ensures that building work for non-habitable rooms below the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals' has a high water resistance.</p> <p>Note - The Queensland Government Fact Sheet 'Rebuilding after a flood' provides information about water resilient products and building techniques. Available at http://www.hpw.qld.gov.au/SiteCollectionDocuments/WaterResilientProductsAndBuildingTechniquesForRebuildingAfterAFlood.pdf</p>	<p>Yes</p>	<p>Non-habitable rooms are not located below the flood planning level.</p>
<p>PO12</p> <p>Development ensures that where earthworks alone cannot ensure the development achieves the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals', a building is designed and constructed using pier and pole construction to achieve the required flood immunity in the Defined Flood Event.</p>	<p>No acceptable outcome specified.</p>	<p>Yes</p>	<p>Floor levels achieve the minimum flood planning levels.</p>

To be Amended

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>PO13</p> <p>Development ensures that earthworks complies with the requirements of Table 8.2.2.4 'Fill Requirements' and does not:</p> <ul style="list-style-type: none"> a. directly, indirectly and cumulatively cause any increase in water flow velocity or level; b. increase the potential for erosion, scour or flood damage either on the premises or on other premises, public land, watercourses, roads or infrastructure or elsewhere in the floodplain; c. change the timing of the flood wave or impact on flood warning times. <p>Note - To demonstrate achievement of the performance outcome, an engineering report is to be prepared by a suitably qualified person. Guidance on the matters to be addressed in the report is provided in Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p>No acceptable outcome provided.</p>	<p>Yes</p>	<p>No earthworks are proposed within the medium risk flood hazard area, hence there would not be any direct, indirect or cumulative impacts to the flooding.</p>
<p>PO14</p> <p>Development supports and does not unduly burden, disaster management responses and recovery capacity and capabilities for a flood hazard event up to and including the Defined Flood Event.</p>	<p>No acceptable outcome provided.</p>	<p>Yes</p>	<p>Development does not unduly burden disaster management responses.</p>
<p>PO15</p> <p>Development has access which, having regard to the hydraulic hazard, provides for safe vehicular and pedestrian movement and emergency services access.</p>	<p>No acceptable outcome provided.</p>	<p>Yes</p>	<p>Safe vehicular and pedestrian movement and emergency services access is provided.</p>

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>PO16</p> <p>Development ensures that a use which requires an interface with the public realm, including a commercial and residential use, maintains a functional and attractive relationship with the adjacent street frontage.</p> <p>Note - This is particularly relevant for commercial uses in centres with a strong 'town-centre' pedestrian realm that also may be affected by flood, or for residential uses to maintain an attractive presentation to the street.</p>	<p>AO16.1</p> <p>Development for a residential dwelling where pier and pole construction is utilised:</p> <ul style="list-style-type: none"> a. uses screening around the understorey of the dwelling that is a minimum of 50% permeable to ensure the understorey is not visible from the street; b. allows for the flow of flood water through the understorey. 	NA	
	<p>AO16.2</p> <p>Development for a commercial building or structure maintains an active street frontage through:</p> <ul style="list-style-type: none"> a. providing clear pedestrian access from any adjacent footpath to the floor level of the commercial activity; b. providing a retail or food and beverage use, if consistent with the overall outcomes of the applicable zone and precinct, which interfaces with and overlooks the street; c. urban design treatments which screen the understorey of the building from view from the adjacent street frontage but do not impede flood flow. 	Yes	Clear pedestrian access is achieved.
Reconfiguring a lot (boundary realignment)			
<p>PO17</p> <p>Development is designed to:</p> <ul style="list-style-type: none"> a. ensure personal safety at all times; b. not increase the potential for erosion, scour or flood damage either on the premises or other premises, public land, watercourses, 	<p>AO17.1</p> <p>Development ensures that the development footprint is located in an area other than a High risk area.</p>	NA	
	<p>AO17.2</p> <p>Development ensures that the entry points into the development are located to provide a safe and clear evacuation route path.</p>	NA	

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<p>roads or infrastructure or elsewhere in the floodplain;</p> <p>c. not increase the risk to people, property and infrastructure located on the premises and other premises and where applicable the risk for future occupants is mitigated.</p>	<p><i>If in the Drainage investigation area</i></p> <p>AO17.3</p> <p>Development occurs in accordance with a drainage master plan for the Drainage investigation area.</p>	<p>NA</p>	
Reconfiguring a lot (other than boundary realignment)			
<p>PO18</p> <p>Development is compatible with the intolerable or tolerable level of risk of the flood hazard applicable to the premises such that reconfiguring a lot for creating lots by subdividing another lot:</p> <p>a. in the High risk area, is only for the purposes of Park or Permanent plantation unless:</p> <ul style="list-style-type: none"> i. in the Rural residential zone where; the minimum lot size for each rural residential lot is provided outside the High risk area; or ii. in the Rural zone; or <p>b. in the Medium risk area, is only for the purposes of Park or Permanent plantation unless:</p> <ul style="list-style-type: none"> i. in the Centre zone, Industry zone, Recreation and open space zone, or Township zone, where not for a residential purpose or vulnerable use (flood and coastal); or ii. in the Rural zone; or iii. in the Rural residential zone, where the minimum lot size for each rural residential lot is provided outside the Medium risk area; or iv. in any other zone, where all resultant lots are located outside the High risk or Medium risk area other than those for the purposes of Park or Permanent plantation; or 	<p>No acceptable outcome provided.</p>	<p>NA</p>	

To be Amended

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>c. In the Balance flood planning area, is consistent with the overall outcomes of the applicable zone and precinct.</p> <p>Note - The overall outcomes of this code identify the development outcomes which are intended so as to avoid or mitigate the intolerable or tolerable level of risk applicable to premises in the High risk area, Medium risk area and Low risk area of the Flood planning area.</p>			
<p>PO19</p> <p>Development is designed to ensure personal safety at all times such that:</p> <p>a. flood immunity up to the Flood planning level is achieved;</p> <p>b. the road layout avoids isolation in a flood hazard event and does not impede evacuation;</p> <p>c. signage is utilised to ensure that community members have a clear understanding of the nature of the flood risk in the area.</p>	<p><i>If the ground level is to be filled to the Flood planning level as permitted by Table 8.2.2.4 'Fill Requirements'</i></p>		
	<p>AO19.1</p> <p>Development ensures that the finished ground level for all additional lots (excluding a Park⁽⁵⁷⁾) complies with the requirements of Table 8.2.2.4 'Fill Requirements'.</p>	<p>NA</p>	
	<p>AO19.2</p> <p>Development ensures that the road and pathway layout:</p> <p>a. ensures residents are not physically isolated from an adjacent flood-free urban area;</p> <p>b. provides a safe and clear evacuation route path by:</p> <p style="margin-left: 20px;">i. locating entry points into the development above the requirements set out in Appendix C of the Planning scheme policy - Integrated design and avoiding cul-de-sac or other non-permeable layouts;</p> <p style="margin-left: 20px;">ii. direct and simple routes to a main carriageway.</p> <p>Note - 'Pathway' in this instance relates to pedestrian and non-pedestrian routes internal to a development site that are not specifically roads – for example, pedestrian pathways within a hotel⁽⁵⁷⁾ development or internal roads in a large townhouse development.</p>	<p>NA</p>	

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	<p>Note - It is important to ensure that new reconfigurations are not isolated from other urban areas in the event of a flood.</p>		
	<p>AO19.3</p> <p>Development in a greenfield area protects a flood conveyance area by providing an easement or reserve over the area of the premises up to the Defined Flood Event.</p>	<p>NA</p>	
	<p>AO19.4</p> <p>Development ensures that a new road and development access are provided in accordance with the requirements set out in Appendix C of the Planning scheme policy - Integrated design.</p>	<p>NA</p>	

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	<p>AO19.5</p> <p>Development ensures that:</p> <ul style="list-style-type: none"> a. signage is provided on a road or pathway indicating the position and path of all safe evacuation routes off the premises; b. if the premises contains or is within 100m of a waterway, hazard warning signage and depth indicators are provided at each key hazard point, such as at a waterway crossing or an entrance to a low-lying reserve. <p>Note - 'Pathway' in this instance relates to pedestrian and non-pedestrian routes internal to a development site that are not specifically roads – for example, pedestrian pathways within a hotel⁽³⁷⁾ development or internal roads in a large townhouse development.</p>	<p>NA</p>	
<p><i>If the ground level is to be filled other than as permitted by Table 8.2.2.4 'Fill Requirements'</i></p>			
<p>No acceptable outcome specified</p>		<p>NA</p>	
<p>PO20</p> <p>Development ensures that infrastructure (excluding a road):</p> <ul style="list-style-type: none"> a. is located outside of the High risk flood hazard area and Medium risk flood hazard area; or b. is otherwise located in the High risk flood hazard area or Medium risk flood hazard area to function during and after all flood hazard events up to and including the Defined Flood Event. 	<p><i>If in the Balance flood planning area</i></p>		
	<p>AO20</p> <p>Development ensures that:</p> <ul style="list-style-type: none"> a. any component of infrastructure which is likely to fail to function or may result in contamination when inundated by flood is located above the Flood planning level; or b. infrastructure is designed, located and constructed to resist the hydrostatic and hydrodynamic forces as a result of inundation by the Defined Flood Event. 	<p>NA</p>	
<p><i>If in the High risk area or Medium risk area</i></p>			
<p>No acceptable outcome provided.</p>		<p>NA</p>	

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<p>PO21</p> <p>Reconfiguring a lot does not result in:</p> <ul style="list-style-type: none"> a. directly, indirectly and cumulatively cause any increase in water flow velocity or level; b. increase the potential for erosion, scour or flood damage either on the premises or other premises, public land, watercourses, roads or infrastructure or elsewhere in the floodplain; c. change the timing of the flood wave or impact on flood warning times d. adverse impacts on the local drainage and the flood conveyance of a waterway; e. increased flood inundation of surrounding properties; f. any reduction in the flood storage capacity of the floodplain and any clearing of native vegetation. <p>Note - To demonstrate achievement of the performance outcome, an engineering report is to be prepared by a suitably qualified person. Guidance on the matters to be addressed in the report is provided in Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p><i>If in the Balance flood planning area</i></p>			
	<p>AO21</p> <p>All earthworks are undertaken outside of the Defined Flood Event, or where required to regularise allotment shape, earthworks are undertaken in accordance with Planning scheme policy – Flood hazard, Coastal hazard and Overland flow.</p>	<p><i>If in the High risk area or Medium risk area</i></p>	<p>NA</p>	
	<p>No acceptable outcome provided.</p>		<p>NA</p>	
<p>Additional criteria for works whether or not associated with a material change of use, building work or reconfiguring a lot</p>				
<p>PO22</p> <p>Development ensures that works complies with the requirements of Table 8.2.2.4 'Fill Requirements' and does not:</p> <ul style="list-style-type: none"> a. directly, indirectly and cumulatively cause any increase in water flow velocity or level; b. increase the potential for erosion, scour or flood damage either on the premises or other premises, public land, watercourses, roads or infrastructure or elsewhere in the floodplain; c. change the timing of the flood wave or impact on flood warning times; 	<p>No acceptable outcome provided.</p>	<p>Yes</p>	<p>No earthworks are proposed within the medium risk flood hazard area, hence there would not be any direct, indirect or cumulative impacts to the flooding.</p>	

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<p>d. adverse impacts on the local drainage and the flood conveyance of a waterway;</p> <p>e. increased flood inundation of surrounding properties;</p> <p>f. any reduction in the flood storage capacity of the floodplain and any clearing of native vegetation.</p> <p>Note - To demonstrate achievement of the performance outcome, an engineering report is to be prepared by a suitably qualified person. Guidance on the matters to be addressed in the report is provided in the Planning scheme policy Flood Hazard, Coastal Hazard and Overland Flow.</p>			
Additional criteria for development involving hazardous chemicals			
<p>PO23</p> <p>Development ensures that hazardous chemicals are not located or stored in the High risk flood hazard area.</p>	<p>No acceptable outcome provided.</p>	<p>NA</p>	
<p>PO24</p> <p>Development not in the High risk area ensures that public safety and risk to the environment are not adversely affected by a detrimental impact of floodwaters up to the Defined Flood Event on a hazardous chemical located or stored on the premises.</p>	<p>AO24</p> <p>Development ensures that a hazardous chemical is located or stored at least above the flood planning level in Table 8.2.2.3 'Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals'.</p> <p>Note - Refer to the <i>Work Health and Safety Act 2011</i> and associated Regulation and Guidelines, the <i>Environmental Protection Act 1994</i> and the relevant building assessment provisions under the <i>Building Act 1975</i> for requirements related to the manufacture and storage of hazardous substances.</p>	<p>NA</p>	
Additional criteria for development for community infrastructure			

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<p>PO25</p> <p>Development for community infrastructure is not located in the High risk flood hazard area or Medium risk flood hazard area.</p>	<p>No acceptable outcome specified.</p>	<p>NA</p>	
<p>PO26</p> <p>Development for community infrastructure not located in the High risk area or Medium risk area:</p> <ul style="list-style-type: none"> a. remains functional to serve community needs during and immediately after the Defined Flood Event; b. is designed, sited and operated to avoid adverse impacts on the community or the environment due to the impacts of flood inundation on infrastructure, facilities or access and egress routes; c. retains essential site access during the Defined Flood Event; d. is able to remain functional even when other infrastructure or services may be compromised in the Defined Flood Event. 	<p>No acceptable outcome provided.</p>	<p>NA</p>	
Additional criteria for development of premises subject to a drainage master plan			
<i>If the Council has an adopted drainage master plan for the Drainage master plan area</i>			
<p>PO27</p> <p>Development of premises included in the General residential zone – Next generation neighbourhood precinct or General residential zone – Urban neighbourhood precinct located in a Drainage investigation area identified on Figures 8.2.2.1 to 8.2.2.10 is supported by drainage works and specific building design responses to mitigate the risk posed by the flood hazard.</p> <p>Note - Planning scheme policy - Flood hazard, Coastal hazard and Overland flow provides</p>	<p>AO27.1</p> <p>Development:</p> <ul style="list-style-type: none"> a. undertakes identified works, internal and external, or transfers land as required to mitigate the impact of the flood hazard and any coastal hazard; b. is designed to mitigate the impact of the flood hazard and any coastal hazard in accordance with the design standards identified in the drainage master plan in the Planning scheme 	<p>NA</p>	

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<p>direction on the preparation of a drainage master plan, or similar, for the Drainage Investigation Area.</p>	<p>policy - Flood hazard, Coastal hazard and Overland flow.</p>		
<p><i>If the Council does not have an adopted drainage master plan for the Drainage investigation area</i></p>			
<p>AO27.2</p> <p>Development:</p> <ul style="list-style-type: none"> a. occurs in accordance with a drainage master plan prepared by an applicant and approved by the Council; b. undertakes identified works, internal and external, or transfers land as required to mitigate the impact of the flood hazard and any coastal hazard; c. is designed to mitigate the impact of the flood hazard and any coastal hazard in accordance with the design standards identified in the approved drainage master plan. <p>Note - Planning scheme policy - Flood hazard, Coastal hazard and Overland flow provides direction on the preparation of a drainage master plan.</p>		<p>NA</p>	

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<p>PO28</p> <p>Development of premises included in General residential zone – Next generation neighbourhood precinct or General residential zone – Urban neighbourhood precinct located in a Drainage investigation area identified on Figures 8.2.2.1 to 8.2.2.10 must ensure that the land is filled:</p> <ul style="list-style-type: none"> a. where there is an adopted drainage master plan, in accordance with the levels in the drainage master plan; b. where there is no adopted drainage master plan, in accordance with the fill requirements in Table 8.2.2.4 'Fill Requirements' or such that the filling of the land does not: <ul style="list-style-type: none"> i. directly, indirectly and cumulatively cause any increase in water flow velocity or level; ii. increase the potential for erosion, scour or flood damage either on the premises or other premises, public land, watercourses, roads or infrastructure or elsewhere in the floodplain. <p>Note - To demonstrate achievement of the performance outcome, an engineering report is to be prepared by a suitably qualified person. Guidance on the matters to be addressed in the report is provided in Planning scheme policy - Flood hazard, Coastal hazard and Overland flow.</p>	<p>AO28</p> <p>No acceptable outcome provided.</p>	<p>NA</p>	
<p>Additional criteria for development for a Park⁽⁵⁷⁾</p>			
<p>PO29</p> <p>Development for a Park⁽⁵⁷⁾ ensures that the design and layout responds to the nature of the flood hazard affecting the premises in order to:</p> <ul style="list-style-type: none"> a. maximise public benefit and enjoyment; b. minimise impacts on the asset life and integrity of park⁽⁵⁷⁾ structures; 	<p>AO29</p> <p>Development for a Park⁽⁵⁷⁾ ensures works are provided in accordance with the requirements set out in Appendix B of Planning scheme policy - Integrated design.</p>	<p>NA</p>	

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c. minimise maintenance and replacement costs.			
Additional criteria for material change of use for Permanent plantation⁽⁵⁹⁾ or Cropping⁽¹⁹⁾ (where involving forestry for wood production)			
<p>PO30</p> <p>Development:</p> <p>a. adopts management practices to minimise release of woody debris load into floodwaters during flood events up to the Defined Flood Event;</p> <p>b. complies with other relevant environmental setbacks and requirements.</p>	No acceptable outcome provided.	NA	

To be Amended

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Table 8.2.2.3 Flood planning level for a habitable floor (residential development) and a non-habitable floor (non-residential development) and levels for hazardous chemicals		
Flood planning area	Defined freeboard	Flood planning level
Flood planning area (east of the Bruce Highway and inside the Erosion Prone Area in the Coastal hazard overlay)	500mm	Defined Flood Event + 500mm
Flood planning area (east of the Bruce Highway and outside the Erosion Prone Area in the Coastal hazard overlay)	300mm	Defined Flood Event + 300mm
Flood planning area (west of the Bruce Highway)	750mm	Defined Flood Event + 750mm

Note - If the premise is subject to another overlay which states a flood planning level, the flood planning level that provides the highest level of immunity applies.

Table 8.2.2.4 Fill Requirements	
Flood planning area	Fill level
Land in the High risk area included in the Limited development zone.	No filling permitted.
Land in the High risk area not included in the Limited development zone.	No filling permitted.
Land in the Medium risk area and not located in a Drainage investigation area.	No filling permitted.
Land located in a Drainage investigation area identified on Figures 8.2.2.1 to 8.2.2.10.	Filling in accordance with the relevant adopted Drainage master plan.
Land in the Balance flood planning area.	Filling permitted - Development Footprint as a minimum to the Defined Flood Event.

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#9 Submissions

23 November 2018

Assessment Manager
Moreton Bay Regional Council PO
Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au

Dear Sir/Madam

Objection to DA/37063/2018/V2C

This letter and corresponding report represent our formal objection to the Material Change of Use for 200 place Childcare Centre (DA/37063/2018/V2C) at 54-66 Old Bay Road Deception Bay.

The proposed site is well known to us, numerous property developers and childcare operators within the broader local community.

Given the onerous range of planning and environmental constraints that lie within this property, it has been widely accepted that any proposed development on this site would be extremely limited.

- The proposal is not consistent with and compromises the Strategic Framework or the relevant Strategic Outcomes of the Themes. (The MBRC Planning Scheme 2016, Part 3 of the Strategic Framework)

The applicant's proposal is also generally inconsistent with

- The General Residential Zone (Suburban Neighbourhood Precinct) within the MBRC Planning Scheme
- Coastal and Riverlands Place Type
- Flood Overlay Code
- MBRC Planning Scheme Policy – Policy Bushfire Prone Areas
- MBRC Planning Scheme - Environmental Areas and Corridors
- MBRC Planning Scheme – Flood Hazard, Coastal Hazard and Overland Flow
- MBRC Planning Scheme – Integrated Transport
- MBRC Planning Scheme – Noise
- MBRC Planning Scheme – Stormwater Management
- MBRC Planning Scheme – Waste

The applicant's proposal also fails to apply the relevant State and Federal requirements in particular,

- Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) referral guidelines for the vulnerable koala (DoEE, 2014)
- Nature Conservation Act 1992
- Planning Act 2016
- State Planning Policy (2017) State interest – Natural hazards: Guidance on flood, bushfire and landslide hazard.
- AS - Australian Standard (AS 3959 – 2009) Construction of buildings in bushfire-prone areas

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Our reasons for the complete refusal of this application are contained below. Leading independent expert consultants have reviewed the applicant's proposal and their technical reports. We have provided copies of the "independent" expert reports as part of our submission.

We look forward to this application being refused in full after confirmation of our properly made submission.

Regards

Michael Niven
25-27 Raymond Terrace
Deception Bay 4508

By email: amniven@bigpond.net.au

Mailing address

PO Box 3180
Hendra 4011

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

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Annexures

- Annexure A – Business Geographics - Childcare Supply Analysis – Deception Bay
- Annexure B – Green Tape Solutions – Environmental Consultancy Expert Analysis
- Annexure C – Pekol – Traffic Engineering Assessment
- Annexure D – Cyber Drafting & Design – GFA calculation

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The MBRC Planning Scheme 2016, Part 3 of the Strategic Framework

Applicant Proposal Planning Conflicts

Planning Conflict # 1

3.3 - Theme: Sustainability and Resilience

1. 3.3.1 - Integrate sustainability with land planning decision making

The proposed site development has a major adverse impact on the land quality, environment and local character.

The applicant proposes to remove approximately 80% of the trees on the subject site. Their proposal includes the removal of 359 trees from a total of 472 trees on the property. The sheer volume of tree removal increases climate change in the community. The removal of these 359 trees includes 238 trees that the vulnerable species – koala, uses for both habitat or as a food source. The resulting development will greatly diminish the environmental values this site possesses.

Further information is provided in our submission Theme 3.4: Natural Environment and Landscape regarding the adverse effects to the ecosystem.

The development outcomes do NOT focus on creating multiple benefits to the community or economy.

The site development will create an overall negative effect on the community and the local environment.

The applicant falsely relies on bringing one (1) sole benefit to the community – “the proposal shall establish a local service which is currently unavailable” (Applicants Town Planning Submission)

In fact, the community has a major oversupply of childcare places relative to demand with numerous centres already located and properly approved in the immediate catchment of the site. An independent expert report has been prepared by Mr Phil Henry of Business Geographics demonstrating the demand and supply of childcare in the Deception Bay community. **The report “Childcare Supply Analysis – Deception Bay” is attached in Annexure A.**

The report states (page 4) “that the potential future delivery of a further 200 places will result in CRITICAL OVERSUPPLY of long day care and undermine the economic viability of other existing and proposed centres in Deception Bay with an average estimated occupancy rates forecast to drop to less than 50%.”

The report also concludes there will be an adverse effect on the existing centres financial viability which will lead to a significant loss of amenities.

The reduction of amenities (existing childcare centres closing down as result of new development) in the neighbourhood will NOT be made good by the new development and will create numerous adverse effects.

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There are a number of key community members which will suffer as a result of the proposed development.

Community Stakeholders		
1	Neighbouring Community <i>Adverse effect of 200 place childcare centre at proposed site</i>	<p>Neighbours - streetscape ruined, local character changed</p> <p>Neighbours loss sense of place and identity</p> <p>Natural wildlife and habitat destroyed – residents will not see protected species in their immediate neighbourhood</p> <p>Neighbours- increased traffic / road noise</p> <p>Neighbours increased exposure to flooding as a result of a loss of vegetation cleared</p> <p>Community put at risk of bushfires and flood in a supposedly safe community activity environment – childcare facility</p> <p>Loss of choice / available semi-rural housing availability</p> <p>Neighbours of existing childcare centres (suffering financial hardship / closed down due to oversupply) are confronted with the eyesore of unmaintained building/playground on their streetscape</p> <p>Waste of investment & current infrastructure in the community – supply / demand analysis demonstrates oversupply</p> <p>Local residents lose confidence in business activity / investment in local community as result of existing businesses closing</p>
2	Environment <i>Adverse effect of 200 place childcare centre at proposed site</i>	<p>Land degradation due to mass vegetation clearing</p> <p>Loss of native bushland/natural habitat</p> <p>Loss of biodiversity and associated ecosystem</p> <p>Decrease in connectivity of ecosystems</p> <p>Green infrastructure corridor compromised</p> <p>Loss of priority species (koalas)</p> <p>Water quality in Little Burpengary Creek decreased from stormwater runoff and erosion</p> <p>Increase in climate change due to vegetation clearing</p>
3	Child - <i>Adverse effect of childcare centres closing due to oversupply</i>	<p>Child does not have the opportunity to participate in a diversified range of specialised programs</p> <p>Child feels a sense of abandonment/loss</p> <p>Child becomes unsettled</p> <p>Child's wellbeing is compromised</p> <p>Carer/teacher interactions are impacted</p> <p>Peer relationships are impacted</p> <p>Child's routine is disrupted</p> <p>Child's unique learning profile may not be adequately catered for</p> <p>Child's behavioural issues may not be adequately catered for</p>
4	Parents <i>Adverse effect of childcare centres closing due to oversupply</i>	<p>Reduced choice of where to send their child – 1 large dominant centre of 200 places replaces 3-4 smaller centres</p> <p>Reduced choice of educational programs and techniques for their child</p> <p>Disappointment of not sending their child to a centre they trusted</p> <p>Disappointment of their child not being cared by staff that they trusted</p> <p>Parents forced to travel further to find suitable childcare</p> <p>Parents with babies will have limited choice (limited number of 0-2 yrs in specific Deception Bay proposal)</p> <p>Parents are force to send their child to large scaled 200 placed centre.</p>

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5	<p>Staff <i>Adverse effect of childcare centres closing due to oversupply</i></p>	<p>Proposed New centre find staff whilst existing staff eventually lose jobs as business viability decreases Staff will be stressed finding a new job in the local community Staff forced to travel outside of local area for suitable position Staff & their families forced to relocate out of Deception Bay for suitable position.</p>
6	<p>Operators of closing centre <i>Adverse effect of childcare centres closing due to oversupply</i></p>	<p>Loss of fee-income from childcare business Increased stress to meet financial obligations No income to maintain property/grounds Quality of care reduces from financial pressures - despite best intentions Forced to relocate out of neighbourhood to find another childcare centre to operate</p>
7	<p>Property owner of closing centre <i>Adverse effect of childcare centres closing due to oversupply</i></p>	<p>Loss of rental income from childcare business Increased stress to meet financial obligations- generally highly mortgaged Loss of generational wealth as it will be impossible to find a new tenant due to the oversupply in community No alternate use for the purpose-built childcare building Loss of generational wealth as the purpose-built building is unsaleable in current form</p>

Further information is provided in our submission 3.5 Theme: Strong Communities, outlining the negative effects to the community.

2. 3.3.3 Strategic Outcome - Natural hazards and adaptation

The development site is located in numerous natural hazard zones including bushfire and flood. The applicant fails to recognise risks from projected changes in weather including more heatwaves and higher levels of flooding and severe storm activity.

A childcare centre is classified as a vulnerable land use and should not be situated in locations posing any risks to children, staff and the community at large.

Flood Risk

The development footprint encroaches into the medium flood area despite freely unencumbered available land outside of the flood zone. The development footprint of 9% of total land area should not encroach into the flood area.

The development site adjoins natural waterways and is adjacent to lots that have a very high risk of major flooding (recorded recent occurrence 2015).

The application has failed to consider the proposed vegetation removal and the resulting consequences of enhanced natural hazards as a result of the development.

“Vegetation affects how water flows through the catchment, and this process is affected by land use and management practices. Native vegetation slows water,

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retaining it longer in the landscape and recharging groundwater aquifers, and reducing the erosion potential and the loss of soil from the catchment”.

Source: (Walking the Landscape – Caboolture Catchment Map Journal v1.0 (2017), presentation, Department of Environment and Heritage Protection, Queensland.)

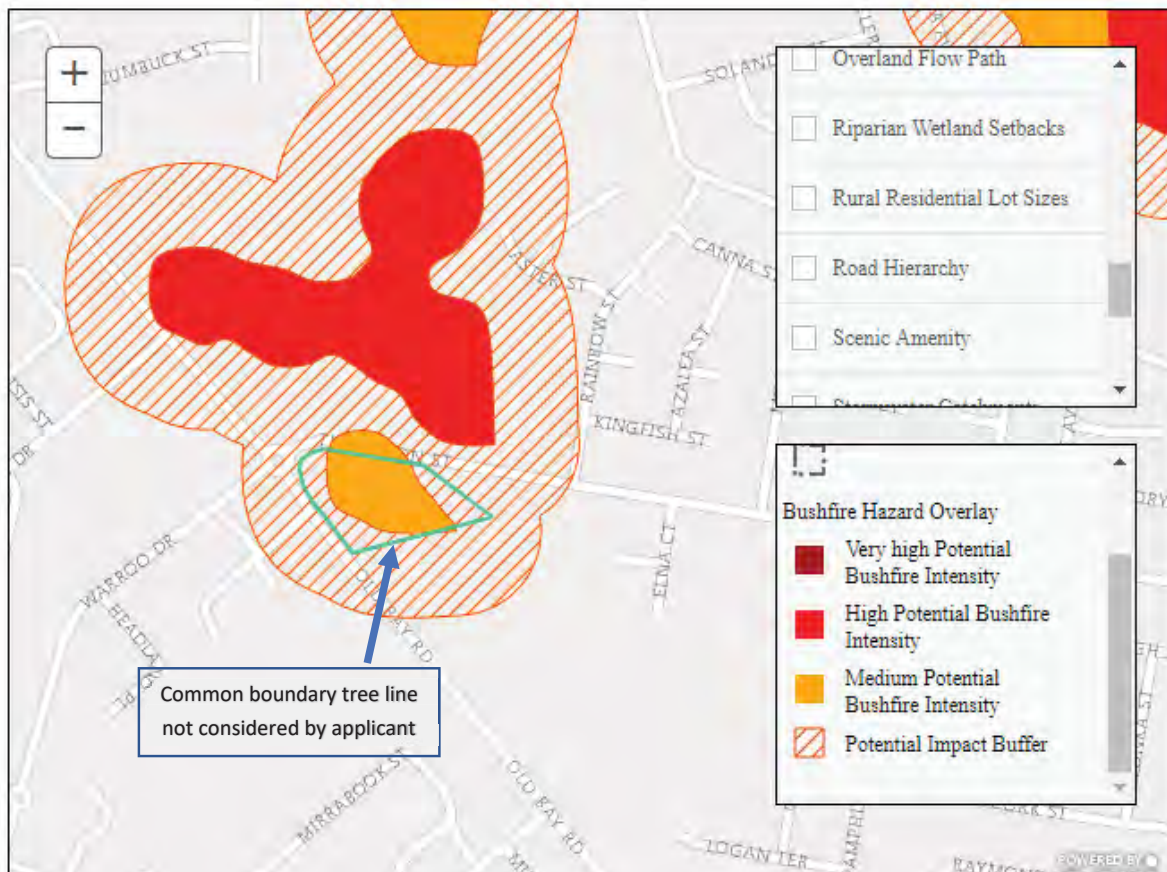
Bushfire Risk

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Bushfire Assessment

The applicant has provided a bushfire assessment report on the proposed development on the basis that 360 trees and other vegetation have been removed from the site.

Given the significant planning breaches mentioned further in this submission (ie: ecological significance and adverse impact to the community at large) the assumption to remove such vegetation should not be made.

The applicant has failed to provide an adequate risk assessment for the vulnerable use activity should the removal of vegetation be disallowed. The applicant has not included the MBRC bushfire overlay map in their application. (see below) Note the site and surrounding sites demonstrate higher levels of natural hazard than applicants’ mapping provided.



MBRC Bushfire Hazard Overlay

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The applicant has failed to demonstrate that development designs can mitigate bushfire hazard utilising methodology recommended by the current State Planning Policy.

The natural bushfire hazard assessment in the application has utilised superseded - SPP Guidelines 1/03 Mitigating the Adverse Impact of Flood, Bushfire and Landslide 2003. The MBRC Planning Scheme Policy – Bushfire Prone Areas was prepared in accordance with the State Planning Policy which incorporates the State Interest Technical Manual – Natural Hazards, Risk and Resilience 2016.

This technical guideline provides a more fit for purpose approach in undertaking natural hazard studies and risk assessments as recommended by the SPP. Given the actual flora on site has been identified and can be categorised in this current guideline, **the site will retain at best a “medium risk category”**.

Notwithstanding the above, the applicant’s bushfire technical report (refer: Table 1 p14) misrepresents the hazard score associated with the class of actual vegetation on site. The tree retention report clearly shows the vast majority of trees in BHU 1 (sub unit) consist of Eucalyptus Open Forest (hazard score 8) not grassy Eucalypt community (hazard score 6).

The authors report also describes BHU 1 (4.3 p12) as a Scribbly Gum open forest and other canopy species as being Forest Red Gum, Pink Bloodwood & Grey Gum.

Accordingly, the hazard scores concluded (table 4 p 16) are incorrect.

The site retains a minimum at best “medium risk category” not a low risk category as concluded by the applicant.

4.9 Safety Buffers

The final step for a site-specific Bushfire assessment in accordance with the SPP 1/03 is the inclusion of a safety buffer for ‘Medium’ rated bushfire hazard areas. It states that land within 50 m of an area identified as having a Medium bushfire severity classification should be included in the ‘Medium’ bushfire hazard area. The proposed development footprint is contained within the buffer zone.

The proposed management of vegetation outlined in the bushfire management plan is inconsistent with the recommended rehabilitation work of the waterway corridor. Rehabilitation of the waterway shall be provided to improve ecological values of the riparian vegetation community. This will likely increase the level of bushfire hazard and an assessment of the vegetation taking into consideration the rehabilitated in its fully mature state should have been provided.

Further scrutiny of this assessment is required by MBRC for all of the sub units indicated on the applicant’s report.

The applicants technical report FAILS to consider the direct adjoining property to the south on Old Bay Road. This property is located in the MBRC bushfire overlay code. The tree retention report identified over 30 trees ranging in height to 18.0 metres tall. The proposed development footprint is only 2.5 metres from this common boundary. The omission of neighbouring trees significantly affects any conclusions reached.

In addition, the applicant has not introduced a risk factor for the proposed use of the site. In accordance with the Planning Scheme Policy, the number of users and type of user should be considered. As there

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are 200 children (aged 0-5) plus 35 staff members plus parents, a risk factor should be attached to the risk score allowing for the vulnerable activity.

“children take 10 times longer than adults to evacuate a building.”

Stephen Burton, Engineers Australia’s Society of Fire Safety

Source: <https://www.cela.org.au/2018/01/07/bushfire-advice-for-childrens-services/>

Moreton Bay Regional Council Bushfire Hazard Management Strategy - December 2011

6.1.2 Controlling Development Types

“Certain forms of development may be inappropriate in an area exposed to bushfire hazard. Some development types have potential to start bushfires or create additional significant hazards if they are impacted by a bushfire. Such uses include, but are not limited to: chemical/ hazardous/flammable type industries, liquid fuel depots, service stations, sawmills, junk yards and power generation plants etc. Some development types may be used by fire-vulnerable groups which would be difficult to protect and evacuate in the event of an approaching bushfire (eg. child-care facilities, schools, aged-care facilities, and hospitals). Appropriate planning aims to avoid exposure of fire-hazardous and fire-vulnerable developments to inappropriate levels of bushfire risk.”

Source: <https://www.moretonbay.qld.gov.au/uploadedFiles/moretonbay/development/planning/mbrc-plan/BushfireHazardManagementStrategy.pdf>

The development application must be refused.

3. 3.3.5 Strategic Outcome - Land, air, and noise

The adverse effects of development on the land should be avoided in the first instance. The environmental harm as a result of the development is high and has not been avoided nor mitigated. The scale of the tree and vegetation removal does not minimise the adverse effects of land degradation. The scale of the tree and vegetation removal does not correspond with the childcare centre footprint required.

Increased Sediment from Vegetation Removal

“Increases in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality”.

*There was localised erosion and sedimentation associated with extreme rainfall events during 2011 and 2013, including along parts of Waraba, Lagoon, King John and **Little Burpengary** creeks, the mid reaches of Burpengary Creek and the Caboolture River mouth.*

Source: (Walking the Landscape – Caboolture Catchment Map Journal v1.0 (2017), presentation, Department of Environment and Heritage Protection, Queensland.)

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Planning Conflict # 2

3.4 Theme: Natural Environment and Landscape

1. 3.4.1 Strategic Outcome - Biodiversity conservation

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Ecological Expert

Page 7 – “The ecological values of the site have been significantly under-valued by the proponent and the ecological report fails to recognise and respond to the following matters:

- a. impact on fauna habitats;
- b. impact on wildlife corridors and connectivity;
- c. impact on stream integrity;
- d. impact of opportunities for revegetation and all other wetlands. rehabilitation planting;
- e. edge effects.”

The site contains a broad and diverse array of native vegetation and wildlife. The site is well known to local residents as a local koala park with natural waterways.

The development does not protect the biodiversity and associated ecosystem located within the subject site.

The removal of 359 trees (80% destruction of total site) fails to conserve the ecosystem of the area. The preferred and sustainable method of selective clearing of vegetation does not exist in the applicant’s proposal. The development relies on bulk excavation and earthworks in an environmentally sensitive location.

The applicants ecological report recommends that native vegetation (ie mature eucalypts) and habitat should not be cleared except for where necessary. This recommendation has not been followed in the proposed plans and clearing far exceeds the development footprint.

The native vegetation located outside of the development footprint is only being cleared to reduce the natural risk hazard – bushfires located throughout the site. The vulnerable proposed use (childcare centre) is inappropriate given the environmental constraints for this property.

The proposal does not propose to rehabilitate the site apart from the small buffer alongside Little Burpengary Creek.

The site is not isolated from the surrounding rural environment and provides an effective, safe habitat and corridor in the area. A loss of ecological connectivity will occur as a result of the development.

The green infrastructure network is located directly adjoining the site. The green network has not been incorporated into the design of the development. (see image below) The proposal fails to preserve the ongoing supply of existing ecosystems to the community and does not conserve biodiversity values. The site (being an adjacent lot and not protected in perpetuity) should be protected, rehabilitated where necessary and habitats enhanced for priority species.

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MBRC Green Infrastructure Network

The applicant’s Ecological assessment report fails in methodology. The Ecological Assessment does not follow the guidelines set out in the Planning Scheme Policy - Environmental Area and Corridors.

Namely:

- fails to supply an Ecological Restoration Plan to improve connectivity resulting from proposal
- fails in field survey techniques for both vegetation and wildlife (wrong method and not conducted for sufficient time period for satisfactory analysis)

“a minimum of four days and nights survey to minimise sampling duration influences within a given sampling period. In circumstances where less sampling effort is applied, appropriate justification must be provided.”

2. 3.4.2 Strategic Outcome - Priority species conservation

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Ecological Expert

Page 1 – *“The Wildlife Online extract for the site revealed that there have been 73 Koalas sightings recorded within a 1 km radius of the site. We have also undertaken a site investigation of the surrounding area (access on site was not permitted) on 16th November 2018 and found evidence of the presence of Koala (e.g. fresh scats on the edge of the trees and within the waterway corridor and Koala scratches on the numerous trunks). “*

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Page 4 - *“Green Tape Solutions’ field assessment and desktop review revealed the presence of threatened fauna species on site – Koala listed as Vulnerable under the Nature Conservation Act 1992 and EPBC Act. Currently, the proposed development will require the removal of more than 80% of site vegetation, including a large proportion of non-juvenile Koala trees. The development will result in the net loss of fauna habitat and does not propose for any offset or compensation in accordance with the local, state or commonwealth legislation.”*

Koalas live in their natural habitat on the proposed site and adjacent properties. Photographic and video footage (taken on Friday 2nd November 2018) submitted with this submission provide direct undisputable evidence. See image below (see separate email for video evidence submission) The koala could be spotted from the footpath, elevated in a mature eucalypt tree for the community to regularly enjoy. Less than 5% of trees on the site could be inspected from the street and a more accurate level of activity would be recorded should full access to the site be allowed. Signs are located on both Old Bay Road and Thompson street indicating the presence of koalas in the immediate vicinity.



Inside Subject Site
10am Friday 2nd November 2018
Roundabout Old Bay Road & Thompson st

The Pre-lodgment meeting (pre4580 & 4348) revealed to the applicant that the site was of habitat value to koala due to recorded sightings.

Planning Scheme Policy - Environmental Area and Corridors stipulates that Local government planning schemes are required by law to recognise and protect matters of state and national significance including habitats for priority species. Priority species habitat is incorporated into the Environmental Areas mapping to the extent it can be represented spatially.

Scattered and diffuse native vegetation and habitat values may not be captured in this overlay and must be identified and valued at development application stage

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Planning Scheme Policy - Environmental Area and Corridors states that a koala movement area or koala habitat area is

- where there is a koala sighting within a 1-2 km range
- where koala food and habitat trees are present – Note: there are 238 koala sensitive trees listed for removal identified in the tree retention report
- where there is trace evidence of koala presence such as scratching on tree trunks.

Number of Trees on Property	472
Number of Trees to be removed	359

Nb. A total of 30 trees included in applicant report for retaining were on the adjoining property.

Koala (sensitive) Tree Removal Summary

Grey Gum	13
Forest Red Gum	40
Pink Blood wood	46
Swamp Box	17
Broad Leaf Paperbark	39
Scribbly Gum	83
Total Koala Food/Habitat Trees for removal	238

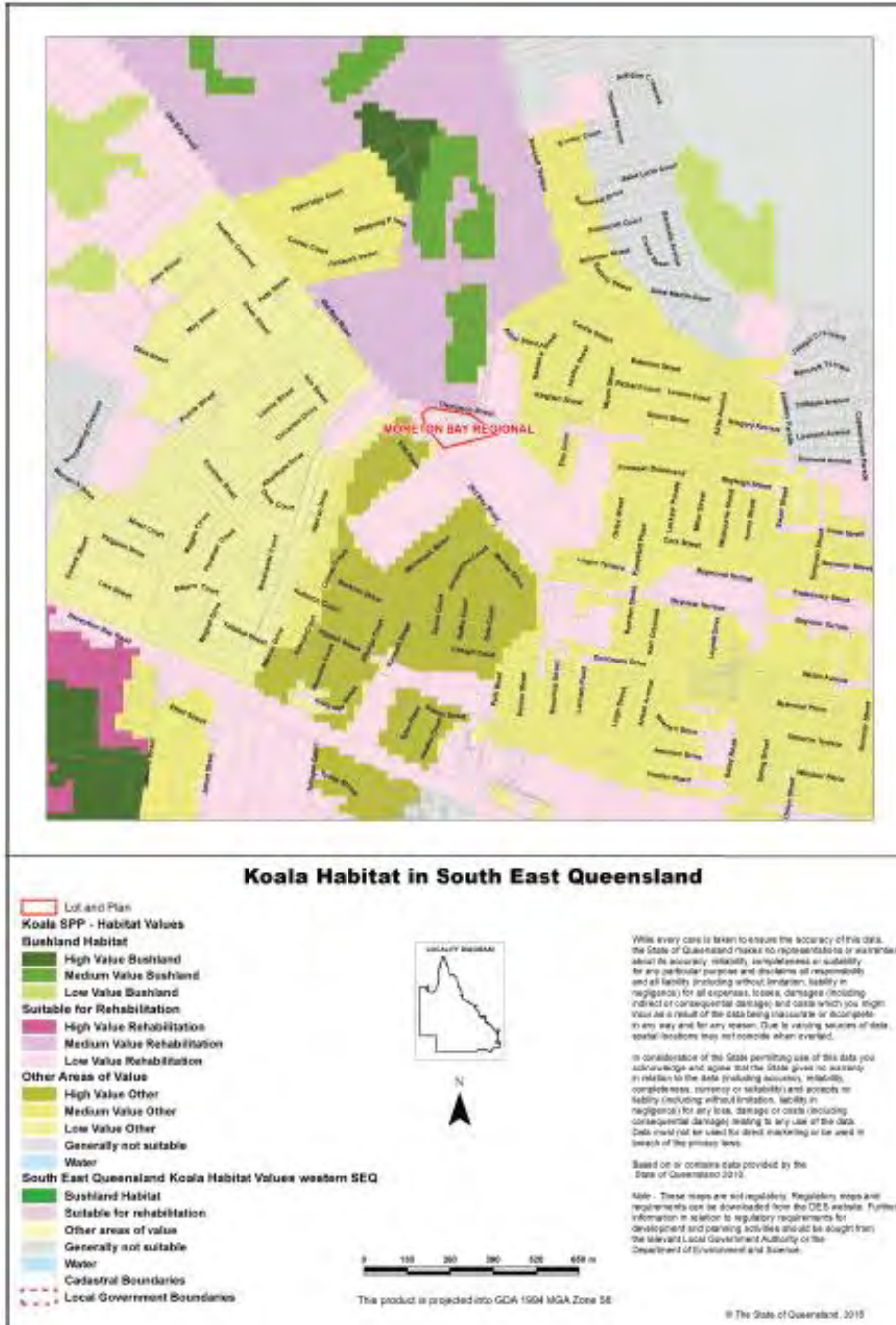
The applicant’s ecological assessment stated that there was numerous fauna and koala scratching on trees sighted.

The site is therefore classified as a koala habitat area.

The applicant incorrectly concludes that there is unlikely to be any koalas on site due to its limited visual survey and the site not being mapped in the priority koala assessable development area. However, a SPP Koala bushland habitat is located adjacent to the proposed site (see image below)

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Map requested: (05/11/2018 21:47:34)
Lot: 32 Plan: SP152335



The Ecological Assessment does not follow the guidelines set out in the Planning Scheme Policy - Environmental Area and Corridors for the assessment of fauna on the site. The report relies on a site inspection of the 1.6 hectares for only **one day** (daylight hours only) whereas the PSP requires a comprehensive site survey of four days and nights to identify priority species. Furthermore, the tree retention plan provided with the Ecological Report states there were koala fauna scratches on tree number 278. The report does not make reference to this fact.

The development fails to incorporate koala design principles decreasing the threat to koalas.

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Almost 80% of the natural landscape will be bulldozed.

The development proposal (Ecological report) does not recognise the high value and native bushland koala habitat that surrounds and adjuncts the site on Thompson Street (see image below).

The site is not isolated and is adjacent to land categorized as (MSES) Matters of State Environmental Significance).



Matter of State Environmental Significance Site adjacent to 54 -66 Old Bay Road

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Ecological Expert

Page 5 – “The S5 Environmental ecological assessment report acknowledges that the site provides some good habitat for a range of wildlife (reptiles, birds and mammals). The site is also directly connected to adjacent large remaining vegetated patches (north and south) through the existing waterway and culvert under Thompson road.”

The landscape plan submitted by the applicant has no beneficial impact for the koala and its lost habitat.

Vegetation being removed from the site contains priority species habitat. As such environmental offset should be sought for any removal of vegetation.

Scattered and diffuse native vegetation and habitat values may not be captured in this overlay and must be identified and valued at development application stage. It is therefore apparent that Schedule 11 Planning Regulation 2017 may also apply and further assessments be made.

Applicant has failed to adequately provide a species management plan to meet the requirements of the Nature Conservation Act 1992.

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Applicant has failed to demonstrate how the development avoids, mitigates and offsets the loss of the threatened fauna species habitat.

3. 3.4.4 Strategic Outcome - Regional landscape area

The development fails to provide a healthy and diverse landscape. The site is located adjacent to rural zoned properties. The clearing of 80% of the trees from this site will not maintain a healthy rural landscape. The application does not protect, manage or enhance the landscape of the area as significant vegetation will be removed. The vegetation removal reduces the green infrastructure network and causes environmental harm to the ecosystem of the site and surrounds.

This site's close proximity to the green infrastructure network and its biodiversity value of the site should be protected from inappropriate development. A 200-place childcare centre which requires the removal of 359 trees, with no measures for rehabilitation will harm the ecological function and scenic amenity of the site. The environmental value of the site due to the presence of koalas should be recognised and maintained.

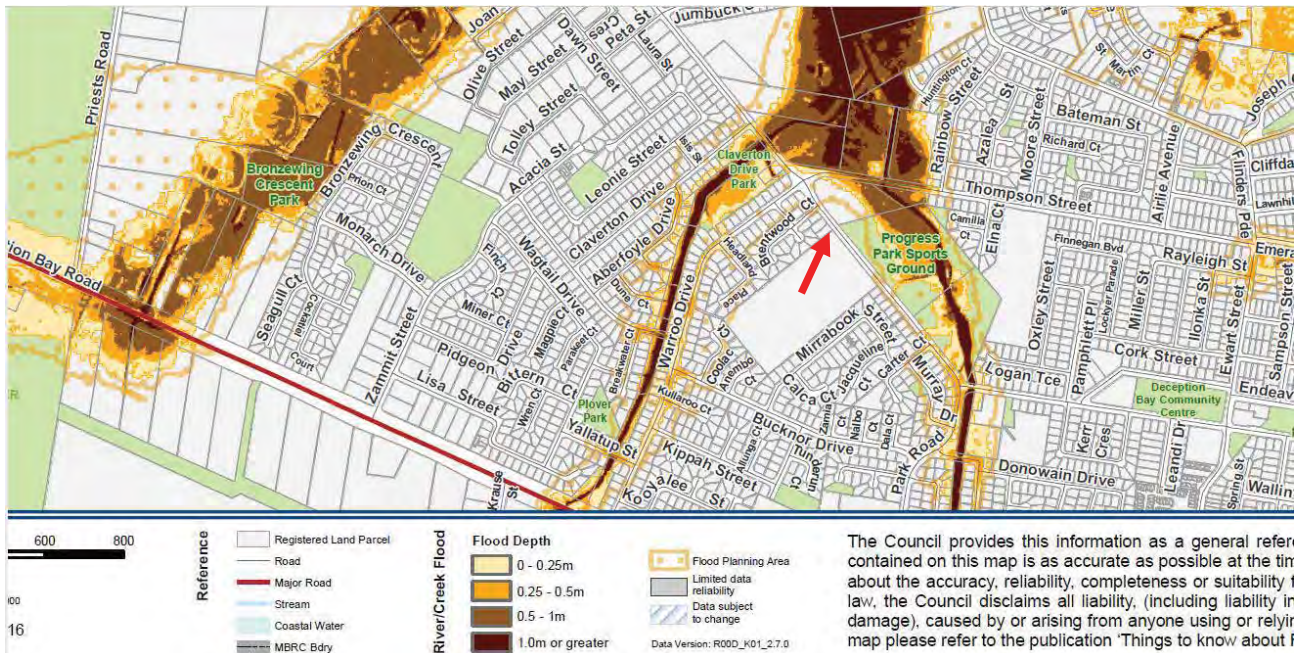
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Planning Conflict # 3

3.5 – Theme: Strong Communities

1. 3.5.1 Strategic Outcomes - Healthy and safe communities

The application provides for the site to be used for community activities (Planning Regulation 2017 s24 definition of community activities include childcare centre). The site is located in a bushfire and flood overlay. The adjacent properties possess extremely high natural hazard characteristics – bushfire and flood. Old Bay road and Thompson streets near the site are in high flood areas (MBRC flood overlay map) and are often inundated. The proposed facility is not situated in an appropriate location for emergency purposes during and after natural disasters. The road network is severely affected during heavy rain periods with the proposed site regularly landlocked (see diagram below).



MBRC Flood Report 54-66 Old Bay Road 1

2. 3.5.2 Strategic Outcomes - Community, cultural and sporting facilities

The application proposes a community activity. Community facilities must only be provided where needed within the region. New community facilities must also be located adjacent to and within mixed use centres.

The site is not adjacent to or within a mixed-use centre.

The facility is not needed within the region.

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The community has a major oversupply of childcare places relative to demand with numerous centres located in the immediate catchment of the site. An independent expert report has been prepared by Mr Phil Henry of Business Geographics demonstrating the demand and supply of childcare in the community. **The report “Childcare Supply Analysis – Deception Bay” is attached in Annexure A.**

The report concludes (page 22) that a significant oversupply will exist in 2019 due to an extra 43% (over 2018) of supply being made available by the opening of two new centres. These two developments will provide for an extra 228 places to an already balanced market. This significant oversupply is even without the proposed 200 placed centre or the Flegg street Approval (120 places) being considered.

The report states (page 21) that if the 200-place centre is approved, that a CRITICAL OVERSUPPLY will remain for a very long time and may also adversely affect other childcare markets in surrounding areas such as Burpengary, Morayfield, Rothwell and North Lakes.

Report (page 22) *“the negative economic impacts far outweigh any potential community benefits of the proposed development”*

3. 3.5.3 Strategic Outcomes - Sense of place and identity

The built form of the development reduces the sense of place and identity of the site. The site is well known for its rural like setting and abundance of native wildlife regularly seen from the pathway alongside.

4. 3.5.4 Strategic Outcomes - Open space network

The development will result in a significant loss of passive community greenspace and identity.

5. 3.5.5 Strategic Outcomes - Urban greenspace

The application fails to demonstrate an integrated, high quality, urban community greenspace. The environmental needs of the existing neighbourhood have not been achieved. The application does not respond to growth in a co-ordinated manner. The development outcome provides a service which has been deemed unnecessary by Business Geographics. The ecological values of the site and surroundings will be negatively impacted.

6. 3.5.7 Strategic Outcomes - Housing choice and affordability

The proposed development is located in a suburban residential zone. A variety of housing options should be provided to meet the diverse community needs and achieve housing choice and affordability. The applicant fails to provide any housing needs in the community by demolishing a detached residential house located in a rural like setting abundant with natural flora and fauna.

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The development fails to consider the existing house or additional necessary housing required in the vicinity. The development has reduced the available choice of housing and decreased affordability in the area.

The application does not consider utilising a more sustainable method of selectively clearing vegetation (retaining native vegetation and habitat trees) for alternative uses such as detached housing. Natural hazards (bushfire and flood) and ecological harm can be mitigated for small scale uses such as detached housing. This is in stark contrast to the large scale and vulnerable community activity proposed.

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Planning Conflict # 4

3.6 – Theme: Settlement Pattern

1. 3.6.2 Strategic Outcome - Network of centres

The site is not suitable for establishing a new activity centre or neighbourhood hub.

2. 3.6.5 Strategic Outcome - Infill development

The site is not located in a higher order centre and is not considered *of focus* to council for mixed use development.

The site is not located adjacent to adjoining centres and is not targeted for redevelopment. The site is not within walking distance of the nearest centre and is not serviced well by public transport (only serviced by the one suburban bus route - 665).

The site's proposed use is not considered to be orderly urban development due to substantiated oversupply of existing childcare centres in the immediate vicinity. The analysis conducted by Business Geographics confirms oversupply rendering any further like development disorderly.

The site contains significant natural hazards that place vulnerable land uses at risk. A childcare centre is deemed as a vulnerable land use. As such infill development should not be supported for the proposed activity use.

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Planning Conflict # 5

3.7 Theme: Employment Location

1. 3.7.1 Strategic Outcome - Diversification of the local economy

The proposed use (childcare centre) does not provide for any diversification of the local economy. There are 9 (existing and approved awaiting completion) childcare centre facilities in the local community already.

The needs analysis conducted by Business Geographics (Annexure A) fully demonstrates that the community is facing critical oversupply of childcare places should the development proceed.

The development does not develop or support the expansion of the local economy.

“The population (0-5) is expected to increase by only 72 children from 2018-2023 (report page 5). Should the proposed development be approved, there will be a further 548 places made available (report p21).”

“Deception Bay has experienced rapid growth in the ageing population and is generally considered to be a retirement destination for the Moreton Bay Region (report page 9).”

The development will not provide for any new local jobs. Existing centres will close with many staff losing their jobs. Business Geographics analysis states that existing businesses will suffer serious financial adverse effects as a result of the new development.

The development will hinder the private sector’s investment already made in the local economy.

The development does not provide for balanced employment and economic growth.

2. 3.7.2 Strategic Outcome - Maximise the opportunities for development of existing places of employment and business activity

The development will not contribute to employment growth as existing childcare centres will close (existing centre staff leave) due to massive oversupply of services.

The proposed 200 place childcare centre is the largest capacity centre in the neighbourhood by a great margin. The average centre has approval for 88 places (page 12). The highest existing centre is 118 places. The development proposed alone would provide an additional 37% supply to the market.

The proposed developments’ scale and dominance will detract from higher order district activity centres already servicing the local community. The proposal does not provide a lower order complementary business or community service.

The proposal does not avoid placing economic and employment growth in areas of natural hazard risk. There are flood and bushfire natural hazards on the site and immediate surrounds. The vulnerable land use (childcare activities) remains a risk.

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3. 3.7.3 Strategic Outcome - Location of new economic activities

The new economic activity proposed fails to provide diversified, broad-based local economic growth. The location of the site's proposed use is inappropriate given the level of local market saturation of childcare already in existence.

The new economic activity is located in natural hazard risks. Bushfire and flooding exist on the proposed site and also on the adjacent / adjoining properties and road infrastructure.

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Planning Conflict # 6

3.8 – Theme: Rural Futures

1. 3.8.2 Strategic Outcome - Rural infrastructure

The site is located next to rural zoned land and is itself considered to contain all rural characteristics. The proposal adversely affects green infrastructure, destroys ecosystems, and places priority species at major risk. The applicants technical ecological report fails to comply with the necessary standards in their evaluation technique.

Community services such as the proposed use are already well supplied to the local rural community (local rural community is captured in the demand / supply analysis conducted by Business Geographics)

2. 3.8.3 Strategic Outcome - Rural communities

The proposed development is an intrusion of incompatible development given the site's environmental characteristics and constraints.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Planning Conflict # 7

3.9 – Theme: Natural Resources

1. 3.9.5 Strategic Outcome - Ecosystem services

Proposal fails to protect and enhance ecosystem services. Mass koala habitat, including non-juvenile habitat trees destroyed causing loss of connectivity to broader region.

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Ecological Expert

Page 5 – *“The development will require the removal of significant amount (more than 80%) of vegetation on site including vegetation outside of the proposed development footprint. Field investigations and a desktop assessment undertaken by Green Tape Solutions has revealed that the site supports threatened fauna species (Koala) and the clearing of the vegetation will be detrimental to the quality and integrity of their habitat. The clearing will result in an adverse impact upon threatened wildlife. No avoidance, mitigation measures or offset is proposed to compensate for the loss of biodiversity and threatened species habitat.”*

Page 7 – *“The site is mapped has having MLES waterway buffer or a Value Offset Area MLES wetland buffer along the eastern side (waterway corridor). However, there is strong evidence that the mapped MLES should cover the whole site due to the presence of threatened fauna species. An environmental offset shall be required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas. This has not been proposed by the proponent”*

Page – 7 *“The proposed level of vegetation retention is inadequate and fails to provide and maintain a suitable setback from waterways and wetlands that protects natural and environmental values.*

The ecological values of the site have been significantly under-valued by the proponent and the ecological report fails to recognise and respond to the following matters:

- a. impact on fauna habitats;*
- b. impact on wildlife corridors and connectivity;*
- c. impact on stream integrity;*
- d. impact of opportunities for revegetation and all other wetlands. rehabilitation planting;*
- e. edge effects.”*

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Planning Conflict # 8

3.10 - Theme: Integrated Transport

- 1. 3.10.4 Strategic Outcome - Safety and quality Influence sustainable travel behaviour by creating attractive places to walk and cycle.**

Development site currently enjoys scenic pathways for community to look at natural bushland and the native wildlife, including priority species - koala. The applicant's proposal will de-activate a sense of community and discourage people to walk along the busy use new development perimeter.

The applicants traffic assessment report fails to provide any analysis on the traffic content and user type of pedestrians and cyclists from the two nearby primary schools.

The applicants have provided a traffic assessment as part of their application.

An expert witness has been engaged to provide a deep analysis of the proposed design and their assessment in general.

Adam Pekol of Pekol Transport has identified numerous issues in the applicant's design method. **Refer to Annexure C - Pekol – Traffic Engineering Assessment.**

The applicant has failed to provide best practice design of the transport network to reduce accidents and improve safety, particularly related to the high number of pedestrians and cyclists.

The development application must be refused.

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Planning Conflict # 9

3.11 -Theme: Infrastructure

1. 3.11.4 Strategic Outcome - Protect infrastructure sites and corridors

Current planning indicates that future road widening may occur adjoining Old Bay Road. (pre4580 & 4348) The applicant was requested to provide a development footprint for the balance allotment setback at least 1.5 metres from the Old Bay Road frontage of the site.

In addition to the extra setback, the applicant is required to provide an access driveway of at least 12.0 metres in length to avoid potential queuing issues. The existing access driveway has not been designed in accordance with AS2890.1 as discussed in detail

Refer to Annexure C - Pekol – Traffic Engineering Assessment.

The applicant has failed to provide for the future road widening in addition to correct queuing requirements.

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Planning Conflict # 10

3.12 – Theme: Water Management

1. 3.12.1 Strategic Outcome - Total water cycle management

The Stormwater management plan has been produced utilising wrong GFA numbers on the development (see Annexure D - Cyber Drafting -GFA calculation).

The Stormwater management plan has not considered the effects of the mass clearing of vegetation on the subject site (outside the development footprint) in its evaluation of the total water cycle management plan.

In particular, environmental flow and the effect on the environmentally sensitive waterway have not been considered after substantial tree removal.

Increased Sediment from Vegetation Removal

“Increases in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality”.

*There was localised erosion and sedimentation associated with extreme rainfall events during 2011 and 2013, including along parts of Waraba, Lagoon, King John and **Little Burpengary** creeks, the mid reaches of Burpengary Creek and the Caboolture River mouth.*

Source: (Walking the Landscape – Caboolture Catchment Map Journal v1.0 (2017), presentation, Department of Environment and Heritage Protection, Queensland.)

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Ecological Expert

Page 5 – *“The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.*

The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.

The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.”

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2. 3.12.4 Strategic Outcome - Floodplain management

The proposed land use is “vulnerable”. Planning should restrict unnecessary development for a vulnerable activity in a medium risk flood area overlay. Proposal fails to minimise exposure of people to flood hazard.

The development footprint remains in the medium risk zone despite available flood free land.

3. 3.12.5 Strategic Outcome - Water sensitive urban design

The Stormwater management plan has been produced utilising wrong GFA numbers on the development (see **Annexure D - Cyber Drafting – GFA calculation**). As such the report cannot be relied upon measuring storm water runoff.

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Ecological Expert

Page 5 – *“The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.*

The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.

The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.”

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Planning Conflict # 11

3.13 – Theme: Planning Areas

1. 3.13.3.1 Specific Outcomes - Sustainability and resilience

The site contains two large natural hazards

- Medium Risk Flood Overlay
- Medium Risk Bushfire Overlay

The site also contains significant environmental overlays / concerns

- Waterway corridor
- Significant Priority Species Habitat

There should be no further intensification of development on this site, particularly involving a vulnerable use activity that is not required and does not overcome these detrimental effects.

2. 3.13.3.2 Specific Outcomes - Natural environment and landscape

The site contains green infrastructure components including waterways and urban forests. The proposed development design fails to retain the natural environment and landscape by removing 80% of the native trees on the property. The proposal includes the removal of 359 trees.

Many of the trees being removed are koala sensitive trees (proposal is for 238 trees that feed and shelter koalas). Identified koala habitat areas and koala corridors should be protected. Development should rehabilitate and reinstate the regional ecosystem values in these identified areas. Koalas have been proven to permanently reside on the property in large numbers.

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert) – review of applicants Ecological Expert

Page 2 - *“The tree retention plan provided by S5 Environmental only includes Koala habitat trees that are 150 mm diameter at breast height (DBH). The tree survey should have included all non-juvenile Koala trees with >100mm DBH. It is highly likely that the number of non-juvenile Koala trees on site was underestimated and will be removed as part of the development.”*

The proposed development is not of a good quality in terms of urban design outcomes and should be rejected in full.

Page 5 – *“The development will require the removal of significant amount (more than 80%) of vegetation on site including vegetation outside of the proposed development footprint. Field*

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investigations and a desktop assessment undertaken by Green Tape Solutions has revealed that the site supports threatened fauna species (Koala) and the clearing of the vegetation will be detrimental to the quality and integrity of their habitat. The clearing will result in an adverse impact upon threatened wildlife. No avoidance, mitigation measures or offset is proposed to compensate for the loss of biodiversity and threatened species habitat."

Page 7 – *"The site is mapped as having MLES waterway buffer or a Value Offset Area MLES wetland buffer along the eastern side (waterway corridor). However, there is strong evidence that the mapped MLES should cover the whole site due to the presence of threatened fauna species. An environmental offset shall be required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas. This has not been proposed by the proponent"*

Page – 7 *"The proposed level of vegetation retention is inadequate and fails to provide and maintain a suitable setback from waterways and wetlands that protects natural and environmental values.*

The ecological values of the site have been significantly under-valued by the proponent and the ecological report fails to recognise and respond to the following matters:

- a. impact on fauna habitats;*
- b. impact on wildlife corridors and connectivity;*
- c. impact on stream integrity;*
- d. impact of opportunities for revegetation and all other wetlands. rehabilitation planting;*
- e. edge effects."*

3. 3.13.3.3 Specific Outcomes - Strong communities

The planning area provides for a diverse range of housing outcomes in the suburban neighbourhood. The proposal fails to provide for the diverse range of housing that is required in the planning area. The development would see a reduction in available housing and affordability.

The planning area also provides for the development of an appropriate range of community facilities and services. The proposal for a large scale 200 place childcare centre is not considered suitable given the broad range of services currently provided to the local community.

An appropriate range of childcare centres is already provided in the local community. The current number of centres has been determined to more than meet the demands of the local community both presently and for many years to come (**Business Geographics report Annexure A**).

Any increase in the number of services would have an adverse effect on the local community.

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Childcare Supply Analysis (report page 4) *“Should the proposed development be approved, there would be an increase in supply of 103.59% over 2018. This compares to population growth (0-5yrs) of just 4.85% over the same period”.*

The district centre for Deception Bay is considered the focal area for a mix of compatible uses and employment opportunities in a compact and integrated manner effectively servicing its catchments. The proposed development is not located in or near the Deception Bay district centre and is not considered to be an appropriate development on the subject site.

The proposed development is located in an established suburban neighbourhood and is identified as an area that will be maintained with little change. The proposed development removes all character from the existing site and surrounding properties. The proposal introduces substantial changes.

The proposed development comprises the characteristics of a rural residential lot. It is adjacent to semi-rural residential and clear open space. The proposed intense use will detrimentally impact on the landscape character created by these uses.

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Planning Conflict # 12

3.14 – Moreton Bay Regional Council Place Model

The proposed development site is situated in two Place Types

- Suburban neighbourhood place type
- Coast and riverlands place type

It is intended where applications are made for impact assessment Council will use this section (3.14) to assess such applications.

1. 3.14.1.7 Strategic Outcomes - Suburban neighbourhood place type

The area shall continue to provide low density residential, predominantly detached housing with a limited range of local convenience services and facilities.

The proposed use does not provide for any further low-density housing of which the place type predominantly consists. The proposal intends to remove current detached housing.

The applicant's town planning report (p59) states the proposal shall establish a local service which is currently unavailable. This assertion is untrue. Expert factual analysis, conducted by **Business Geographics (Annexure A)** has concluded that there is already an abundant range of childcare centres in the local catchment that greatly exceed demand.

2. 3.14.8.1 Specific Outcomes - Sustainability and resilience

The current lot provides attached housing whilst being densely vegetated with native trees and local wildlife. The lot actively contributes to the amenity and micro-climate of the area.

The proposed development will have a severe negative impact on the amenity and micro-climate.

The new development has been proposed in an area containing both bushfire and flood natural hazards.

3. 3.14.8.2 Specific Outcomes - Natural environment and landscape

A high level of vegetation should be retained on both public and private land that provides native flora and fauna habitat and to ensure the ongoing provision of ecosystems, in line with the green infrastructure network.

The development has not been designed to integrate with open space (adjoining lot is parkland) and the natural environment.

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The proposed development proposes to remove some 359 native trees from the lot. The lot is inhabited by priority species – koalas and contains important natural waterways. There are 238 koala sensitive trees being removed by the proposed development.

Based upon the applicant's bushfire hazard report (Pg. 14) the site's vegetation ecosystem can best be described in the MBRC document "Species List for Regional Ecosystem 12.3.6" The Community and Environmental Services Division have furnished numerous documents including "Species List for Regional Ecosystems" (see extract below)



Coastal floodplain grassy Broadleaf Paperbark (*Melaleuca quinquenervia*), Blue Gum (*Eucalyptus tereticornis*) and Swamp Box (*Lophostemon suaveolens*) open forest to woodland

Description: This woodland occurs in coastal areas on alluvial plains. The major species are Broad Leaved Paperbark (*Melaleuca quinquenervia*), Blue Gum (*Eucalyptus tereticornis*) and Swamp Box (*Lophostemon suaveolens*). Occasionally present are Swamp She Oak (*Casuarina glauca*) and Pink Bloodwood (*Corymbia intermedia*).

Ecological values: Occurs on flat low lying coastal areas which are seasonally inundated. This ecosystem is important for its contribution to healthy waterways by helping to filter out contaminants and sediment. Species that can be found in this ecosystem include: Koalas, various frogs, Eastern Grey Kangaroos, Swamp Wallabies, Blue Tiger Butterflies, Squirrel Gliders and nectar and pollen eating birds such as Rainbow Lorikeets and Brown Honeyeaters. Important habitat to rare species such as the Wallum Froglet and Grey Goshawk.

Source: <https://www.moretonbay.qld.gov.au/uploadedFiles/moretonbay/environment/vegetation/RegionalEcosystem12.3.6.pdf>

It is clear that the development site is considered to be of significant ecological value that contributes to healthy waterways and wildlife habitat.

4. 3.14.8.3 Specific Outcomes - Strong communities

The proposed activity is a vulnerable use. Childcare centres should be located so that they provide a safe meeting place. The site is contained in a medium risk flood zone (development footprint included) and a medium risk fire hazard zone.

The site is surrounded by higher levels of flooding and bushfire risk. It is probable that the new childcare centre (along with 200 infants and 35 staff) will be cut off from parents and the rest of the community in times of increasingly occurring natural hazards and crises.

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In summary, this site is not suitable for the proposed activity given the extraordinarily high number of alternative childcare centres in the immediate local catchment.

5. 3.14.8.4 Specific Outcomes - Settlement pattern and urban form

The lot is located in the Suburban neighbourhood zone. Suburban neighbourhood places should cater for predominately low density detached housing.

The proposed development removes current and potential future housing development. As a result, available housing choice and diversity is reduced and affordability is decreased in the community.

New development should be sympathetic to the existing character of the particular Suburban neighbourhood location.

The site currently resembles a semi-rural, densely vegetated (predominately native trees) lot featuring a single detached house. The area of the lot is large being some 16,380 m². It therefore provides a large part of the existing locality character and blends in with the immediate surrounds.

The proposal fails to achieve a design that fits in with the locality.

The scale of the development is not subordinate to higher order or district centres. The proposed 200 place centre dwarfs the average centre size of 88 places.

6. 3.14.1.13 Strategic Outcome - Coast and riverlands place type

1. In the Coast and riverlands place type the natural environment dominates;
2. These areas are particularly exposed to coastal hazards and flooding;
3. These areas also perform essential functions as ecological and regional landscape areas which are vital to protecting the Region's green infrastructure and providing essential ecosystem services for human wellbeing; and
4. Within Coast and riverlands areas, reconnecting habitats and ecosystems and restoring biodiversity to healthy levels is a priority; other activities that occur in this area are compatible with maintaining its essential functions.


The entire proposal FAILS to recognise the subject property is located in the Coast and Riverlands Place Type.

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert) – review of applicants Ecological Expert

Page 7 – “The site is mapped has having MLES waterway buffer or a Value Offset Area MLES wetland buffer along the eastern side (waterway corridor). However, there is strong evidence that the mapped

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“MLES should cover the whole site due to the presence of threatened fauna species. An environmental offset shall be required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas. This has not been proposed by the proponent”



Coast and Riverlands place type

The Strategic framework outlines the 20-year vision for growth and development in the Moreton Bay region. It divides the region into 13 place types. These place types explain the level of growth and form of development that is expected in different neighbourhoods and communities throughout the Moreton Bay Region. Coast and Riverland is one of these 13 place types.

Coast and Riverlands are important ecological landscapes that are crucial to protecting the Moreton Bay Region's unique coastline and major waterway networks.

These areas may be particularly exposed to coastal hazards and flooding. Existing development in these areas will not intensify in the future. Development in the future is limited to uses compatible with protecting the environment and those uses not sensitive to hazard events, such as rural, sport, recreation and tourism activities.

Where can I find a Coast and Riverlands place type?
Coast and Riverlands place types are found throughout the region, particularly around the Pine River and Hays Inlet catchment, Caboolture River estuary, Pumicestone Passage and Bribie Island.

This place type also incorporates areas of environmental significance, coastal lowlands containing estuarine areas, tidal flats and marine deposits, beach ridge and sand dunes.

Why is the Coast and Riverlands place type important?
Coast and Riverland places accommodate areas of environmental significance and identify opportunities for improving local habitat and ecosystems.

These places are likely to experience coastal hazards including flooding and storm tide events, erosion and inundation due to potential future rises in sea level.

Future development around Coastal and Riverland areas must be carefully managed to minimise community risk to natural hazards and the impact of growth on the local environment.

Coast and Riverlands at a glance

- Natural environment dominates
- May experience natural hazards including flooding, storm tide and erosion
- Protection of important habitats and ecosystems
- Protection and enhancement of riparian and coastal vegetation
- Coastal activities are appropriate to the character of the area
- Variety of active and passive sport and recreation opportunities
- Protection of cultural heritage sites
- Existing pattern of development not intensified
- Low key employment opportunities based around tourism activities
- Development does not impact on natural resources and is not sensitive to hazard events
- Waterways, wetlands and coastal areas are enhanced and protected

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Source: <https://www.moretonbay.qld.gov.au/upload>

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3.14.14 Element - Coast and riverlands place type

This place type has significant environmental values that have been impacted by development over many years as the Region has experienced rapid urbanisation. Projected changes in weather conditions is likely to lead to an increased occurrence of natural hazards e.g. flooding, storm tide and erosion events. This will further threaten environmental values. Future development needs to be carefully managed to minimise additional adverse impacts on the environment and exposure of our communities and development to hazard impacts.

The proposed development fails to provide a service that is required in the community. The oversupply of childcare places in the community has been well documented. The proposal does not minimise adverse impacts on the environment and increases exposure to the community to hazard impacts.

3.14.14.1 Specific Outcomes - Sustainability and resilience

1. The subject site is within this place type and is exposed to coastal hazards and is not suitable for urban development

3.14.14.2 Specific Outcomes - Natural environment and landscape

1. The integrity, condition and function of biodiversity and ecological processes within these areas are NOT protected in perpetuity from the adverse impacts of proposed development and land use activity

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert) – review of applicants Ecological Expert

Page 7 – *“The site is mapped as having MLES waterway buffer or a Value Offset Area MLES wetland buffer along the eastern side (waterway corridor). However, there is strong evidence that the mapped MLES should cover the whole site due to the presence of threatened fauna species. An environmental offset shall be required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas. This has not been proposed by the proponent”*

Page – 7 *“The proposed level of vegetation retention is inadequate and fails to provide and maintain a suitable setback from waterways and wetlands that protects natural and environmental values.*

The ecological values of the site have been significantly under-valued by the proponent and the ecological report fails to recognise and respond to the following matters:

- a. impact on fauna habitats;*
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2. The visual character and the visual relief and separation between urban areas provided by the network of waterways has not been retained. Vegetated buffers have not been maintained

3. Existing natural areas, including the habitat of a range of threatened species, have not been enhanced nor protected from the impacts of development;

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert) – review of applicants Ecological Expert

Page 5 – *“The development will require the removal of significant amount (more than 80%) of vegetation on site including vegetation outside of the proposed development footprint. Field investigations and a desktop assessment undertaken by Green Tape Solutions has revealed that the site supports threatened fauna species (Koala) and the clearing of the vegetation will be detrimental to the quality and integrity of their habitat. The clearing will result in an adverse impact upon threatened wildlife. No avoidance, mitigation measures or offset is proposed to compensate for the loss of biodiversity and threatened species habitat.”*

4. The Coast and riverlands place type forms part of the green infrastructure network that traverses across public and private land to link to the Mountains, forests and waterways place type. The proposed development adversely affects the green corridor by removal of native vegetation and habitat.

3.14.14.4 Specific Outcomes - Settlement pattern

1. The existing pattern of development within this place type should not be intensified

2. Dispersed dwellings and farm buildings are predominant within this place type, mostly on large rural allotments. Some small house lots also occur in this place type. The current dwelling house in existence provides a suitable use for the site.

4. Development and coastal activities are limited to uses that are allied to and compatible with the long-term protection of the areas environmental values and are not sensitive to hazard events. The vulnerable use – childcare centre is not appropriate in this instance.

3.14.14.5 Specific Outcomes - Employment location

1. Employment opportunities in this place type include low key, low impact recreational and tourism activities that serve the needs of residents and visitors to the region.

A childcare centre is not appropriate at this site.

3.14.14.7 Specific Outcomes - Integrated transport

1. An adequate level of service for road access should be maintained for visitors to the area to provide safe access in areas susceptible to flooding and for use in emergencies.

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It is not appropriate for the childcare centre to have car parking in a medium flood risk.

3.14.14.9 Specific Outcomes - Water Management

Proposed development fails all three criteria

1. Waterways, wetlands and coastal areas should be enhanced and protected from degradation or loss of biodiversity values
2. Development should retain the natural hydrological characteristics of waterways, wetlands and coastal areas including groundwater, and mitigates disturbance of acid sulphate soils and the mobilisation and release of nutrients of concern from nutrient hazard areas
3. The risk of downstream or upstream shoreline, bed or bank erosion through altered hydrology, development or unnatural disturbance should not be increased; and
4. Nutrient enrichment is avoided.

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert) – review of applicants Ecological Expert

Page 5 - *“The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.*

The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.

The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.

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General Residential Zone (Suburban Neighbourhood Precinct) Code

The proposal does not achieve the overall outcomes of the Suburban Neighbourhood Precinct.

Non- Compliance Issue 1:

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 (e) states that

Community activities: (a childcare centre is defined as a community activity)

ii. do not negatively impact adjoining residents or the streetscape;

The proposed Childcare centre and the clearing of vegetation will negatively impact both the adjoining residents and the streetscape because:

- Currently traffic is a problem around the Deception Bay North School in the mornings. The new childcare centre with 200 places will increase the traffic on the streets surrounding nearby resident's property bringing more congestion and traffic noise to adjoining residents.
- The new staff will park outside the centre on Old Bay Rd (competing with residents dropping children to school) and this will cause problems with traffic in the area from 6am to 6pm Monday to Friday every day of the year.
- Pedestrians and cyclists currently compete with cars that park on the footpath because of Old Bay Road not being wide enough for parked cars and ongoing traffic. Many of these pedestrians and cyclists are of primary school age due to adjacent school.
- The traffic coming from the roundabout at Old Bay Rd and Thompson St cannot be seen from the driveway of the new childcare centre.
- The new childcare centre and the clearing of vegetation will ruin the natural environment in the immediate area. Residents live here because they enjoy the natural beauty of the area within a semi-rural atmosphere.
- Clearing of the vegetation will create an eyesore on the street scape. The natural environment will be lost forever and residents will have their neighbourhood character modified to an extreme extent.
- Koalas are well known to be seen on this site and clearing the vegetation will ruin their habitat. This will the local residents from seeing the koalas in their natural environment.

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Non- Compliance Issue 2:

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 (e) states that

Community activities:

iii. do not undermine the viability of existing or future centres;

Previously, it was widely accepted that many local communities needed more childcare / early education facilities throughout Australia. This general consensus has led to a proliferation of new centres, many of which are inappropriately located, built by overzealous developers and without consultation to experienced educators.

Deception Bay's local catchment has become saturated with a broad range of childcare services, particularly over the last 12 months despite very small population growth in the 0-5 age bracket.

The negative effects on the community as a result of the proposed development far exceed any benefit that the new centre can bring to the community.

The applicant has not placed any regard to the viability of existing or approved future centres as a result of their application for a massive supply increase of 200 places in the immediate local catchment. Furthermore, the proposal has failed to properly consider the consequences to the local community and associated loss of amenities in general:

- Applicant only purchased this property in April 2018
- Applicant pre-lodgement minutes dated June 2018 for childcare centre.
- The recent acquisition and proposed use of the development site, situated in an inappropriate location, would NOT be considered REASONABLE given the chronic oversupply of childcare places in the catchment.

A complete independent analysis (**Appendix A – Childcare Supply Analysis – Deception Bay**) produced by Mr Phil Henry of Business Geographics Pty Ltd. Business Geographics is a leading provider of geographic and demographic information on the Childcare Industry in Queensland. It is clear from Mr Henry's conclusion that the applicant cannot meet the code requirements.

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Extracts from report

(page 21)

It is Business Geographic's view that the future delivery of the Natureplay Early Learning Centre (200 places) will result in a CRITICAL OVERSUPPLY of long day care and undermine the economic viability of other existing (and proposed) childcare centres in Deception Bay.

The proposed Natureplay Early Learning Centre alone represents a large 37.8% increase in supply (200 places) compared to current levels. An increase in supply of this magnitude would be expected to have profound and long-term adverse impacts on existing supply. It would create a highly competitive environment in which average occupancy rates would decline significantly (<50%). In this environment some operators would trade below levels required to maintain profitability. This may ultimately result in some rationalisation of supply.

Approval of the proposed Natureplay Early Learning Centre would likely undermine the economic viability of the three (3) other approved childcare developments in Deception Bay. In particular, these impacts would be most acutely felt by the subject site "Pocket Rockets Early Learning Centre" which is located less than 1km from the subject site. It should also be noted that if the Natureplay Early Learning Centre was to proceed in addition to other developments, a CRITICAL OVERSUPPLY is likely which will persist over the long term (ie. beyond 2023). A CRITICAL OVERSUPPLY may also, adversely affect childcare markets in surrounding areas such as Burpengary, Morayfield, Rothwell and even parts of North Lakes with operators repricing/ providing incentives to meet the market to attract demand from outside of the catchment. This repricing or implementation of enrolment incentives will lower benchmark returns for operators in these areas and will affect profitability over the medium to long term.

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The proposed Natureplay Early Learning Centre will have significant adverse impacts on the existing (and proposed) childcare network and will undermine the economic viability of these centres. These impacts may persist over the long-term and also adversely impact childcare markets in surrounding areas.

These negative economic impacts far outweigh any potential community benefits of the proposed development.

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Non- Compliance Issue 2 (B)

Consequences of Existing and Future Centres having their Financial Viability Undermined By the proposed development.

Mr Phil Henry of Business Geographics concludes that existing and future centres financial viability will be severely compromised. The data cannot be disputed. It is plainly obvious that various existing centres will close their doors and approved new centres may not be built as a result of the new development being approved.

There will be a clear loss of amenity for residents caused by the reduction of facilities, that will not be made good by the development.

The proposed development will result in a deterioration in the level of service to the local community and undermines public investments in infrastructure and services

Social issues examining the consequences of this loss of amenity has been conducted as part of our submission. Considerations on all stakeholders in the local community have been taken into account.

The table below demonstrates that the proposed development would have a clear and overall adverse effect on the local community that would not be made good by the development itself.

Community Stakeholders		
1	Neighbouring Community <i>Adverse effect of 200 place childcare centre at proposed site</i>	Neighbours - streetscape ruined, local character changed Neighbours loss sense of place and identity Natural wildlife and habitat destroyed – residents will not see protected species in their immediate neighbourhood Neighbours- increased traffic / road noise Neighbours increased exposure to flooding as a result of a loss of vegetation cleared Community put at risk of bushfires and flood in a supposedly safe community activity environment – childcare facility Loss of choice / available semi-rural housing availability Neighbours of existing childcare centres (suffering financial hardship / closed down due to oversupply) are confronted with the eyesore of unmaintained building/playground on their streetscape Waste of investment & current infrastructure in the community – supply / demand analysis demonstrates oversupply Local residents lose confidence in business activity / investment in local community as result of existing businesses closing
2	Environment <i>Adverse effect of 200 place childcare centre at proposed site</i>	Land degradation due to mass vegetation clearing Loss of native bushland/natural habitat Loss of biodiversity and associated ecosystem Decrease in connectivity of ecosystems Green infrastructure corridor compromised Loss of priority species (koalas) Water quality in Little Burpengary Creek decreased from stormwater runoff and erosion Increase in climate change due to vegetation clearing

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3	Child - <i>Adverse effect of childcare centres closing due to oversupply</i>	<p>Child does not have the opportunity to participate in a diversified range of specialised programs</p> <p>Child feels a sense of abandonment/loss</p> <p>Child becomes unsettled</p> <p>Child's wellbeing is compromised</p> <p>Carer/teacher interactions are impacted</p> <p>Peer relationships are impacted</p> <p>Child's routine is disrupted</p> <p>Child's unique learning profile may not be adequately catered for</p> <p>Child's behavioural issues may not be adequately catered for</p>
4	Parents <i>Adverse effect of childcare centres closing due to oversupply</i>	<p>Reduced choice of where to send their child – 1 large dominant centre of 200 places replaces 3-4 smaller centres</p> <p>Reduced choice of educational programs and techniques for their child</p> <p>Disappointment of not sending their child to a centre they trusted</p> <p>Disappointment of their child not being cared by staff that they trusted</p> <p>Parents forced to travel further to find suitable childcare</p> <p>Parents with babies will have limited choice (limited number of 0-2 yrs in specific Deception Bay proposal)</p> <p>Parents are forced to send their child to large scaled 200 placed centre.</p>
5	Staff <i>Adverse effect of childcare centres closing due to oversupply</i>	<p>New centres find new staff whilst existing staff eventually lose jobs as business viability decreases</p> <p>Staff will be stressed finding a new job in the local community</p> <p>Staff forced to travel outside of local area for suitable position</p> <p>Staff & their families forced to relocate out of Deception Bay for suitable position.</p>
6	Operators of closing centre <i>Adverse effect of childcare centres closing due to oversupply</i>	<p>Loss of fee-income from childcare business</p> <p>Increased stress to meet financial obligations</p> <p>No income to maintain property/grounds</p> <p>Quality of care reduces from financial pressures - despite best intentions</p> <p>Forced to relocate out of neighbourhood to find another childcare centre to operate</p>
7	Property owner of closing centre <i>Adverse effect of childcare centres closing due to oversupply</i>	<p>Loss of rental income from childcare business</p> <p>Increased stress to meet financial obligations- generally highly mortgaged</p> <p>Loss of generational wealth as it will be impossible to find a new tenant due to the oversupply in community</p> <p>No alternate use for the purpose-built childcare building</p> <p>Loss of generational wealth as the purpose-built building is unsaleable in current form</p>

The childcare facilities presently enjoyed by the community (or currently planned for) are put in jeopardy by the proposed development. Emotional, physical and financial detriments will not be made good by the proposed development.

The proposed development must be refused in full on this basis.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Non-Compliance Issue 3

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 states that

1. h The design, siting and construction of non-residential uses:

- i. maintains a human scale, through appropriate building heights and form;
- ii. provides attractive, active frontages that maximise pedestrian activity along road frontages, movement corridors and public spaces;
- iii. provides for active and passive surveillance of road frontages, movement corridors and public spaces;

The Development Application design in its entirety utilises incorrect information in regards to the GFA calculation and subsequent quoting.

The supporting information for the proposed development states that a GFA of 784 m² shall form the basis of the application.

This figure is incorrect. The correct GFA is in the range of 1,000 – 1,050m².

Refer to Annexure D – Cyber Drafting GFA calculation.

The following applicants supporting documents utilise a GFA of 784 sqm.

- Town Planning Report
- Architectural Plans
- Landscape Plans
- Traffic Impact Assessment Report
- Noise Assessment Report
- Stormwater management plan
- Infrastructure Charges Calculation

The applicant's consultants have utilised incorrect critical measurements in their assessments. The reports are invalid, unreliable and have a material effect on the development application.

Of further concern, is the architectural drawings for a 200-place childcare centre. The plans in their current format do not meet the National Regulations and Standards from ACECQA. The applicant fails to meet the criteria for internal space, storage, changing tables and bathroom/sanitary facilities for the proposed number of children. The applicant fails to disclose the amount of staff, which is estimated to be in the range of 35-37 full time equivalents.

The applicant's plans / drawings are inaccurate and unreliable.

The application should be rejected in full on this basis.

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Non- Compliance Issue 4

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 states that

j. General works associated with the development achieves the following:

i. new development is provided with a high standard of services to meet and support the current and future needs of users of the site, including roads, street lighting services, telecommunications and reticulated electricity (underground wherever possible), water and sewerage (where available);

The proposed development does not provide for underground reticulated electricity. The applicant states that the cost is too much and should not be imposed despite acknowledging that the site adjoins parkland. Performance outcome 16 requires underground electricity along the full frontage of the site which includes both Old Bay Road and Thompson street.

Note: MBRC previously applied this provision to childcare development application (2017/33921/v2L) at 108 Bells Pocket Road Strathpine

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Non- Compliance Issue 5

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 states that

1 j.

ii. the development manages stormwater to:

- A. ensure the discharge of stormwater does not adversely affect the quality, environmental values or ecosystem functions of downstream receiving waters;
- B. prevent stormwater contamination and the release of pollutants;
- C. maintain or improve the structure and condition of drainage lines and riparian areas;
- D. avoid off-site adverse impacts from stormwater.

The applicant's consultants have not used the correct measurements of the GFA and as such the impacts are unknown. The applicant has failed to demonstrate compliance with this code.

The applicants technical report also fails to acknowledge or consider the development includes the removal of 80% of the site's vegetation.

Increased Sediment from Vegetation Removal

"Increases in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality".

*There was localised erosion and sedimentation associated with extreme rainfall events during 2011 and 2013, including along parts of Waraba, Lagoon, King John and **Little Burpengary** creeks, the mid reaches of Burpengary Creek and the Caboolture River mouth.*

Source: (*Walking the Landscape – Caboolture Catchment Map Journal v1.0 (2017)*, presentation, Department of Environment and Heritage Protection, Queensland.)

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert) – review of applicants Ecological Expert

Page 5 - *"The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.*

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The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.

The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.

The development fails to consider the close proximity of Little Burpengary Creek to the proposed site.

The proposed underground detention tank does not mitigate stormwater run-off from the rear half of the car park and driveway. Due to the differences in ground elevation, the rear half of the car park and driveway is not able to discharge via gravity toward the detention tank. These areas have therefore been modelled as bypassing the detention tank. (**Pg15 Stormwater Management Report**). This run off area is adjacent to Little Burpengary Creek, the applicant has not provided any mitigation measures to ensure that this run off does not enter the Creek without any filtration.

The development fails to identify pollutants that may enter Little Burpengary Creek from the proposed site

The development fails to identify the likely effect of the proposed childcare on Little Burpengary's water quality

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Non- Compliance Issue 6

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 states that

1 j.

- iii. the development does not result in unacceptable impacts on the capacity and safety of the external road network;
- iv. the development ensures the safety, efficiency and useability of access ways and parking areas;

Refer to Annexure C - Pekol – Traffic Engineering Assessment.

- Applicants SIDRA analysis of the site access intersection utilises default data values (95% peak flow factor) in lieu of the actual traffic survey data factors (morning 83%, afternoon 72%).

Pekol - "The application of these peak flow factors results in an approximate 15% increase in traffic volumes during the morning peak period and 30% increase during the afternoon peak period, compared to the volumes used in the analysis. Therefore, the average delay expected for vehicles turning right into the site is likely to be significantly higher than indicated in the SIDRA analysis."

- Applicant has not considered the impact of the proposed development on the operation of Old Bay Road / Thompson Rd / Waroo Drive roundabout. The applicant has failed to demonstrate (via method such as SIDRA) that the proposal does not result in unacceptable impacts on the capacity and safety of the external road network.

Pekol - "the development is expected to generate 160 trips during the peak hour, which represents an approximate 40% increase in traffic volumes on Old Bay Road during the morning peak hour and a 30% increase during the afternoon peak hour. Of the total development generated trips, 50% are expected to travel to / from the north via the Old Bay Road / Thompson Road / Waroo Drive roundabout. However, the traffic impact assessment has not considered the impact of the proposed childcare centre"

- The applicant has not been able to demonstrate that the proposed site access location and design is safe given the applicant has failed to meet the Australian Standards (namely AS2890.1 section 3).

Pekol - "For a Category 3 access facility (ie the proposed site access), AS2890.1 requires that the access not be located where right turning traffic entering the facility would obstruct through traffic. As discussed above, the peak flow factors used in the SIDRA analysis of the site access intersection do not accurately reflect the existing conditions on Old Bay Road and as a result, the average delay expected for vehicles turning right into the site is likely to be higher than indicated by the results. Additionally, on-site observations indicate the existing informal on-street parking on both sides of Old Bay Road along the site frontage is well utilised during peak periods. Therefore, it is unlikely that through vehicles on Old Bay Road would be able to pass vehicles waiting to turn right into the site during peak periods.

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In our view, the SIDRA analysis of the site access intersection does not demonstrate compliance with AS2890.1 Section 3"

- The applicant has not been able to demonstrate that the proposed site access queuing design is safe given the applicant has failed to meet the MBRC Planning Scheme requirements nor the Australian Standards (namely AS2890.1 section 3).

Pekol - *"For a car park with a capacity for 51-75 vehicles (ie the proposed development), the required queuing provision is equal to two vehicles (ie 12m), measured between the property boundary and first conflict point within the site. The proposed layout includes provision for approximately 4.5m of queuing within the site and fails to comply. MBRC have previously indicated that they may require road dedication of 1.5m on Old Bay Road in future, to accommodate road reserve widening for a 5.5m wide verge. This would further reduce the available queuing within the site to approximately 3m.*

As outlined above, it is unlikely that through vehicles on Old Bay Road would be able to pass vehicles turning right into the site during peak periods. Therefore, any on-site queuing is likely to adversely impact the operation of the adjacent section of Old Bay Road. "

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Non- Compliance Issue 7

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 states that

1 j. (v) site works including earthworks are managed to be safe and have minimal impacts on adjoining or adjacent premises, the streetscape or the environment.

The proposed site works include removal of 80 % of the site's vegetation including removal of 359 native trees. This mass clearing is proposed despite the building footprint requiring less than 10% of the available land.

Adjacent residences will be adversely affected by the severe modification to their streetscape and existing characteristics of their neighbourhood.

The environmental constraints of the property and the adverse effects of clearing native vegetation alongside the loss of habitat for priority species -koalas has a major impact on the environment.

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Non- Compliance Issue 8

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 states that

o. Development avoids areas subject to constraint, limitation, or environmental value.

The development site is poorly located for its intended vulnerable use – childcare centre.

The site is located in an area of natural hazard - medium risk flood zone.

The site is located in an area of natural hazard – medium bush fire risk flood zone.

The site is located in an area of environmental value - priority species habitat.

The site is located in an area of environmental value – natural waterways

The site is located in an area of environmental value – green infrastructure network

There is a broad range of existing and newly approved childcare centres already servicing the local community. The massive scale of the proposal critically increases the level of oversupply of childcare places in the community.

Therefore, on a site where there is no genuine need, development should exclude a vulnerable use activity.

Where development cannot avoid these identified areas, it responds by:

i. adopting a 'least risk, least impact' approach when designing, siting and locating development in any area subject to a constraint, limitation or environmental value to minimise the potential risk to people, property and the environment;

The proposed use of a childcare centre on the affected site does not adopt “a least risk approach”. The siting of the building / carpark footprint is located in the medium risk flood zone despite available land outside of this area.

The proposed development does not minimise damage to the environment due to extensive land clearing. **Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis)**

“The ecological values of the site have been significantly under-valued by the proponent”

The applicant has not been able to sufficiently mitigate risks via appropriate designs and siting on a medium risk bushfire zone. The proposed development footprint encroaches significantly into mandated buffer zones and is poorly located. Building setbacks do not conform to the required standards.

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ii. ensuring no further instability, erosion or degradation of the land, water or soil resource;

The proposed removal of 80% of the site's vegetation increases risk of further instability, erosion and degradation of the land.

Increased Sediment from Vegetation Removal

"Increases in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality".

There was localised erosion and sedimentation associated with extreme rainfall events during 2011 and 2013, including along parts of [Waraba](#), [Lagoon](#), [King John](#) and [Little Burpengary](#) creeks, the [mid reaches of Burpengary Creek](#) and the [Caboolture River mouth](#).

Source: (*Walking the Landscape – Caboolture Catchment Map Journal v1.0 (2017)*, presentation, Department of Environment and Heritage Protection, Queensland.)

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert) – review of applicants Ecological Expert

Page 5 - *"The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.*

The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.

The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.

iv. maintaining, restoring and rehabilitating environmental values, including natural, ecological, biological, aquatic, hydrological and amenity values, and enhancing these values through the provision of planting and landscaping, and facilitating safe wildlife movement and connectivity through:

A. the provision of replacement, restoration, rehabilitation planting and landscaping;

The proposal does not provide for any replacement of native vegetation. The application only provides for a minor landscaping plan for the childcare centre which is not commensurate with the broad removal proposed. Safe wildlife movement and connectivity will be lost and not restored by the development.

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The development only intends to rehabilitate a small area of vegetation near the waterway. There is no rehabilitation of the cleared land to the north of the proposed site

B. the location, design and management of development to avoid or minimise adverse impacts on ecological systems and processes;

The proposed removal of 80% of the site's vegetation does not minimise adverse impacts on ecological systems and processes.

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis)

Page 7- *The proposed level of vegetation retention is inadequate and fails to provide and maintain a suitable setback from waterways and wetlands that protects natural and environmental values.*

The ecological values of the site have been significantly under-valued by the proponent and the ecological report fails to recognise and respond to the following matters:

- a. impact on fauna habitats;*
- b. impact on wildlife corridors and connectivity;*
- c. impact on stream integrity;*
- d. impact of opportunities for revegetation and all other wetlands. rehabilitation planting;*
- e. edge effects.*

B. the requiring of environmental offsets in accordance with the Environmental Offsets Act 2014.

The applicant fails to abide by the Qld Environmental Offset Act 2014

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis)

Page 2 *“As required under the QLD Environmental Offset Policy, the ecological report has not demonstrated that the development has been designed to avoid the loss of habitat for threatened fauna species in the first place. Avoidance should be demonstrated by providing for the retention of a greater number of non-juvenile Koala trees on the site. Mitigation shall be provided through the proposed rehabilitation of the waterway corridor and resultant improvement of ecological connectivity. An offset should be provided for all residual impact on Koala habitat in accordance with the Qld Environmental Offset Policy.”*

Page 7 – *“The site is mapped has having MLES waterway buffer or a Value Offset Area MLES wetland buffer along the eastern side (waterway corridor). However, there is strong evidence that the mapped MLES should cover the whole site due to the presence of threatened fauna species. An environmental*

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offset shall be required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas. This has not been proposed by the proponent"

v. protecting native species and protecting and enhancing species habitat;

The proposed removal of 80% of the site's vegetation fails to protect native species located on the site,

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis) – review of applicants Ecological Expert

Page 1 – *"The Wildlife Online extract for the site revealed that there have been 73 Koalas sightings recorded within a 1 km radius of the site. We have also undertaken a site investigation of the surrounding area (access on site was not permitted) on 16th November 2018 and found evidence of the presence of Koala (e.g. fresh scats on the edge of the trees and within the waterway corridor and Koala scratches on the numerous trunks). "*

Page 4 - *"Green Tape Solutions' field assessment and desktop review revealed the presence of threatened fauna species on site – Koala listed as Vulnerable under the Nature Conservation Act 1992 and EPBC Act. Currently, the proposed development will require the removal of more than 80% of site vegetation, including a large proportion of non-juvenile Koala trees. The development will result in the net loss of fauna habitat and does not propose for any offset or compensation in accordance with the local, state or commonwealth legislation."*

viii. establishing, maintaining and protecting appropriate buffers to waterways, wetlands, native vegetation and significant fauna habitat;

The applicant fails to recognise the proposed site is located in the Coast and Riverland Place Type and as such should protect habitats and ecosystems

The adverse effects of increased sediment and land degradation caused by the removal of 80% of the site's vegetation fails to maintain and protect the natural waterway located inside the property.

Refer Annexure B – Green Tape Solutions (Environmental Consultancy Expert Analysis)

Page 5 *"The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.*

The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.

The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained."

x. ensuring effective and efficient disaster management response and recovery capabilities;

The proposed development is a vulnerable activity use – childcare centre.

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The number of users and type of users on the site should be considered. As there are 200 children (aged 0-5) plus 35 staff members plus parents.

“children take 10 times longer than adults to evacuate a building.”

Stephen Burton, Engineers Australia’s Society of Fire Safety

Source: <https://www.cela.org.au/2018/01/07/bushfire-advice-for-childrens-services/>

The site is located in an area of natural hazard - medium risk flood zone and balanced flood planning.

The site is located in an area of natural hazard – medium bush fire risk zone.

The adjacent properties possess extremely high natural hazard characteristics – bushfire.

The development site adjoins natural waterways and is adjacent to lots that have a very high risk of major flooding (recorded recent occurrence 2015).

Old Bay road and Thompson streets near the site are in high flood areas (MBRC flood overlay map) and are often inundated with water after significant rainfall events.

Recovery capabilities and response times are severely impacted by the potential of both fire and water.

The proposed facility is not situated in an appropriate location for the efficient and effective disaster management responses required for such a vulnerable use.

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General Residential Zone (Suburban Neighbourhood Precinct) Code

6.2.6.2 Suburban neighbourhood precinct

Performance Out comes	Non-Compliance
Setbacks (non-residential uses)	
<p>PO5 Front setbacks ensure non-residential buildings address and actively interface with streets and public spaces</p>	<p>Development fails to comply – should be located on property boundary Setback of 13.7m proposed</p>
<p>PO6 Side and rear setbacks cater for driveway(s), services, utilities and buffers requires to protect the amenity of adjoining sensitive land uses.</p>	<p>Proposed development plans show Northern side setback of only <u>10 metres to future residential development</u>. No consideration to future users (noise engineer reports, traffic etc) has been considered.</p>
Water sensitive urban design	
<p>PO9 Best practice Water Sensitive Urban Design (WSUD) is incorporated within development sites adjoining street frontages to mitigate impacts of stormwater run-off in accordance with Planning scheme policy – Integrated design.</p>	<p>An Increase in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality.</p> <p>The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.</p> <p>The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.</p> <p>The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.</p> <p>Refer – Annexure B - Green Tape Solutions</p>

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Amenity	
<p>PO12 The amenity of the area and adjacent sensitive land uses are protected from the impacts of dust, odour, noise, light, chemicals and other environmental nuisances.</p>	<p>Adjacent housing will be negatively impacted by noise from 30 % increase in peak time traffic on Old Bay Road. The Applicant's noise report relies on recordings from the period Thursday 9 August 2018 to Wed 15 August 2018. These recordings <u>are not representative of normal noise conditions</u> for proposed development as</p> <ul style="list-style-type: none"> • based on the incorrect GFA figure of 784m² • Incorrect Use of Input Data - week end noise measurement in average calculations is a misrepresentation • Using EKKA public holiday – 14 August 2018 noise measurements in average calculations is a misrepresentation <p>The amenity of the area will be greatly changed from the mass clearing of the site's vegetation. The effect of the increase in stormwater runoff (on the natural waterway in the property and on adjacent properties) from loss of vegetation has not been considered by the applicant.</p>
Noise	
<p>PO13 Noise generating uses do not adversely affect existing <u>or potential noise sensitive uses</u>. Note - The use of walls, barriers or fences that are visible from or adjoin a road or public area are not appropriate noise attenuation measures unless adjoining a motorway, arterial road or rail line.</p> <p>Note - A noise impact assessment may be required to demonstrate compliance with this PO. Noise impact assessments are to be prepared in accordance with Planning scheme policy - Noise.</p>	<p>The Applicant's noise report relies on recordings from the period Thursday 9 August 2018 to Wed 15 August 2018. These recordings are not representative of normal noise conditions for proposed development as measurements are:</p> <ul style="list-style-type: none"> • based on the incorrect GFA figure of 784m² • use "week end" noise measurement in average calculations • use EKKA public holiday – 14 August 2018 noise measurements in average calculations <p>Proposed development plans show Northern side setback <u>of 10 metres to future residential development</u>. No consideration to future residential users (sensitive user) has been considered by the applicant's technical reports.</p> <p>A noise impact assessment must have regard to future sensitive users. Report fails to calculate or mitigate Noise of cars/ car door slam/ child play associated with the development on the future residential development proposed on Lot 2 on the site</p>

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<p>PO14</p> <p>Sensitive land uses are provided with an appropriate acoustic environment within designated external private outdoor living spaces and internal areas while: contributing to safe and usable public spaces, through maintaining high levels of surveillance of parks, streets and roads that serve active transport purposes (e.g. existing or future pedestrian paths or cycle lanes etc); maintaining the amenity of the streetscape.</p> <p>Note - A noise impact assessment may be required to demonstrate compliance with this PO. Noise impact assessments are to be prepared in accordance with Planning scheme policy - Noise.</p>	<p>The applicants noise impact assessment has not been conducted in accordance with the Planning scheme policy.</p> <ul style="list-style-type: none"> • the noise calculations are based on incorrect GFA of 784m² • the proposed plans do not identify the sleep rooms for babies. Correct calculations for sleep rooms were not determined • noise measurement period Thursday 9 August 2018 to Wed 15 August 2018 not representative of normal noise conditions for proposed development (3 days out of 7 days should not be used for averaging). <ul style="list-style-type: none"> • Using week-end noise measurement in average calculations is a misrepresentation • Using EKKA public holiday – 14 August 2018 in average calculations is a misrepresentation • Night time noise measurements do not apply to this development. The proposed childcare centre closing time is 7.00pm. Noise measurements after this time are irrelevant. • <u>Report uses 35 dB(A) rather 30 dB(A) for sleep areas.</u> This relies on the assumption that MBRC Planning Scheme Policy - Noise takes precedence over State Environmental Protection (Noise) Policy 2008 <p>Site design - centre provides no casual surveillance to road as all high windows on front of centre</p>
<p>Clearing of Habitat Trees where not located within the Environmental Areas Overlay map</p>	
<p>PO15</p> <p>Development ensures that the biodiversity quality and integrity of habitats is not adversely impacted upon but maintained and protected.</p> <p>Development does not result in the net loss of fauna habitat. Where development does result in the loss of a habitat tree, development will provide replacement fauna nesting boxes at the following rate of 1 nest box for every hollow removed. Where hollows have not yet formed in trees > 80cm in diameter at 1.3m height, 3 nest boxes are required for every habitat tree removed.</p> <p>Development does not result in soil erosion or land degradation or leave land exposed for an</p>	<p>Green Tape Solutions’ field assessment and desktop review revealed the presence of threatened fauna species on site – Koala listed as Vulnerable under the <i>Nature Conservation Act 1992</i> and EPBC Act. Currently, the proposed development will require the removal of more than 80% of site vegetation, including a large proportion of non-juvenile Koala trees. The development will result in the net loss of fauna habitat and does not propose for any offset or compensation in accordance with the local, state or commonwealth legislation.</p> <p>Refer – Annexure B - Green Tape Solutions</p> <p>The development does not mitigate any soil erosion or land degradation resulting from vegetation clearing. Removal of vegetation increase erosion potential and the loss of soil from the site.</p> <p>The development only intends to rehabilitate a small area of vegetation near the waterway. There is no rehabilitation of the cleared land to the north of the proposed site</p>

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<p>unreasonable period of time but is rehabilitated in a timely manner</p> <p>Note: Further guidance on habitat trees is provided in Planning scheme policy - Environmental areas</p>	
Utilities	
<p>PO16 Where the site adjoins or is opposite to a Park (57), foreshore or Humpybong Reserve all existing overhead power lines are to be undergrounded for the full frontage of the site.</p>	<p>The site adjoins a park. The plans do not provide for underground power – NOT Compliant. The entire frontage (Old Bay Road & Thompson street) should have underground power supplied.</p>
Access	
<p>PO24 The layout of the development does not compromise:</p> <ol style="list-style-type: none"> a. the development of the road network in the area; b. the function or safety of the road network; c. the capacity of the road network. <p>Note - The road hierarchy is mapped on Overlay map - Road hierarchy.</p>	<p>Pekol Traffic Impact Assessment report states proposed development is NOT Compliant with PO24 Independent assessment (APPENDIX C)</p> <ul style="list-style-type: none"> • fails to utilise correct SIDRA data input (disregards peak flow data) • fails to provide analysis - impact of proposed development on Major Roundabout • Fails to apply correct queuing requirements • Fails to satisfy AS2890.1 – Access Facilities to Off Street Parking Areas and Queuing areas – sight distance, where right turning traffic entering the facility would obstruct through traffic,
<p>PO25 Safe access is provided for all vehicles required to access the site.</p>	<p>Pekol Traffic Impact Assessment report states proposed development is NOT Compliant with PO25 Independent assessment (APPENDIX C)</p> <ul style="list-style-type: none"> • fails to utilise correct SIDRA data input (disregards peak flow data) • fails to provide analysis - impact of proposed development on Major Roundabout • Fails to apply correct queuing requirements • Fails to satisfy AS2890.1 – Access Facilities to Off Street Parking Areas and Queuing areas – sight distance, where right turning traffic entering the facility would obstruct through traffic,

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Stormwater	
<p>PO27 Stormwater run-off from the site is conveyed to a point of lawful discharge without causing nuisance or annoyance to any person, property or premises.</p> <p>Note - Refer to Planning scheme policy - Integrated design for details.</p> <p>Note - A downstream drainage discharge report in accordance with Planning scheme policy – Stormwater management may be required to demonstrate achievement of this performance outcome.</p> <p>Note - A watercourse as defined in the Water Act may be accepted as a lawful point of discharge providing the drainage discharge from the site does not increase the downstream flood levels during events up to and including the 1% AEP storm. An afflux of +20mm may be accepted on Council controlled land and road infrastructure. No worsening is ensured when stormwater is discharged into a catchment that includes State Transport Infrastructure.</p>	<p>Development has failed to utilise correct GFA measurements for the proposed footprint in its Stormwater report and as such the applicant has not appropriately mitigated the effect of stormwater runoff from the proposed site.</p> <p>Development has failed to consider effects of removal of vegetation outside of the proposed development footprint in its assessment. The impact of the increase in runoff from this area has be not investigated and mitigation measure have not been provided to ensure that a nuisance does not occur to person, property or premises</p>
<p>PO28 Stormwater generated from the development does not compromise the capacity of existing stormwater infrastructure downstream of the site.</p> <p>Note - A downstream drainage discharge report in accordance with Planning scheme policy - Stormwater management may be required to demonstrate achievement of this performance outcome.</p>	<p>Development has failed to utilise correct GFA measurements of proposed footprint in its Stormwater Report.</p> <p><u>Development has failed to consider effects of removal of vegetation outside of the proposed development footprint</u> in its assessment. The current vegetation contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway. The reduction in vegetation will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.</p> <p>Refer – Annexure B - Green Tape Solutions</p> <p>The development did not provide any mitigation measures to ensure that the removal of vegetation will not compromise the capacity of the stormwater infrastructure downstream. An increase in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality.</p>

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<p>PO29 Stormwater quality management systems are designed and constructed to minimise the environmental impact of stormwater discharge on surface and underground receiving water quality and meet the design objectives in Tables A and B in Appendix 2 of the SPP. Note - A stormwater management plan prepared by a suitably qualified professional will be required in accordance with Planning scheme policy – Stormwater management</p>	<p>Development has failed to utilise correct GFA measurements of proposed footprint in its Stormwater Management assessment Report. The mitigation process outlined in the report is therefore not accurate</p> <p><u>Development has failed to consider effects of removal of vegetation outside of the proposed development footprint</u> in its Stormwater Management assessment report. The applicant has not mitigated the effect of this increase in run off. An increase in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality.</p> <p>Applicant fails to identify the close proximity of Little Burpengary Creek to the proposed development and the impact on its water quality from stormwater run off</p> <p>The proposed underground detention tank does not mitigate stormwater run-off from the rear half of the car park and driveway. The applicant fails to mitigate the effect of the carpark runoff into Little Burpengary Creek</p> <p>Stormwater management report fails to identify the discharge point of the detention tank. Report fails to identify pollutants that may result from the proposed childcare centre that may enter Little Burpengary Creek</p> <p>Report fails to identify and fully mitigate effect of the development on Little Burpengary’s creek water quality</p>
<p>Site works and construction management</p>	
<p>PO32 All works on-site are managed to:</p> <ul style="list-style-type: none"> a. minimise as far as practicable, impacts on adjoining or adjacent premises and the streetscape in regard to erosion and sedimentation, dust, noise, safety and light; b. minimise as far as possible, impacts on the natural environment; c. ensure stormwater discharge is managed in a manner that does not cause nuisance or annoyance to any person or premises; d. avoid adverse impacts on street trees and their critical root zone. 	<p>Proposed Development requires for vast majority of vegetation to be removed despite being located well outside of the development footprint.</p> <p>The negative impacts on the natural environment are immense and have not been minimised in the design stage. The proposed design will not allow for minimisation of impacts to the natural environment.</p> <p>Increased sedimentation and erosion during site works have not been mitigated</p> <p>The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.</p> <p>The proposed development will require the removal of more than 80% of the vegetation on site which will likely</p>

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	<p>result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway. The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained. Refer – Annexure B - Green Tape Solutions</p>
<p>PO36 The clearing of vegetation on-site:</p> <ol style="list-style-type: none"> a. is limited to the area of infrastructure works, building areas and other necessary areas for the works; and b. includes the removal of declared weeds and other materials which are detrimental to the intended use of the land; c. is disposed of in a manner which minimises nuisance and annoyance to existing premises. 	<p>The development proposes the removal of most of the vegetation within the site, including the vegetation north of the proposed childcare centre which is not justified. The clearing of this vegetation should be limited to the infrastructure works. Refer – Annexure B - Green Tape Solutions</p>
<p>Earthworks</p>	
<p>PO42 Development does not result in</p> <ol style="list-style-type: none"> a. adverse impacts on the hydrological and hydraulic capacity of the waterway or floodway; b. increased flood inundation outside the site; c. any reduction in the flood storage capacity in the floodway; and d. any clearing of native vegetation. <p>Note - To demonstrate compliance with this outcome, Planning Scheme Policy – Stormwater Management provides guidance on the preparation of a site based stormwater management plan by a suitably qualified professional. Refer to Planning scheme policy - Integrated design for guidance on</p>	<p>The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.</p> <p>The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.</p> <p>The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.</p> <p>The development will also result in direct clearing of the vegetation of the wetland which is not compliant with PO 42(d). Refer – Annexure B - Green Tape Solutions</p>

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<p>infrastructure design and modelling requirements.+</p>	
<p>Retail, commercial and community uses</p>	
<p>PO59 Community activities:</p> <ul style="list-style-type: none"> a. are located to: <ul style="list-style-type: none"> i. cluster with other non-residential activities to form a neighbourhood hub (this may include being located within or adjacent to an existing neighbourhood hub); or ii. if establishing a new neighbourhood hub (as described in the PO below) be on a main street; b. are located on allotments that have appropriate area and dimensions for the siting <p>of:</p> <ul style="list-style-type: none"> i. buildings and structures; ii. vehicle servicing, deliveries, parking, iii. manoeuvring and circulation; iv. landscaping and open space including v. buffering; <ul style="list-style-type: none"> c. are of a small scale, having regard to the surrounding character; d. are serviced by public transport; e. do not negatively impact adjoining residents or the streetscape 	<p><u>Adverse effects on adjacent residents and streetscape</u> Neighbours - streetscape ruined, local character changed Neighbours loss sense of place and identity Natural wildlife and habitat destroyed – residents will not see protected species in their immediate neighbourhood Neighbours- increased traffic / road noise Neighbours increased exposure to flooding as a result of a loss of vegetation cleared Community put at risk as site is contained in a medium hazard bushfire zone and medium risk – flood zone in a supposedly safe community activity environment – childcare facility Loss of choice / available semi-rural housing availability</p> <p>The proposal is NOT small in scale. It will be the largest childcare centre in Deception Bay by a great majority. The average existing centre size consists of 88 places according to Business Geographics Report (Annexure A – Childcare Supply Analysis – Deception Bay)</p>

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<p>PO61 The expansion (into adjoining lots) of existing neighbourhood hubs or the establishment of a new neighbourhood hub must:</p> <ol style="list-style-type: none"> a. adjoin or address a park, public open space or include privately owned civic or forecourt space having a minimum area of 400m²; b. be located on the corner of a sub-arterial or collector road; c. form a 'Main street' having a maximum length of 200m; d. be centrally located within an 800m radial catchment; e. be separated from other neighbourhood hubs and centres by 1600m, measured from the centre of each neighbourhood hub or centre. 	<p>The proposed development is NOT located sufficiently from the nearest neighbourhood hub - Zammit Street. It is well within the 1600 metre limit required.</p>
<p>PO63 Non-residential uses address and activate streets and public spaces by:</p> <ol style="list-style-type: none"> a. ensuring buildings and individual tenancies address street frontage(s), civic space and other areas of pedestrian movement b. new buildings adjoin or are within 3m of the primary frontage(s), civic space or public open space; c. locating car parking areas behind or under buildings to not dominate the street environment; d. establishing and maintaining interaction, pedestrian activity and casual surveillance through 	<p>Building is not located on the primary frontage</p> <p>Car parking is located in front of building and does dominate street environment</p> <p>Proposed design does not cater for casual surveillance as all high windows at front of centre facing the street</p>

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<p>appropriate land uses and building design (e.g. The use of windows or glazing and avoiding blank walls with the use of sleeving);</p> <ul style="list-style-type: none"> e. providing visual interest to the façade (e.g. Windows or glazing, variation in colours, materials, finishes, articulation, recesses or projections); f. establishing and maintaining human scale. 	
<p>PO64 All buildings exhibit a high standard of design and construction, which:</p> <ul style="list-style-type: none"> a. add visual interest to the streetscape (e.g. variation in materials, patterns, textures and colours, cantilevered awning); b. enable differentiation between buildings; c. contribute to a safe environment; d. incorporate architectural features within the building facade at the street level to create human scale (e.g. cantilevered awning); e. include building entrances that are readily identifiable from the road frontage; f. locate and orientate to favour active and public transport usage by connecting to pedestrian footpaths on the street frontage and adjoining sites; g. incorporate appropriate acoustic treatments, having regard to any adjoining residential uses; 	<p>The proposed building entrance is not readily identifiable from road. There is no arbour above pathway providing connectivity from street to entry.</p> <p>The proposed design does not facilitate casual surveillance of all public spaces.</p>

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<p>h. facilitate casual surveillance of all public spaces.</p>	
<p>PO 65 Development provides functional and integrated car parking and vehicle access, that:</p> <ul style="list-style-type: none"> a. prioritises the movement and safety of pedestrians between the street frontage and the entrance to the building; b. provides safety and security of people and property at all times; c. does not impede active transport options; d. does not impact on the safe and efficient movement of traffic external to the site; e. is consolidated and shared with adjoining sites wherever possible. 	<p>Pekol Traffic Impact Assessment report states proposed development is NOT Compliant with PO65 Independent assessment (APPENDIX C)</p> <ul style="list-style-type: none"> • fails to utilise correct SIDRA data input (disregards peak flow data) • fails to provide analysis - impact of proposed development on Major Roundabout • Fails to apply correct queuing requirements • Fails to satisfy AS2890.1 – Access Facilities to Off Street Parking Areas and Queuing areas – sight distance, where right turning traffic entering the facility would obstruct through traffic, • Fails to provide appropriate parking widths and aisle widths
<p>PO66 The safety and efficiency of pedestrian movement is prioritised in the design of car parking areas through providing pedestrian paths in car parking areas that are:</p> <ul style="list-style-type: none"> a. located along the most direct route between building entrances, car parks and adjoining uses; b. protected from vehicle intrusion through the use of physical and visual separation (e.g. wheel stops, trees etc); c. are of a width to allow safe and efficient access for prams and wheelchairs. 	<p>Pekol Traffic Impact Assessment report states proposed development is NOT Compliant with PO66 Independent assessment (APPENDIX C)</p> <p>Application technical report does NOT refer to surrounding uses – ie: Primary School and Kindergarten. These users are abundant during peak hours via the pedestrian paths and cycle ways.</p> <ul style="list-style-type: none"> • fails to utilise correct SIDRA data input (disregards peak flow data) • fails to provide analysis - impact of proposed development on Major Roundabout • Fails to apply correct queuing requirements • Fails to satisfy AS2890.1 – Access Facilities to Off Street Parking Areas and Queuing areas – sight distance, where right turning traffic entering the facility would obstruct through traffic, • Fails to provide appropriate parking widths and aisle widths • Proposed Bin pickup location – potential interactions with young pedestrians / cyclists

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<p>PO67</p> <p>The number of car parking spaces is managed to:</p> <ol style="list-style-type: none"> a. avoid significant impacts on the safety and efficiency of the road network; b. avoid an oversupply of car parking spaces; c. avoid the visual impact of large areas of open car parking from road frontages and public areas; d. promote active and public transport options; e. promote innovative solutions, including onstreet parking and shared parking areas. <p>Note - Refer to Planning scheme policy - Integrated transport assessment for guidance on how to achieve compliance with this outcome.</p>	<p><i>Schedule 7 – Car Parking of the Moreton Bay Regional Council Planning Scheme specifies a minimum car parking rate of 7 spaces per 100m² of GFA. <u>The development has a total GFA of 1000-1050 m², NOT the 784m² as depicted by the applicant</u></i></p> <p>Based on the aforementioned rates, to comply <u>the development should have a minimum of 70 car spaces not the 55 spaces provided</u></p> <p>The proposed development does not avoid visual impact of large areas of open car parking from road frontage.</p> <p>Pekol Traffic Impact Assessment report states proposed development is NOT Compliant with PO67 Independent assessment (APPENDIX C)</p>
<p>PO68</p> <p>End of trip facilities are provided for employees or occupants, in the building or on-site within a reasonable walking distance, and include:</p> <ol style="list-style-type: none"> a. adequate bicycle parking and storage facilities; and b. adequate provision for securing belongings; and c. change rooms that include adequate showers, sanitary d. compartments, wash basins and mirrors. <p>Notwithstanding a. there is no requirement to provide end of trip facilities if it would be unreasonable to provide these facilities having regard to:</p>	<p>The proposed development will have staff number of approximately 35 members. A large development of this nature should provide for end of trip facilities for staff of this number.</p> <p>The proposed plan does not have a single shower dedicated for staff, let alone a change room and lockers.</p>

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<p>a. the projected population growth and forward planning for road upgrading and development of cycle paths; or b. whether it would be practical to commute to and from the building on a bicycle, having regard to the likely commute distances and nature of the terrain; or c. the condition of the road and the nature and amount of traffic potentially affecting the safety of commuters.</p> <p>Editor's note - The intent of b above is to ensure the requirements for bicycle parking and end of trip facilities are not applied in unreasonable circumstances. For example these requirements should not, and do not apply in the Rural zone or the Rural residential zone etc.</p> <p>Editor's note - This performance outcome is the same as the Performance Requirement prescribed for end of trip facilities under the Queensland Development Code. For development incorporating building work, that Queensland Development Code performance</p>	
<p>PO 69 Loading and servicing areas:</p> <p>a. are not visible from the street frontage; b. are integrated into the design of the building; c. include screening and buffers to reduce negative impacts on adjoining sensitive land uses;</p>	<p>The loading bay is an extremely long way away from the entrance to the building and fails to be integrated into the design of the building. The loading bay is also situated in the medium risk flood overlay.</p>

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<p>d. where possible loading and servicing areas are consolidated and shared with adjoining sites</p>	
<p>PO70 Bins and bin storage areas are provided, designed and managed in accordance with Planning scheme policy – Waste.</p>	<p>The applicant has not designed a proposal to comply with this planning policy.</p> <ul style="list-style-type: none"> • Building perspective shows no screening of the bins • Bin placement on the street frontage of Old Bay Road creates an adverse visual impact • Bin placement on the street frontage of Old Bay Road creates an adverse odour impact to adjacent neighbours 20 metres away and pedestrians (Childcare centres waste includes soiled disposable nappies and food scraps that create significant odour, especially for 200 children) • There is no provision for a signed designated parking area for HRV collection on Old Bay Road • No bin washing facilities have been identified that are <ul style="list-style-type: none"> • in close proximity to the bin storage area; • no tap or hose for bin washing identified • no approved sewerage connection identified • No waste management plan was provided to council for approval. <p>Pekol Traffic Impact Assessment report states proposed development is NOT Compliant with PO70 Independent assessment (APPENDIX C)</p>
<p>PO71 On-site landscaping is provided, that:</p> <ol style="list-style-type: none"> a. is incorporated into the design of the development; b. reduces the dominance of car parking and servicing areas from the street frontage; c. retains mature trees wherever possible; d. does not create safety or security issues by creating potential 	<p>The proposed development removes 80% of the site’s vegetation. A significant number of mature native trees are proposed to be cleared despite being located well away from footprint of development.</p> <p>Proposal for the street frontage does not reduce the dominance of car parking</p> <p>The landscaping proposal does not include any fire-retardant plants even though site is located in a medium risk bushfire zone.</p>

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<p>concealment areas or interfering with sightlines;</p> <p>a. e. maintains the achievement of active frontages and sight lines for casual surveillance</p>	
<p>PO73 Lighting is designed to provide adequate levels of illumination to public and communal spaces to maximise safety and minimise adverse impacts on residential and other sensitive land uses.</p>	<p>NO lighting provided in car park or pedestrian access</p>
<p>Environmental areas (refer Overlay map - Environmental areas to determine if the following assessment criteria apply)</p> <p>Note – The following are excluded from the native vegetation clearing provisions of this planning scheme:</p> <ul style="list-style-type: none"> a. Clearing of native vegetation located within an approved development footprint; b. Clearing of native vegetation within 10m from a lawfully established building reasonably necessary for emergency access or immediately required in response to an accident or emergency; c. Clearing of native vegetation reasonably necessary to remove or reduce the risk vegetation poses to serious personal injury or damage to infrastructure; d. Clearing of native vegetation reasonably necessary to construct and maintain a property boundary fence and not exceed 4m in width either side of the fence where in the Rural, Rural residential and e. Environmental Management and Conservation zones. In any other zone, clearing is not to exceed 2m in width either side of the fence; f. Clearing of native vegetation reasonably necessary for the purpose of maintenance or works within a registered easement for public infrastructure or drainage purposes; g. Clearing of native vegetation in accordance with a bushfire management plan prepared by a suitably qualified person, submitted to and accepted by Council; h. Clearing of native vegetation associated with removal of recognised weed species, maintaining existing open pastures and cropping land, windbreaks, lawns or created gardens; i. Grazing of native pasture by stock; <p>Native forest practice where accepted development under Part 1, 1.7.7 Accepted development</p> <p>Note - Definition for native vegetation is located in Schedule 1 Definitions.</p> <p>Note - Native vegetation subject to this criterion primarily comprises of matters of national environmental significance (MNES), matters of state environmental significance (MSES). They also comprise some matters of local environmental significance (MLES). A MLES is defined in Schedule 1.2, Administrative definitions. A list of the elements that apply to the mapped MSES and MLES is provided in Appendix 1 of the Planning scheme policy - Environmental areas.</p> <p>Editors' Note - The accuracy of overlay mapping can be challenged through the development application process (code assessable development) or by way of a planning scheme amendment. See Council's website for details.</p> <p>Note - To demonstrate achievement of the performance outcome, an ecological assessment, vegetation management plan and fauna management plan, as required, are prepared by a suitably qualified person. Guidance for the preparation of above-mentioned reports is provided in Planning scheme policy - Environmental areas.</p> <p>Vegetation clearing, ecological value and connectivity–</p>	

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<p>PO77 Development provides for safe, unimpeded, convenient and ongoing wildlife movement and establishes and maintains habitat connectivity by:</p> <ul style="list-style-type: none"> a. retaining habitat trees; b. providing contiguous patches of habitat; c. provide replacement and rehabilitation planting to improve connectivity; d. avoiding the creation of fragmented and isolated patches of habitat; e. providing wildlife movement infrastructure. <p>Editor's note - Wildlife movement infrastructure may include refuge poles, tree boulevarding, 'stepping stone' vegetation plantings, tunnels, appropriate wildlife fencing; culverts with ledges, underpasses, overpasses, land bridges and rope bridges. Further information is provided in Planning scheme policy – Environmental areas.</p>	<p>The S5 Environmental ecological assessment report acknowledges that the site provides some good habitat for a range of wildlife (reptiles, birds and mammals). The site is also directly connected to adjacent large remaining vegetated patches (north and south) through the existing waterway and culvert under Thompson road. The development has failed to demonstrate that significant vegetation (large hollow bearing trees) will be retained and does not propose any improvement of ecological connectivity beyond rehabilitation.</p> <p>Refer – Annexure B - Green Tape Solutions</p>
<p>Vegetation clearing and habitat protection</p>	
<p>PO78 Development ensures that the biodiversity quality and integrity of habitats is not adversely impacted upon but maintained and protected.</p>	<p>The development will require the removal of significant amount (more than 80%) of vegetation on site including vegetation outside of the proposed development footprint. Field investigations and a desktop assessment undertaken by Green Tape Solutions has revealed that the site supports threatened fauna species (Koala) and the clearing of the vegetation will be detrimental to the quality and integrity of their habitat. The clearing will result in an adverse impact upon threatened wildlife. No avoidance, mitigation measures or offset is proposed to compensate for the loss of biodiversity and threatened species habitat.</p> <p>Refer – Annexure B - Green Tape Solutions</p>

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>PO80 Development ensures safe, unimpeded, convenient and ongoing wildlife movement and habitat connectivity by: providing contiguous patches of habitat; avoiding the creation of fragmented and isolated patches of habitat; providing wildlife movement infrastructure; providing replacement and rehabilitation planting to improve connectivity.</p>	<p>The S5 Environmental report acknowledges that the site provides some good habitat for a range of wildlife (reptiles, birds and mammals). The site is also directly connected to adjacent large remaining vegetated patches (north and south) through the existing waterway and culvert under Thompson road.</p> <p>The development has failed to demonstrate that significant vegetation (large hollow bearing trees) will be retained and does not propose any improvement of ecological connectivity beyond rehabilitation.</p> <p>Refer – Annexure B - Green Tape Solutions</p>
<p>Vegetation clearing and soil resource stability</p>	
<p>PO81 Development does not: a. result in soil erosion or land degradation; b. leave cleared land exposed for an unreasonable period of time but is rehabilitated in a timely manner.</p>	<p>The proposed development will require the removal of more than 80% of the vegetation on site.</p> <p>The development does not mitigate any soil erosion or land degradation resulting from vegetation clearing. An increase in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality.</p> <p>The development only intends to rehabilitate a small area of vegetation near the waterway. There is no rehabilitation planned for the cleared land to the north of the proposed site</p>
<p>Vegetation clearing and water quality</p>	
<p>PO82 Development maintains or improves the quality of groundwater and surface water within, and downstream, of a site by: a. ensuring an effective vegetated buffers and setbacks from waterbodies is retained to achieve natural filtration and reduce sediment loads b. avoiding or minimising changes to landforms to maintain hydrological water flows; c. adopting suitable measures to exclude livestock from entering a waterbody where</p>	<p>The vegetation on site is dominated by scribbly gum with large amount of melaleuca species which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.</p> <p>The proposed development will require the removal of more than 80% of the melaleuca vegetation community on site which will likely result in the significant reduction of the water quality of surface water for the area and would most likely have significant impact upon the hydrological capacity of the waterway.</p> <p>The development failed to provide any mitigations measures to ensure that the current hydrology of the site and water quality is maintained.</p> <p>Refer – Annexure B - Green Tape Solutions</p>

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<p>a site is being used for animal husbandry (4) and animal keeping (5) activities.</p>	
<p>PO83 Development minimises adverse impacts of stormwater run-off on water quality by: minimising flow velocity to reduce erosion; minimising hard surface areas; maximising the use of permeable surfaces; incorporating sediment retention devices; minimising channelled flow.</p>	<p>Development has failed to utilise correct GFA measurements of proposed footprint in its stormwater management assessment report. The mitigation process outlined in the report is therefore not accurate</p> <p>Development has failed to consider effects of removal of vegetation outside of the proposed development footprint in its assessment. The applicant has not mitigated the effect of this increase in flow velocity. An increase in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality.</p> <p>Report fails to identify and fully mitigate effect of the development on Little Burpengary's creek water quality</p>
Vegetation clearing and access, edge effects and urban heat island effects	
<p>PO85 Development minimises potential adverse 'edge effects' on ecological values by:</p> <ol style="list-style-type: none"> a. providing dense planting buffers of native vegetation between a development and environmental areas; b. retaining patches of native vegetation of greatest possible size where located between a development and environmental areas ; c. restoring, rehabilitating and increasing the size of existing patches of native vegetation; ensuring that buildings and access (public and vehicle) are setback as far as possible from environmental areas and corridors; d. landscaping with native plants of local origin. <p>Editor's note - Edge effects are factors of development that go to detrimentally affecting the composition and</p>	<p>The proposed development will require the removal of more than 80% of the vegetation on site and S5 Environmental's ecological report has not addressed the impacts of edge effects on the site's ecological values. The report fails to recognise the presence of threatened fauna species (Koala)</p> <p>The clearing will result in an adverse impact upon threatened wildlife. No avoidance, mitigation measures or offset is proposed to compensate the loss of biodiversity.</p> <p>Refer – Annexure B - Green Tape Solutions</p>

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<p>density of natural populations at the fringe of natural areas. Factors include weed invasion, pets, public and vehicle access, nutrient loads, noise and light pollution, increased fire frequency and changes in the groundwater and surface water flow.</p>	
<p>Vegetation clearing and Matters of Local Environmental Significance (MLES) environmental offsets</p>	
<p>PO87 Where development results in the unavoidable loss of native vegetation within a Value Offset Area MLES waterway buffer or a Value Offset Area MLES wetland buffer, an environmental offset is required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas. Editor's note - For MSES Koala Offsets, the environmental offset provisions in schedule 11 of the Regulation, in combination with the requirements of the Environmental Offset Act 2014, apply.</p>	<p>The site is mapped has having MLES waterway buffer or a Value Offset Area MLES wetland buffer along the eastern side (waterway corridor). <u>However, there is strong evidence that the mapped MLES should cover the whole site due to the presence of threatened fauna species. An environmental offset shall be required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas.</u> This has not been proposed by the proponent. Refer – Annexure B - Green Tape Solutions</p>
<p>Overland flow path (refer Overlay map - Overland flow path to determine if the following assessment criteria apply) Note - The applicable river and creek flood planning levels associated with defined flood event (DFE) within the inundation area can be obtained by requesting a flood check property report from Council</p>	
<p>PO108 Development: a. maintains the conveyance of overland flow predominantly unimpeded through the premises for any event up to and including the 1% AEP for the fully developed upstream catchment; b. does not concentrate, intensify or divert overland flow onto an upstream, downstream or surrounding property. Note - A report from a suitably qualified Registered Professional Engineer Queensland is required certifying that the development does not increase the potential for significant adverse impacts on an upstream, downstream or surrounding premise. Note - Reporting to be prepared in accordance with Planning scheme policy – Flood hazard, Coastal hazard and Overland flow.</p>	<p>Overland flow effects areas surrounding the proposed site. The applicant has failed to demonstrate the development will not increase run off into the overland flow areas surrounding the site. Development has failed to utilise correct GFA measurements of proposed footprint in its Stormwater assessment report. The effect on potential flood damage from increase in overland flow has not been appropriately accounted for. Development has failed to consider effects of removal of vegetation outside of the proposed development. The applicant has not mitigated the effect of this increase in run off and as such may increase overland flow into Little Burpengary Creek and surrounding property.</p>

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<p>PO109 Development does not:</p> <ul style="list-style-type: none"> a. directly, indirectly or cumulatively cause any increase in overland flow velocity or level; b. increase the potential for flood damage from overland flow either on the premises or other premises, public lands, watercourses, roads or infrastructure. 	<p>Overland flow effects areas surrounding the proposed site. The applicant has failed to demonstrate the development will not increase flood damage from overland flow velocity or level</p> <p>Development has failed to utilise correct GFA measurements of proposed footprint in its Stormwater assessment report. The effect on potential flood damage has not been appropriately accounted for. An increase in the volume and speed of runoff can increase erosion in the landscape and the stream channels, resulting in sediment being carried downstream and reduced water quality.</p> <p>Development has failed to consider effects of removal of vegetation outside of the proposed development. The applicant has not mitigated the effect of this increase in run off and as such may increase the potential fold damage from overland flow of premises, public lands, watercourse and roads</p>
Riparian and wetland setbacks	
<p>PO115 Development provides and maintains a suitable setback from waterways and wetlands that protects natural and environmental values. This is achieved by recognising and responding to the following matters:</p> <ul style="list-style-type: none"> a. impact on fauna habitats; b. impact on wildlife corridors and connectivity; c. impact on stream integrity; d. impact of opportunities for revegetation and rehabilitation planting; e. edge effects. 	<p>The proposed level of vegetation retention is inadequate and fails to provide and maintain a suitable setback from waterways and wetlands that protects natural and environmental values.</p> <p>The ecological values of the site have been significantly under-valued by the proponent and the ecological report fails to recognise and respond to the following matters:</p> <ul style="list-style-type: none"> a. impact on fauna habitats; b. impact on wildlife corridors and connectivity; c. impact on stream integrity; d. impact of opportunities for revegetation and all other wetlands. rehabilitation planting; e. edge effects. <p>Refer – Annexure B - Green Tape Solutions</p>

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

8.2.2 Flood hazard overlay code

8.2.2.2 Purpose - Flood hazard overlay

The purpose of the Flood hazard overlay code states

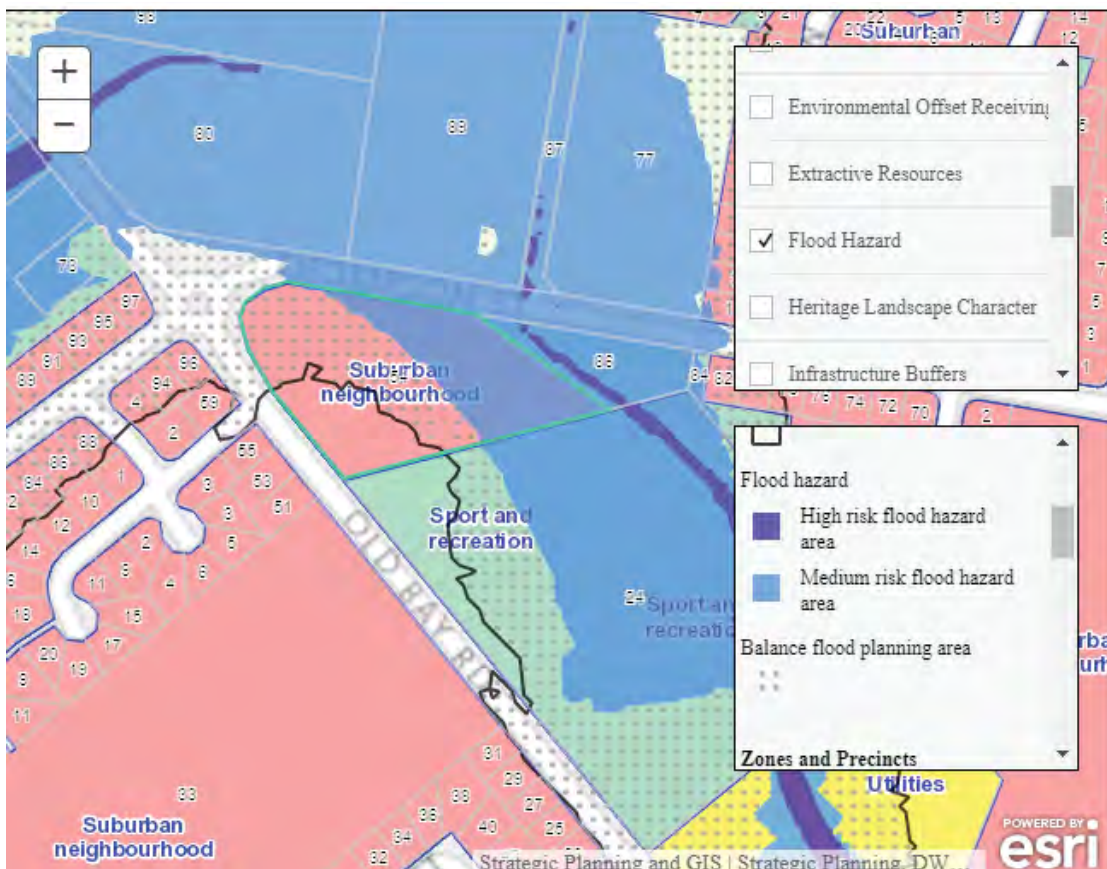
C. Development in the Medium risk area manages and mitigates the tolerable risk of flood hazard by ensuring that:

- i. a material change of use is only for the following uses if consistent with the overall outcomes of the applicable zone and precinct and the risk to people, property and infrastructure located on the premises and other premises is avoided or mitigated:**

H. Non-residential uses where not involving a vulnerable land use (flood and coastal)

The development site is affected by the Medium Flood Risk Area and is in the Balance Flood planning area. There is also an area of High-risk flood hazard along the proposed site boundary.

The development does not achieve overall Outcome 8.2.2.2 (2) (C)(i) of the Flood Hazard Overlay Code – H: as it does not avoid Non-residential uses involving a vulnerable land use. A child care centre is defined as a vulnerable land use.



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Vulnerable Land Use

Vulnerable may be defined as exposed to the possibility of being attacked or harmed, either physically or emotionally. (of a person) in need of special care, support, or protection because of age, disability, or risk of abuse or neglect.

It is quite clear that 200 children under the age of 5 years are quite vulnerable. The Applicants' Stormwater report has not made any reference to the age of the new developments inhabitants and the burden associated with any required evacuation. The report assumes a general premise that "people" can freely move in an orderly and timely manner in times of crises. Major consideration must be given to the vulnerability of the users of this development. (ie babies from the age of six weeks)

8.2.2.2.2 Purpose - Flood hazard overlay

The purpose of the Flood hazard overlay code states

f. Development in the Flood planning area:

- i. supports, and does not unduly burden the disaster management response and recovery capacity and capabilities during and after significant flood events;**
- ii. provides for efficient evacuation of on-site persons and facilitates direct and simple access for evacuation personnel and resources during flood events, while ensuring development does not hinder or place additional complexities upon evacuation activities for other premises;**
- iii. avoids isolation of persons for flood events up to and including the Defined Flood Event;**
- vii. involving essential community infrastructure remains functional during and immediately after a flood event up to and including the Defined Flood Event;**

The applicant has failed to address the flood planning area constraints and does not mitigate the effect on disaster management capabilities during and after significant flood events

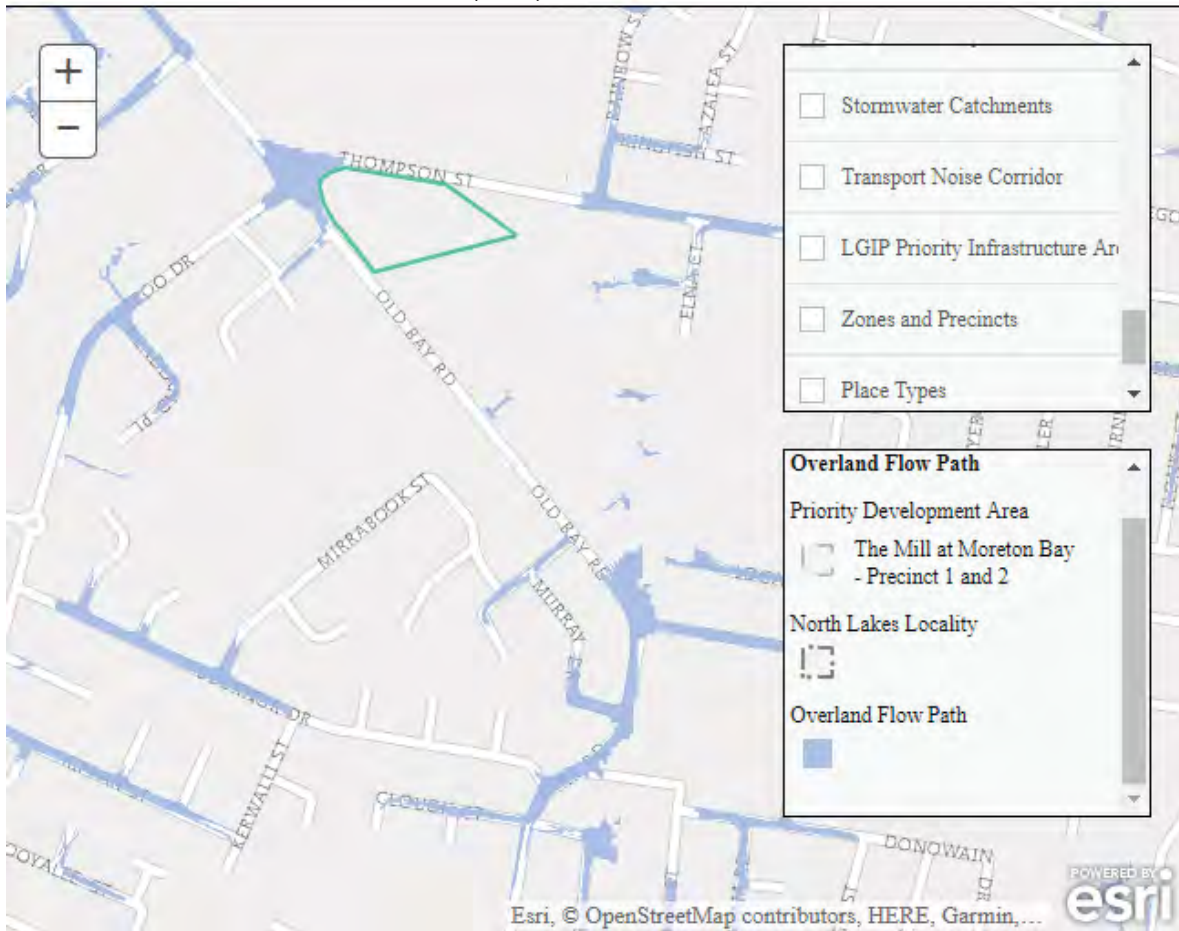
Evacuation Plan

The applicant is located in the Flood planning area. Furthermore, the applicant is surrounded by property that is affected by overland flow. The roundabout at Old Bay Road and Thompson street and the intersection of Old Bay Road and Bayview Terrace are also affected by overland flow (see below).

The proposed site is therefore landlocked in the event of flooding.

The applicant has failed to considered this when evacuating 200 small children during a flood event. Parents will have no means of accessing the site by car. The evacuation of 200 children will unduly burden disaster management during a significant flood event. The proposed site does not allow for efficient evacuation and does not avoid isolating persons during flood events. The proposed site will not remain functional during and immediately after a flood event.

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Queensland Flood Commission Enquiry Report

The Queensland Flood Commission of Enquiry handed down a final report in 2012. The report made a number of recommendations in regards to Planning Development and Flood Considerations.

A number of recommendations on how councils should approach their management of flood risk through land use planning were made.

Many councils throughout Queensland including Moreton Bay Regional Council utilise these recommendations in their planning scheme to appropriately manage natural hazard risks.

An extract from this report in Chapter 7 is below:

“The special characteristics of child care centres make the use a suitable one to be assessed against criteria requiring centres to be located and designed, wherever practicable, so as to function effectively during and immediately after floods of a specified level of risk.

The closure of a child care centre is likely to cause considerable inconvenience and, possibly, expense (loss of wages or the cost of substitute casual child care) to parents using its service. In any assessment it is relevant that many of the occupants of child care centres are likely to be too young to evacuate on foot, or even to be evacuated in a motor vehicle unless fitted with appropriate car seats, increasing the required evacuation time. An ideal evacuation

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would likely involve children being collected by their parents or carers, but that is dependent on there being flood free evacuation routes.

The Queensland Government Planner's opinion, given in response to the description of a case where a child care centre was served by a flood free evacuation route and was required to have a flood evacuation plan in place as a term of its development approval, was that it was, nonetheless, preferable that it be located outside a flood 'risk area'.⁴² His opinion reinforces the Commission's view that child care centres should be assessed against the standard State Planning Policy 1/03 as it applies to community infrastructure, given the 'specified level[s] of risk' for community infrastructure prescribed by the State Planning Policy 1/03 Guideline tends to be set very low, generally between the 0.2% AEP and 0.5% AEP flood levels.

During hearings held at Ipswich, a witness gave evidence about the inundation of a child care centre in Goodna. The development of the centre was approved by the Ipswich City Council in August 2006, on a site which was inundated during the 1974 floods and is located within the council's '1 in 100 flood line', adjacent to an overland flow path and close to the council's '1 in 20 development line'.⁴³ The centre is able to accommodate approximately 115 children per day, including eight babies (under 15 months in age) and 20 toddlers (aged 15 months to two and a half years); on any given day about 25 staff are employed at the centre.⁴⁴ On the morning of 11 January 2011, the centre manager decided to evacuate the centre because of concern about flooding.⁴⁵ By 1.00 pm that day, all children had been collected by their parents or carers and the staff had evacuated.⁴⁶ By 5.00 am on Wednesday 12 January 2011, the water levels at the centre exceeded six feet.⁴⁷ The centre remained closed for 45 days.

⁴⁸ Notwithstanding that child care facilities are not within the compass of the State Planning Policy 1/03 definition, the council assessed the development application against criteria under the Ipswich Planning Scheme 2004's community use code requiring the use (in this case, the child care centre) to be able to function effectively during and immediately after a flood.⁴⁹ This standard was plainly not achieved by the centre during the January 2011 flood.

The Commission's investigation as to the kinds of development which are included in the definition of community infrastructure under Schedule 2 of the Sustainable Planning Regulation but excluded from State Planning Policy 1/03 is, plainly, not comprehensive. Even this selective review, however, establishes a case for the Queensland Government to give consideration to extending the application of a state planning policy which deals with flood to the types of community infrastructure which are identified in the Sustainable Planning Regulation and which the community needs to continue functioning, notwithstanding flood. The Commission otherwise endorses the criteria set by State Planning Policy 1/03 for determining the compatibility of proposed community infrastructure with a specific level of flood risk and supports the incorporation of criteria in these terms in model flood planning controls and planning schemes.

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Recommendations of the inquiry in regards to planning / development:

7.1 The Queensland Government should consider extending the application of a state planning policy dealing with flood to the types of community infrastructure which are identified in the Sustainable Planning Regulation 2009 and which the community needs to continue functioning, notwithstanding flood.

7.2 The Queensland Government should draft assessment criteria to be included in the model flood planning controls that require community infrastructure (including the types of community infrastructure which are identified in the Sustainable Planning Regulation 2009 and which the community needs to continue functioning, notwithstanding flood) to be located and designed to function effectively during and immediately after a flood of a specified level of risk.

7.3 If the Queensland Government does not include such assessment criteria in model flood planning controls, councils should include assessment criteria in their planning schemes that require community infrastructure (including the types of community infrastructure which are identified in the Sustainable Planning Regulation 2009 and which the community needs to continue functioning, notwithstanding flood) to be located and designed to function effectively during and immediately after a flood of a specified level of risk.

It is quite clear that the author(s) of the report would not endorse the approval of the development site's intended use.

Given the operating characteristics of an early learning childcare centre, it is not possible for the proposed centre to operate effectively both during and immediately after the flood event.

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Table 8.2.2.2 Assessable development - Flood hazard overlay

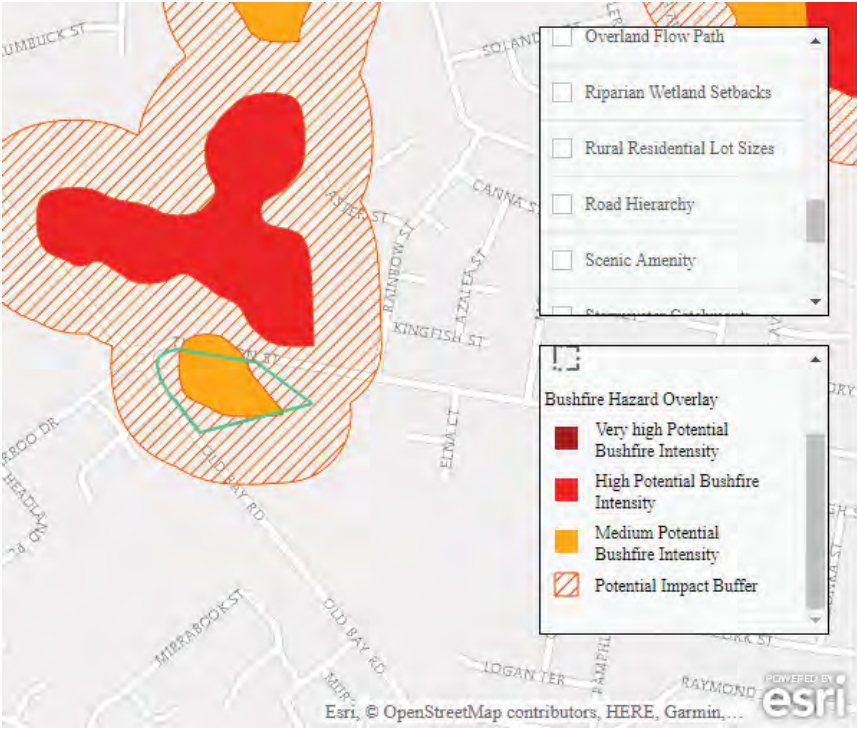
Performance Outcomes	Non-Compliance
For all other material change of use or building work	
<p>PO10 Development maintains personal safety at all times, such that:</p> <ul style="list-style-type: none"> a. a <u>vulnerable land use</u> (flood and coastal) is not located in the High risk flood hazard area or <u>Medium risk</u> flood hazard area; b. new buildings are not located in the High risk flood hazard area included in the Limited development zone; c. a residential accommodation building is located in the following: <ul style="list-style-type: none"> i. Balance flood planning area; or ii. the Medium risk area where located in the Medium risk storm tide inundation area of the Coastal hazard overlay or Balance coastal planning area of the Coastal hazard overlay ; d. evacuation capability from the development or other premises is not hindered or made more complicated and there is no significant additional burden placed on emergency services personnel; e. the isolation of persons in the Defined Flood Event is avoided 	<p>A childcare centre is a vulnerable land use</p> <p>The applicant has failed to considered evacuating 200 small children during a flood event. Parents will have no means of accessing the site by car. The evacuation of 200 children will unduly burden disaster management during a significant flood event.</p> <p>The proposed site does not allow for efficient evacuation and does not avoid isolating persons during flood events.</p> <p>The proposed site will not remain functional during and immediately after a flood event.</p>

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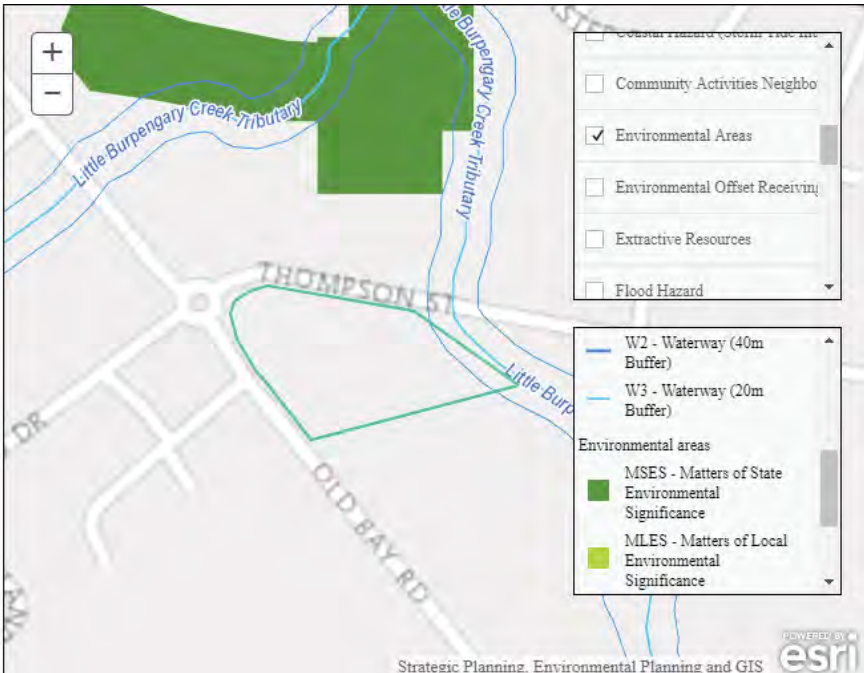
<p>PO14. Development supports and does not unduly burden, disaster management responses and recovery capacity and capabilities for a flood hazard event up to and including the Defined Flood Event.</p>	<p>The evacuation of 200 children will unduly burden disaster management during a significant flood event.</p>
<p>PO15 Development has access which, having regard to the hydraulic hazard, provides for safe vehicular and pedestrian movement and emergency services access.</p>	<p>The applicant is located in the Balance Flood planning area. Furthermore, the applicant is surrounded by property that is affected by overland flow. The roundabout at Old Bay Road and Thompson street and the intersection of Old Bay Road and Bayview Terrace are both effected by overland flow. The proposed site is therefore landlocked in the event of flooding. Parents will have no means of accessing the site by car. Emergency vehicles will have limited access to the site</p>
<p>Additional criteria for development for community infrastructure</p>	
<p>PO25 Development for community infrastructure is not located in the High risk flood hazard area or Medium risk flood hazard area.</p>	<p>A childcare centre is considered a community infrastructure. The site is surrounded by areas of both High risk and Medium risk flood hazard area.</p>
<p>PO26 Development for community infrastructure not located in the High risk area or Medium risk area: <ul style="list-style-type: none"> a. remains functional to serve community needs during and immediately after the Defined Flood Event; b. is designed, sited and operated to avoid adverse impacts on the community or the environment due to the impacts of flood inundation on infrastructure, facilities or access and egress routes; c. retains essential site access during the Defined Flood Event; d. is able to remain functional even when other infrastructure or services may be compromised in the Defined Flood Event </p>	<p>The proposed site will be landlocked during a Defined Flood Event. It will therefore not remain functional to service community needs during and immediately after a Defined Flood Event.</p> <p>Essential site access will not be retained during the Defined Flood Event.</p>

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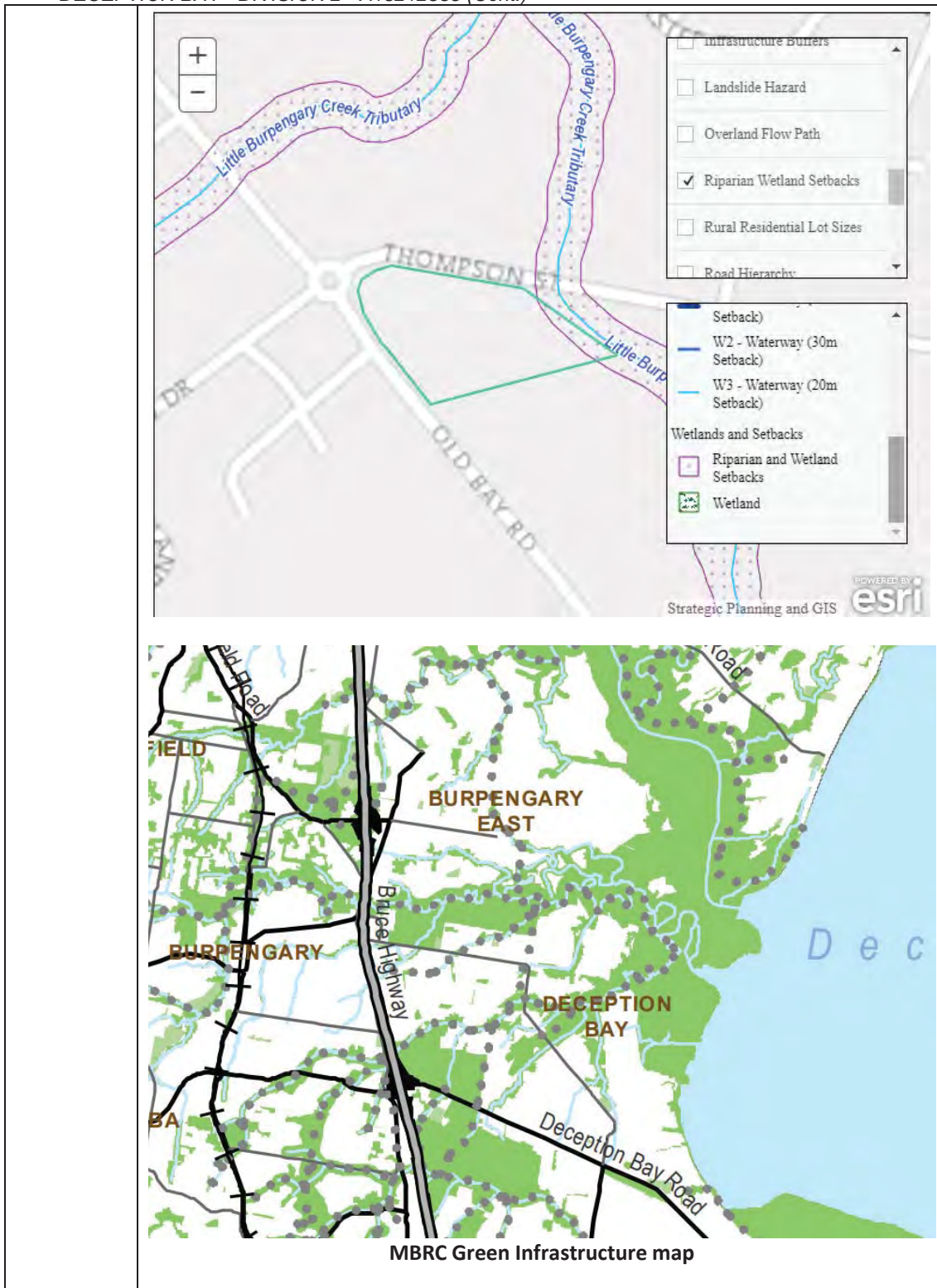
Planning Scheme Policy – Bushfire Prone Areas	
Effective	03/07/2017
Purpose	Prepared in accordance with the current State Planning Policy Guideline, State interest – Natural hazards: Guidance on flood, bushfire and landslide hazard
Application	<p>Applies to assessable development in Medium Potential Bushfire intensity and Potential impact buffer areas identified in MBRC Overlay Map.</p> <p>54 – 66 Old Bay Road is in the Medium Potential Bushfire and Potential impact buffer overlay PSP applies to this development</p> 

<p>Applicant’s Non-Compliance with Planning Scheme Policy</p> <p>The Applicant’s Bushfire Hazard Assessment Report does not follow the guidelines in the PSP in particular</p> <ul style="list-style-type: none"> failed to include the MBRC Bushfire Hazard overlay map. does not use current State Plan Policy methodology for assessing Bushfire Hazards (uses superseded SPP) vegetation identified in the report contradicts the vegetation identified in the ecological report misrepresents the hazard score associated with the class of actual vegetation on site Bushfire Management Plan does not <ul style="list-style-type: none"> Consider the specific risk factor associated with evacuating 200 – (0-5year old) including 12 babies. Does not identify the risk of a bushfire hazard from adjoining land to the south of the property. Does not determine if emergency access can be achieved to the proposed site. 	
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Planning Scheme Policy – Environmental Areas and Corridors	
Effective	03/07/2017
Purpose	<p>This planning scheme policy:</p> <ul style="list-style-type: none"> (a) outlines information Council may require for the assessment of a development application; (b) provides guidance and advice for the achievement of outcomes of the Environmental Areas Overlay assessment benchmarks; (c) provides guidance and advice for developers and decision makers on how development can achieve high quality development design outcomes; (d) provides guidance and advice for counterbalancing environmental values where permitted as a last resort, through the use of environment offsets.
Application	<p>This planning scheme policy applies to development applications (code assessable development and impact assessable development) for land mapped by the:</p> <ul style="list-style-type: none"> • Environmental Areas Overlay; • Environmental Offset Receiving Areas Overlay; <p>This planning scheme policy also informs development affecting habitat trees on land not mapped by the above overlay maps.</p> <p>54 – 66 Old Bay Road is in an Environmental Waterway (W3) Area and Riparian Wetland setback. The tree retention plan also identified habitat trees of the site. The site is adjacent to a MSES Matter of State Environmental Significance area</p> <p>PSP applies to this development</p> 

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Applicant’s Non-Compliance with Planning Scheme Policy

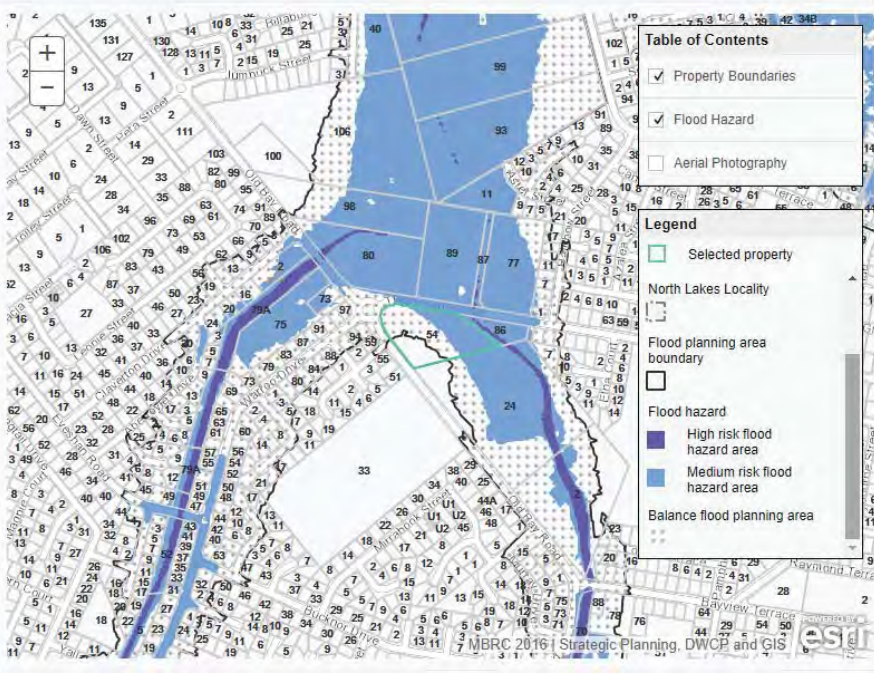
The Applicant’s Detailed Ecological Assessment Report does not follow the guidelines in the PSP in particular:

- does not identify the MSES Matter of State Environment Significance in the adjacent areas to the North of the site (along Thompson st)
- does not identify the importance of vegetation type (ie koala habitat trees) and the impact of removing 238 koala sensitive trees from the site

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

- does not provided an Ecological Restoration Plan for the area north of the proposed development footprint
- does not provide a Fauna Management Plan
- does not provide a Habitat tree management plan
- did not include the data from Queensland Government (2018), Wildlife online extract Nature Conservation Act 1992 (listed as being used in the desktop assessment in the report) which identified 73 koala sightings within a 1 km radius of the proposed site
- did not undertake a fauna survey of a minimum of four days and nights
- does not recognise that koalas use the site even though tree number 278 in the tree retention report states koala fauna scratches
- does not recognise the area as a koala habitat
- does not recommend environmental offsets for the reduction in a koala habitat
- did not undertake an Aquatic survey for water quality and stream health
- did not refer to or identify the MBRC green infrastructure network
- does not consider any green infrastructure design solutions to ensure a health and connection of green infrastructure is maintained
- does not incorporate habitat tress into the development. Removal of habitat trees should be a last resort
- does not avoid fragmenting habitat and does not maintain habitat connectivity
- does not provide a buffer of 200 metres from the MSES Matter of State Environment Significance essential habitat to the north of the proposed site. (along Thompson st)
- does not plan for new wildlife corridors and connections
- does not Integrate existing native vegetation into design to maintain canopy coverage and reduce landscaping costs.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

<h2 style="text-align: center;">Planning Scheme Policy – Flood Hazard, Coastal Hazard and Overland Flow</h2>	
Effective	03/07/2017
Purpose	The purpose of this planning scheme policy is to provide guidance for the preparation of technical reports required to assist in the assessment of proposed development on land in the Flood hazard overlay
Application	<p>This planning scheme policy applies to assessable development where subject to the assessment benchmarks in the Flood hazard overlay code,</p> <p>54-66 Old Bay Road is in the MBRC Medium Flood hazard overlay code PSP applies to this development</p> 
<p>Applicant’s Non-Compliance with Planning Scheme Policy</p> <p>The Applicant’s Stormwater Management Plan does not follow the guidelines in the PSP in particular:</p> <ul style="list-style-type: none"> • Stormwater management plan based on incorrect GFA of 784m² • The risk evaluation criteria used is based on able bodied adults walking safely. No consideration of risk associated with children under the age of 5 evacuating site. • There is native vegetation clearing proposed in the Defined Flood Event area (indicated in tree retention plan) • The report does not identify the altered hydraulic control (flow, velocity and direction) resulting from the clearing of native vegetation from the site • The report does not identify increased new scouring and sedimentation resulting from the clearing of native vegetation from the site. • Does not mitigate effects on property and infrastructure (ie carpark). The site has unencumbered land that is not in the medium flood that could be effectively utilised as a carpark. 	


ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Planning Scheme Policy – Integrated Transport Assessment	
Effective	03/07/2017
Purpose	Provide a guide to new developments to support access and movement by a variety of transport options.
Application	<p>This policy applies to:</p> <ul style="list-style-type: none"> A. A material change of use AND v. Development within 200 metres of a transport sensitive location such as a school, shopping centre, bus or train station or a large generator of pedestrian or vehicular traffic <p>54 – 66 Old Bay Road application is for</p> <ul style="list-style-type: none"> A. a material change use for a Child care centre AND v. Is 30 metres from Deception Bay North State School and C & K Deception Bay North <p>PSP applies to this development</p>
<p>Applicant’s Non-Compliance with Planning Scheme Policy</p> <p>The Applicant’s Traffic Impact Assessment does not follow the guidelines in the PSP in particular:</p> <ul style="list-style-type: none"> • does not adequately describe the transport environment in the vicinity of the development site • It does not identify the close proximity of Deception Bay North State School – 554 students and Deception Bay C & K – 58 students • It does not identify the on-site parking at Deception Bay North State School and Deception Bay C & K – access driveway 30 metres from proposed site • It does not identify the off-site parking of the Deception Bay North State School– access driveway 50 metres from proposed site • It does not identify the pedestrian traffic flow of children/parents outside the proposed site • It does not identify the cycling traffic flow of children/parents outside the proposed site 	

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Planning Scheme Policy – Noise	
Effective	03/07/2017
Purpose	The purpose of this planning scheme policy is to provide guidance for the assessment of noise, preparation of noise impact assessment reports and development of noise management programs where required
Application	<p>This planning scheme policy applies to proposed development that involves noise generating activities or noise sensitive uses</p> <p>54-66 Old Bay Road proposal is for a childcare centre that involves noise generating activities or noise sensitive uses</p> <p>PSP applies to this development</p>
<p>Applicant’s Non-Compliance with Planning Scheme Policy</p> <p>The Applicant’s Noise Report does not follow the guidelines in the PSP in particular:</p> <ul style="list-style-type: none"> • the noise calculations are based on incorrect GFA of 784m² • the proposed plans do not identify the sleep rooms for babies. Correct calculations for sleep rooms were not determined • noise measurement period Thursday 9 August 2018 to Wed 15 August 2018 not representative of normal noise conditions for proposed development. <ul style="list-style-type: none"> • Using week end noise measurement in average calculations is a misrepresentation • Using EKKA public holiday – 14 August 2018 in average calculations is a misrepresentation • Night time noise measurements do not apply to this development. The proposed childcare centre closing time is 7.00pm. Noise measurements after this time are irrelevant. • Report uses 35 dB(A) rather 30 dB(A) for sleep areas. This relies on the assumption that MBRC Planning Scheme Policy - Noise takes precedence over State Environmental Protection (Noise) Policy 2008 • Report fails to calculate or mitigate Noise of cars/ car door slam/ child play from the future residential development proposed in Lot 2 on the site 	


ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Planning Scheme Policy – Stormwater Management	
Effective	03/07/2017
Purpose	The purpose of this planning scheme policy is to provide guidance for the preparation of a Stormwater Management Plan that addresses stormwater quantity and quality
Application	<p>This planning scheme policy applies to assessable development where subject to Stormwater assessment criteria.</p> <p>54-66 Old Bay Road is in the MBRC Stormwater Catchment overlay code PSP applies to this development</p> 
<p>Applicant’s Non-Compliance with Planning Scheme Policy</p> <p>The Applicant’s Stormwater Management Plan does not follow the guidelines in the PSP in particular:</p> <ul style="list-style-type: none"> Modelling is based on incorrect GFA of 784m² 	

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

- Site analysis fails to mention the close proximity of Little Burpengary Creek to the proposed development
- Site analysis does not state that the development includes removal of 359 trees from the site
- Report fails to investigate the hydraulic and the hydrological characteristics of site that is not part of the childcare centre footprint
- The proposed underground detention tank does not mitigate stormwater run-off from the rear half of the car park and driveway. This run off will go directly into Little Burpengary Creek without any filtration.
- Report fails to identify discharge point of the detention tank.
- Report fails to identify pollutants that will result from the proposed childcare centre that will enter Little Burpengary Creek
- Report fails to identify the likely effect of the development on Little Burpengary's water quality

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Planning Scheme Policy – Waste	
Effective	03/07/2017
Purpose	<p>The purpose of this planning scheme policy is to outline the standards for the storage and collection of general waste and recyclable waste bins to ensure:</p> <ol style="list-style-type: none"> 1. all occupants of a development have suitable access to general waste and recyclable waste storage and collection services; 2. bin storage areas do not have adverse acoustic, odour or visual impacts on occupants of a development or adjoining residents; and 3. all general waste and recyclable waste bins can be serviced in a reliable and safe manner.
Application	<p>Applies to assessable development 54-66 Old Bay Road is an assessable development PSP applies to this development</p> 

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Applicant's Proposed storage and collection of waste

- Applicants proposal is for 2 x 1.1m³ bins to be used and stored along the main street frontage of Old Bay Road to ensure that large numbers of wheelie bins are not placed along the street frontage on collection days.
- Bin storage and collection is to occur at the front of the site, separated from vehicle and pedestrian entry points
- It is proposed that waste collection vehicles will service the site from the Old Bay Road frontage. Provision has been made for bins to be moved to the kerb for servicing. It is understood that Council is supportive of this arrangement.

Applicant's Non-Compliance with Planning Scheme Policy

The Applicant's Traffic Impact Assessment does not follow the guidelines in the PSP in particular:

- Building perspective shows no screening of the bins
- Bin placement on the street frontage of Old Bay Road creates an adverse visual impact
- Bin placement on the street frontage of Old Bay Road creates an adverse odour impact to adjacent neighbours 20 metres away and pedestrians. (Childcare centres waste includes soiled disposable nappies and food scraps that create significant odour)
- There is no provision for a signed designated parking area for HRV collection on Old Bay Road
- No bin washing facilities have been identified that are
 - in close proximity to the bin storage area;
 - no tap or hose for bin washing identified
 - no approved sewerage connection identified
- No waste management plan was provided to council for approval.

Pekol Traffic Impact Assessment report states proposed development is NOT Compliant with PSP – Waste

Independent assessment (**APPENDIX C**)

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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Agenda - Supporting Information Item 2.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

23 November 2018

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au

Dear Sir/Madam
Objection to DA/37063/2018/V2C

These annexures form part of objection letter dated 23 November 2018 to the Material Change of Use for 200 place Childcare Centre (DA/37063/2018/V2C) at 54-66 Old Bay Road Deception Bay.

ANNEXURES

Annexure A – Business Geographics - Childcare Supply Analysis – Deception Bay
Annexure B – Green Tape Solutions – Environmental Consultancy Expert Analysis
Annexure C – Pekol – Traffic Engineering Assessment
Annexure D – Cyber Drafting & Design – GFA calculation

Regards

Michael Niven
25-27 Raymond Terrace
Deception Bay 4508
By email: amniven@bigpond.net.au

Mailing address

PO Box 3180
Hendra 4011

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

CHILDCARE SUPPLY ANALYSIS

CHILDCARE SUPPLY ANALYSIS

DECEPTION BAY



Business Geographics Pty Ltd
ABN 58 598 868 634
1/149 Boundary Road, Bardon QLD 4065
PO Box 838, Paddington QLD 4064
Ph: +61 7 3118 5036

www.businessgeographics.com.au

REPORT PREPARED BY BUSINESS GEOGRAPHICS PTY LTD FOR:
Pocket Rockets Pty Ltd

NOVEMBER 2018

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

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IMPORTANT INFORMATION

This report represents an assessment of the need for long day care services in the study area only and should not be interpreted as an assessment of the commercial feasibility for centre development, acquisition or disposal. Information and assumptions used in this report are subject to change and should not be interpreted as precise predictions of the demographic future nor of future market conditions.

While all due care has been taken to ensure the accuracy and currency of information provided in this report, it should not be relied upon in isolation for the making of business decisions. Interested parties should undertake independent inquiries and investigations to satisfy themselves that relevant information remains current, comprehensive and correct.

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

INTRODUCTION

This Childcare Supply Analysis has been prepared for Pocket Rockets Pty Ltd to determine the demand for long day care services in DECEPTION BAY, QUEENSLAND - specifically in relation to an approved long day care centre "Pocket Rockets Early Learning located at 25-27 Raymond Terrace, Deception Bay QLD 4508.

This report provides a review of existing and recently approved childcare facilities (supply) in the local catchment area including estimates of occupancy rates and fees for existing centres; estimates of demand for long day care from the resident population; and a demographic profile of the local area. It also provides an analysis of key drivers for childcare and an assessment of the extent to which the existing supply is meeting current levels of demand.

This report should be read in conjunction with Appendix 1 which explains the terms and concepts used in the report.

Long Day Care in Australia

Long Day Care is a centre-based form of child care service that provides all day care for children of (typically) working families. Long Day Care centres may be run by private operators, not-for-profit organisations, employers and community groups. Most long day care centres are approved child care services that are entitled to receive the Australian Government's Child Care Benefit on behalf of families. Many long day care services also offer Kindergarten and Pre-school programs.

Long Day Care has become a significant social service as it is seen as both a mechanism to support labour force participation and as an important form of early learning and education. The sector has seen dramatic growth over recent years. Currently, there are over half-a-million children attending approved long day care centres in Australia. Approximately 92% of children who attend long day care are under the age of 5.

According to the Office of Early Childhood Education & Child Care, at a national level there is sufficient childcare available and supply is largely meeting demand. However, it's important to note that there are some significant regional variations to this with supply exceeding demand in some areas and demand not being met by existing levels of supply in others. Additionally, the supply of nursery places (for babies and toddlers under the age of two) is typically more restricted in most local markets.

This report relies on some statistical benchmarks and assumptions derived from latest **Report on Government Services (2016) prepared by the Productivity Commission (Volume B Chapter 3 Early Education & Care)**. In particular, this includes an estimated national long day care participation rate of 45% for children aged under 5. This benchmark varies from state to state and region to region. In addition, it is estimated that the average attendance rate (the amount of time children who attend long day care spend there) is 28 hours per week.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

EXECUTIVE SUMMARY

An overview of key statistical indicators of the Deception Bay long day care market.

LOCATION

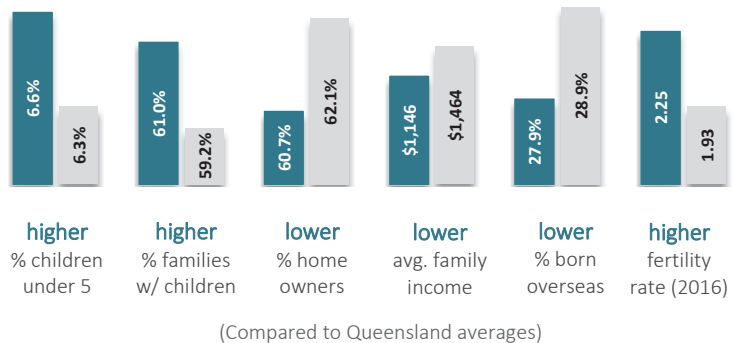
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The subject site is located in the suburb of Deception Bay, in the Greater Brisbane LGA of Moreton Bay Regional Council.

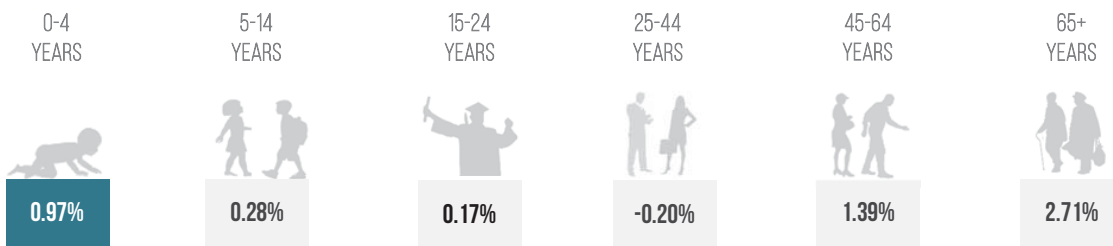
DEMOGRAPHICS

PAGE 10



POPULATION GROWTH

PAGE 9



Population growth in the major catchment is LOW

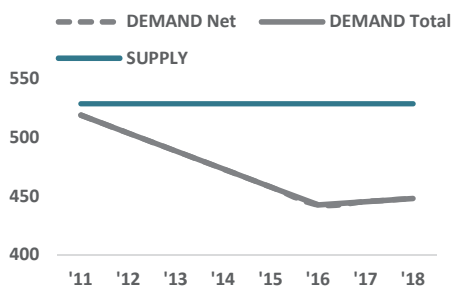
Total population forecast to increase by 0.97% p.a. from 2018 to 2023 (net 1,115 persons)

SUPPLY

PAGE 12

There are currently six (6) long day care centres in the major catchment supplying a total of 529 places.

SUPPLY & DEMAND



DEMAND

PAGE 19

The estimated daily demand from the resident population is for 399 places. The estimated daily demand for long day care from the non-resident working (daytime) population is for 49 places.

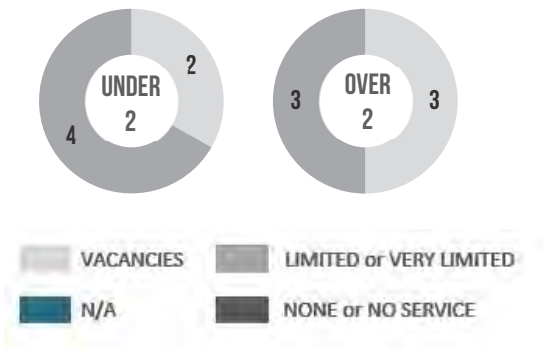
ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

REPORTED OCCUPANCY

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NEEDS ASSESSMENT

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At present (November 2018), there are six (6) long day care centres in Deception Bay supplying a total of 529 places to a resident market of 1,478 children under 5. This represents a ratio of 2.79 children per place. The average occupancy rate is estimated at 84.70% which suggests a BALANCED market.

There is strong interest in the area from childcare developers and a significant proposed development pipeline with one (1) pending and three (3) approved applications in Deception Bay. The total increase in supply (if all proposed projects proceed as planned) would be 548 places (A 103.59% increase on 2018 levels). This compares to the projected increase in children aged under 5 of only 4.85% over the same period.

Considering the existing supply of places is meeting current levels of demand, a significant oversupply of childcare in Deception Bay appears inevitable. Indeed, an analysis of the childcare supply pipeline has identified that a SIGNIFICANT OVERSUPPLY of childcare places is forecast in Deception Bay within 12 months.

The expected delivery of an additional 228 places by the end of 2019 (Based on the opening of Pocket Rockets Early Learning (127 places) and Play and Learn Deception Bay (101 places) by the end of 2019 will push the market into SIGNIFICANT OVERSUPPLY with average estimated occupancy rates forecast to drop to <60%.

It is Business Geographic's view that the potential future delivery of the proposed Natureplay Early Learning Centre (200 places) will result in a CRITICAL OVERSUPPLY of long day care and undermine the economic viability of other existing (and proposed) childcare centres in Deception Bay with average estimated occupancy rates forecast to drop to <50%.

The proposed Natureplay Early Learning Centre will have significant adverse impacts on the existing (and proposed) childcare network and will undermine the economic viability of these centres. These impacts may persist over the long-term and also adversely impact childcare markets in surrounding areas. These negative economic impacts far outweigh any potential community benefits of the proposed development.

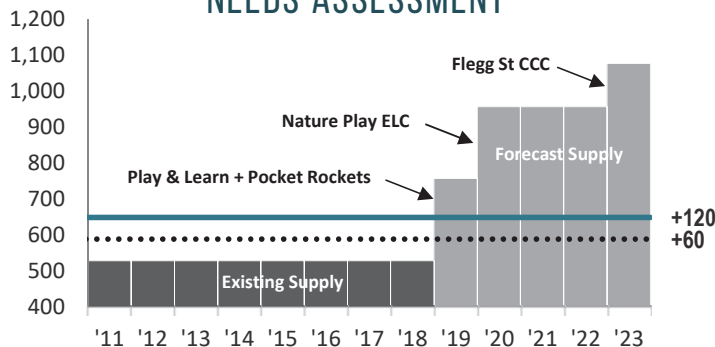
DEVELOPMENT ACTIVITY

PAGE 6

A limited online search for childcare development applications and/or approvals returned four (4) results, detailed on Page 6.

It is unknown if any other applications or approvals exist and interested parties should undertake their own inquiries.

NEEDS ASSESSMENT



LEGEND

- Existing Supply
- Min. Proposed Supply (Known Places)
- Needs Assessment 2023 (Low Forecast)
- Needs Assessment 2023 (High Forecast)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

SUMMARY OF KEY STATISTICAL INDICATORS

Table 1 summarises some of the key statistical indicators from the report that describe the long day care market in the study area. It provides a quick overview of key information provided in the report.

----- KEY STATISTICAL INDICATORS -----		
DEMAND INDICATORS		QLD AVERAGE
Total Population (2018)	22,976	
Children Aged under 5 (%)	1,478 (6.43%)	6.31%
Historical Growth 2011-2016 (Under 5)	-284 children (-3.23% p.a.)	-0.10% p.a.
Forecast Growth 2018-2023 (Under 5)	72 children (0.97% p.a.)	1.65% p.a. (preliminary)
Participation Rate	45%	50%
Resident Daily Demand	399 places	
Non-resident Workforce Daily Demand	49 places	
Total Estimated Daily Demand	448 places	
SUPPLY INDICATORS		
No. of Long Day Care Centres (2018)	6	
Supply of Long Day Care Places (2018)	529	
Change in Supply 2016 – 2018 (%)	NIL	12.5%
Average Daily Fee	\$92 (Range from \$80 to \$102)	\$98
Vacancies at Existing Centres	VACANCIES	
NEEDS ASSESSMENT		
Average Estimated Occupancy Rate (%)	84.70%	82% - 85%
Ratio of (Resident) children per LDC place	2.79 : 1	2.4 : 1
Assessment of Market (2018)	BALANCED	
Additional Places Supportable to 2023	60 to 120 places to 2023	Assuming participation rate of 45% - 50%
Development Activity ¹	<p>A limited online search has been conducted for childcare development applications and/or approvals within the catchment, returning four (4) relevant results detailed on Page 6.</p> <p>It is unknown if any other applications or approvals exist and interested parties should undertake their own inquiries.</p>	

¹ NOTE: Information regarding Development Applications or Approvals should not be interpreted as conclusive. This information is sourced online from third-party sources and its accuracy is not able to be verified by Business Geographics. Development applications/approvals more than 18 months old or less than one month old may not be shown. This information is of course also subject to change. Interested parties may wish to discuss development activity in an area of interest in more detail with the relevant local government authority and/or a consultant town planner.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

DEVELOPMENT APPLICATIONS

The list below shows proposed or approved new centres within the major catchment. **This list may not include applications which are more than 18 months old or less than 1 month old.**

----- DEVELOPMENT APPLICATIONS -----					
PROJECT REF. (PAGE 8)	STREET ADDRESS	SUBURB	PLACES	PLANNING REF. & STATUS	DESCRIPTION
"Subject Site" Pocket Rockets Early Learning	25-27 Raymond Tc	DECEPTION BAY	127	2017 / 34467/V2L DA Approved (Feb-18) Construction expected to commence early 2019 with completion by late 2019	Proposed conversion of Deception Bay Squash & Sports Centre into Pocket Rocket Early Learning child care centre with mezzanine level for 127 places.
Play And Learn Deception Bay	1-45 Bay Av	DECEPTION BAY	101	2017 / 35365/V2C DA Approved (Jun-18) Under Construction (Nov-18) Centre expected to open early 2019	Proposed construction of a child care centre for 101 places.
Natureplay ELC	54-66 Old Bay Rd	DECEPTION BAY	200	DA 2018/37063/V24C DA Lodged Oct-18	Construction of a single storey 200 place child care.
Flegg Street CCC	12 Flegg St	DECEPTION BAY	120	2017 / 34272 / V2L DA Approved (Jul-17) Project Deferred (Jun-18)	Proposed construction of a 1 storey child care centre for 120 places.
TOTAL			548 Places		

KEY POINTS

- Analysis of the childcare supply pipeline has identified that a SIGNIFICANT OVERSUPPLY of childcare places is forecast in Deception Bay within 12 months. This assumes the opening of Pocket Rockets Early Learning (127 places) and Play and Learn Deception Bay (101 places) by the end of 2019 which represents an increase in supply of 228 places (43.1% increase on 2018 levels).
- The total potential increase in supply (if ALL proposed projects proceed as planned) would be 548 places (103.59% increase on 2018 levels).
- This compares to the projected increase in children aged under 5 of only 4.85% over the same period. Considering the existing supply of places (as at November 2018) is meeting current levels of demand, a significant oversupply of childcare in Deception Bay appears inevitable.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

SITE CONTEXT

The photo below shows the proposed site at 25-27 Raymond Terrace, Deception Bay and an aerial image of the immediate area.

Some points of interest nearby (within 2 km) include:



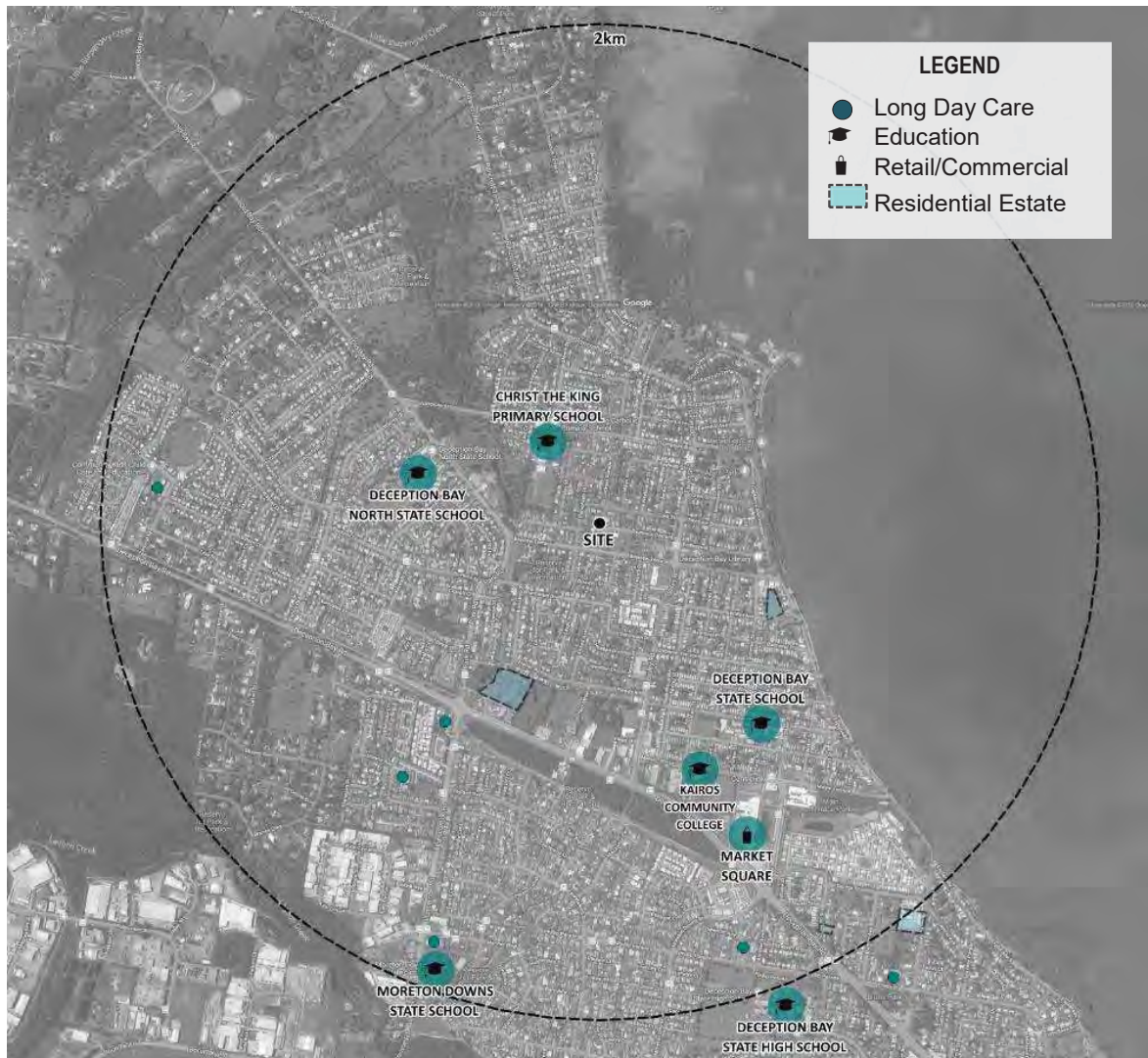
CHRIST THE KING PRIMARY SCHOOL



MARKET SQUARE



DECEPTION BAY STATE SCHOOL



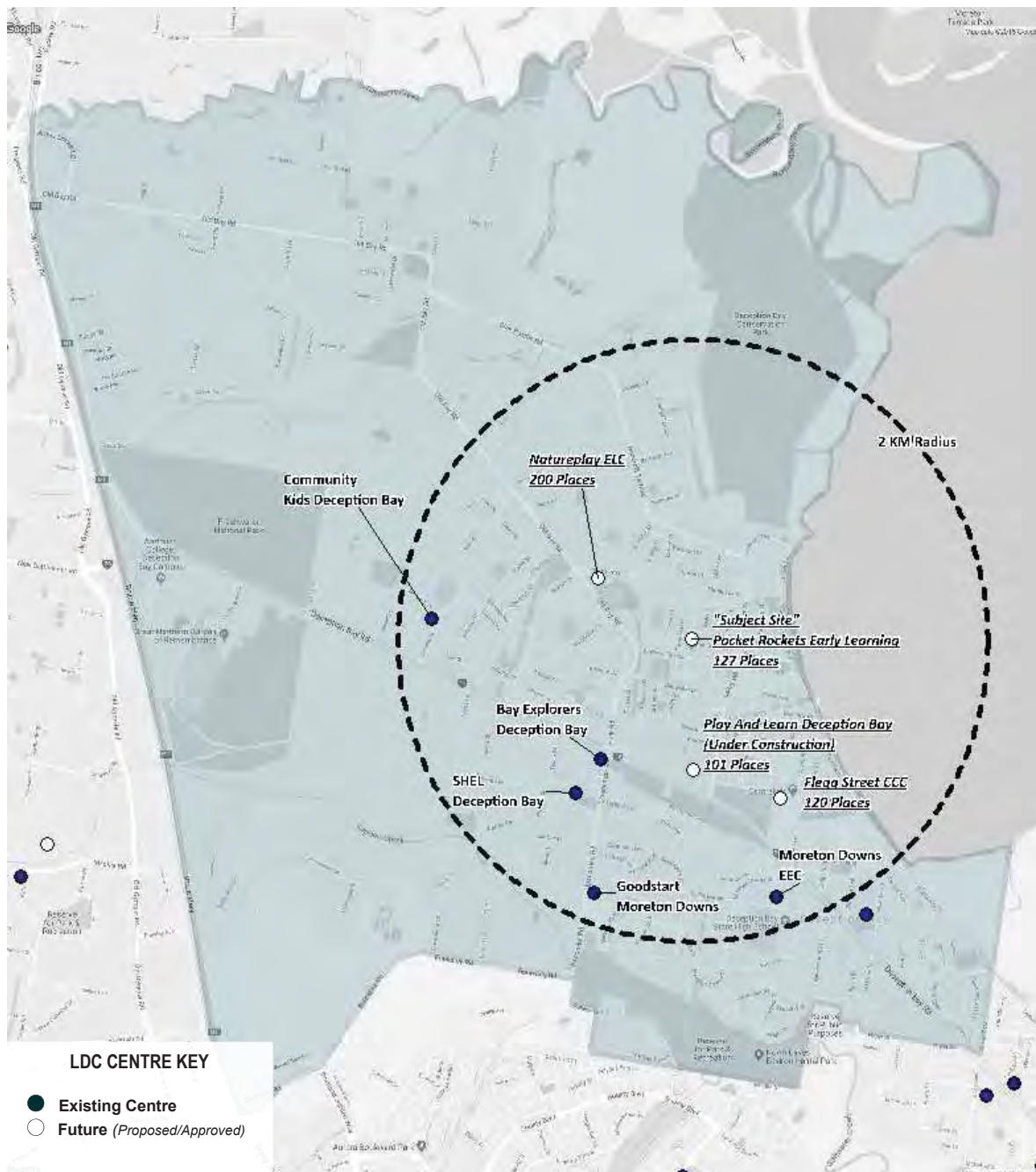
ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

MAP OF MAJOR CATCHMENT AREA

This map shows the major catchment area for the subject site shaded in blue and shows the location of existing long day care centres (blue dots). The major catchment (or study area) is the area from which an estimated 80%+ of enrolments at the subject site could be expected to originate from. For the purposes of this report, the major catchment is the Deception Bay Statistical Area 2 (SA2). This represents an area that interacts socially and economically.



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

POPULATION & DEMOGRAPHICS

This section provides an overview of the key demographic characteristics of the major catchment area residents and includes historic and current population estimates and projections from 2016 to 2023.

The subject site is located in the suburb of Deception Bay, on the northern fringe of Greater Brisbane. The suburb is located approximately 32km (radially) north of Brisbane CBD. Key retail amenity for the suburb is located along Deception Bay Road, that runs through the centre of major catchment. Major retailers Aldi, Woolworths, Supercheap Auto and KFC are just a few of the brands that are established in the suburb.

Deception Bay has been an area that has experienced rapid growth in the ageing population with several retirement/aged care facilities established such as Seabrook Aged Care Facility, Palm Lake Resort and Sir James Terrace. There has also been a consistent level of residential activity with 302 dwellings completed from 2011 to 2016. This is mainly due to a growing level of medium to high density activity due to the areas relative affordability and proximity to the employment centres of North Lakes and Narangba.

The age profile in the major catchment is slightly younger than the Queensland profile, with an average age of 38 (one year under the state average). It is pertinent that there was a 4.79% increase in the number of residents who were couples without children from 2011 to 2016 with this 37.63% of people in the major catchment being in this family structure. This indicates that the area is sought after by young couples, and it likely that moving forward, as these couples have children, there will be an increase in the number of children aged 0-4 years over the next 5 years to 2023.

The table on the following page highlights some key demographic indicators evident in the major catchment when compared to the state profile. Key findings include –

- Higher proportion of children under 5.
- Higher proportion of homes owned outright.
- Lower individual, household and family incomes.
- Lower proportion of persons born overseas.

At present, population growth in the major catchment is LOW with the total population forecast to increase by 0.97% p.a. from 2018 to 2023 (net 1,115 persons). The population of children under 5 in the major catchment is forecast to increase at a lower rate of 0.97% p.a. from 2018 to 2023 (net 72 children).²

The following table shows population forecasts from 2016 – 2023 by age group in the major catchment.

AGE GROUP	2016		2018		2023		Change (18-23)	
	No.	%	No.	%	No.	%	No. total	% per annum
0-4 years	1,473	6.56%	1,478	6.43%	1,549	6.43%	72	0.97%
5-14 years	3,170	14.11%	3,126	13.60%	3,169	13.16%	44	0.28%
15-24 years	2,892	12.87%	2,902	12.63%	2,927	12.15%	25	0.17%
25-44 years	5,248	23.36%	5,141	22.37%	5,089	21.12%	-52	-0.20%
45-64 years	5,479	24.39%	5,670	24.68%	6,065	25.17%	395	1.39%
65 years and over	4,204	18.71%	4,660	20.28%	5,292	21.97%	632	2.71%
TOTAL	22,466	100.00%	22,976	100.00%	24,092	100.00%	1,115	0.97%

² NOTE: Population projections are not targets. It is important to recognise that projections reflect the outcome of certain assumptions about the future of fertility, mortality and migration – assumptions which may or may not eventuate. The projections should not be interpreted as precise predictions of the demographic future.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

KEY DEMOGRAPHIC INDICATORS

The following table provides a summary demographic profile of the major catchment area residents (compared to state benchmarks) based on data from the 2016 ABS census of population and housing.

	----- 2016 CENSUS -----		STATE COMPARISON	
	CATCHMENT		Higher than QLD ▲	QLD average
	No.	%.	Lower than QLD ▼	
TOTAL PERSONS	22,466	100.00%		
Males	10,961	48.79%	▼	49.39%
Females	11,505	51.21%	▲	50.65%
AGE GROUPS				
0-4 years	1,473	6.56%	▲	6.31%
5-14 years	3,170	14.11%	▲	13.11%
15-24 years	2,892	12.87%	▼	13.04%
25-44 years	5,248	23.36%	▼	27.12%
45-64 years	5,479	24.39%	▼	25.20%
65 years and over	4,204	18.71%	▲	15.23%
Median Age		38	▼	39
SELECTED CHARACTERISTICS				
Performed unpaid childcare (15 years +)	5,007	28.09%	▲	28.07%
Married persons (15 years +)	7,505	42.11%	▼	46.89%
Country of birth - Australia	16,197	72.10%	▲	71.11%
Language spoken at home - English only	19,044	84.77%	▲	81.27%
INCOME (POPULATION AGED 15 YEARS AND OVER)				
Average individual income (\$/weekly)		\$534	▼	\$668
Average household income (\$/weekly)		\$1,260	▼	\$1,657
Average family income (\$/weekly)		\$1,146	▼	\$1,464
FAMILY CHARACTERISTICS				
Total families	5,867	100.00%		100.00%
Couple families without children	2,208	37.63%	▼	39.43%
Couple families with children	2,202	37.53%	▲	42.73%
One parent families	1,378	23.49%	▲	16.46%
Other families	79	1.35%	▼	1.37%
DWELLING CHARACTERISTICS				
Occupied private dwellings	7,860	100.00%		100.00%
Owned outright	2,334	29.69%	▲	28.45%
Owned with a mortgage	2,434	30.97%	▼	33.69%
Rented	2,854	36.31%	▲	34.17%
Other tenure type	27	0.34%	▼	0.74%
Tenure not stated	222	2.82%	▲	2.61%

Source: ABS Census of Population & Housing 2016

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

WORKING POPULATION

This section provides an overview of the key demographic characteristics of the non resident working population in the major catchment area.

It is estimated that in November 2018, there were approx. 4,600 people working each day within the major catchment area. An estimated 80% of these people travel from elsewhere to work here.

An analysis of the non resident working population in the major catchment (based on the 2016 Census) has revealed the dominant industries of employment are: Manufacturing, Construction and Health Care and Social Assistance. The top reported occupations were Technicians and Trades workers, Labourers and Clerical and Administrative workers.

Female labour participation rates and major industries of employment suggest that approximately 1 full-time on-site childcare place per day is demanded for every 75 non-resident employees (that live outside the major catchment).

At this level of demand, the current demand for places (2018) from the non-resident working population (those that live outside the major catchment) is estimated at 49 places per day. Depending on the level of employment growth, the non resident working population expected to increase by an estimated 600 - 800 persons (2.61% - 3.48% per annum) over the next five years to 2023. Consequently, the demand for long day care from the non-resident working population is expected to range between 55 and 58 places per day by 2023.



----- WORKING POPULATION FORECASTS 2016 – 2023 -----

	2016	2018	2023		Change (18-23)	
	(actual)	(estimate)	(low forecast)	(high forecast)	(low – high)	(low – high)
Daytime Working Population	No.	No.	No.	No.	No. total	% per annum
Total Daytime Working Population	4,200	4,600	5,200	5,400	600 - 800	2.61% - 3.48%
% from outside major catchment	80%	80%	80%	80%	-	-
Non-Resident Daytime Working Population	3,360	3,680	4,160	4,320	480 - 640	2.61% - 3.48%
Daily Demand (Working Population)*	45	49	55	58	6 - 9	2.61% - 3.48%

*In the major catchment, it is estimated that 1 full-time on-site childcare place is demanded for every 75 employees.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

SUPPLY ANALYSIS

This section provides a review of existing long day care infrastructure in the major catchment area. A table is provided on the following page providing specific details of Licensed Places, Fees and Vacancy Rates at existing centres. This information is sourced directly from centres and its accuracy is dependent on the knowledge of the person supplying this information.

At present (2018) there are currently six (6) long day care centres in the major catchment supplying a total of 529 places to an estimated resident market of 1,478 children under 5. Childcare development in the area commenced prior to 1995 with over a third (36%) of the supply offered by centres which established more than 24 years ago.

No centres were established since Little Scholars School of Early Learning Deception Bay opened in 2009.

The catchment is still relatively fragmented, dominated by small-scale or independent providers. The largest Market Share is held by G8 Education, holding approximately 22% of the supply (118 places). The catchment averages 88 places per centre, ranging from 75 places at several centres to 118 places at Community Kids Deception Bay.

Daily Fees³ in the major catchment average \$92 per day (or \$458 per week for full-time attendance), and comprise a range from \$80 at Community Kids Deception Bay to \$102 at Bay Explorers Deception Bay (for younger ages only).

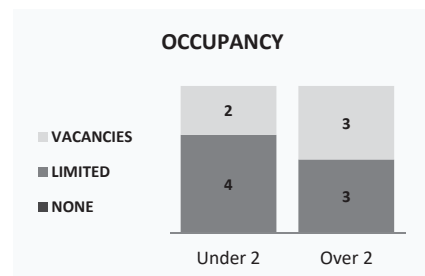
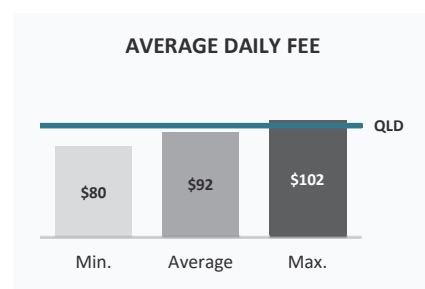
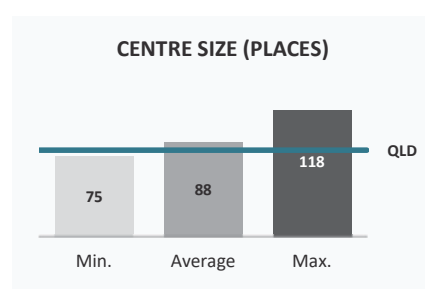
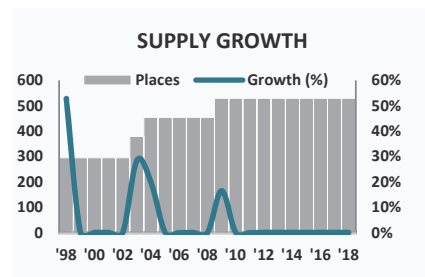
All centres have been assessed against the National Quality Standard (NQS) and 49% of the supply with a quality rating Meeting NQS. This means that most services comply with the current standards. A telephone survey of the centres in the major catchment has revealed that, for children over 2:

- **Three (3) centres reported VACANCIES.**
- **Three (3) centres reported LIMITED or VERY LIMITED VACANCIES.**

Places were more limited for children under 2, although this is typical in most markets due to higher staffing ratios and fewer places offered.

Reported vacancy rates suggest estimated average occupancy rates across the major catchment of 84.70% which is consistent with a BALANCED market in which most parents should be able to find a place for their children in the local area, although not necessarily at their preferred centre. At the same time the majority of centres should be achieving benchmark returns.

A limited online search for childcare development applications and/or approvals returned four (4) results, detailed on page 6⁴.



³ Fees quoted are the full-fee calculated before any child care benefit is applied. Daily Fees are typically higher for babies and younger children and vary depending on specific inclusions offered by centres such as meals and educational programs.

⁴ It is unknown if any other applications or approvals exist and interested parties should undertake their own enquiries. Please refer to previous notes regarding Development Applications and/or Approvals.

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CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

SUPPLY TABLE – LONG DAY CARE CENTRES

The following table provides details of existing long day care centres in the major catchment area. This list has been compiled by Business Geographics from a range of sources.⁵

INCLUSIONS PROVIDED = 🍏 Lunch 🍌 Snacks 🍼 Nappies

CENTRES IN CATCHMENT						
DETAILS	PROVIDER & DATE ESTABLISHED	LICENSED PLACES	VACANCIES	FEE SCHEDULE PER DAY	FEE SCHEDULE PER WEEK	INCLUSIONS, OPERATING HOURS & QUALITY RATING
Bay Explorers Early Learning Deception Bay 2 Lipscombe Rd DECEPTION BAY 4508 QLD (07) 3203 2999	Romsey Holdings Est. 2003	84*	V. Limited <2 Limited >2	\$100.00 - \$102.00	\$500.00 - \$510.00	🍏 🍌 🍼 6:00am to 6:00pm Meeting NQS
Community Kids Child Care and Education Hub - Deception Bay 5 Monarch Dr DECEPTION BAY 4508 QLD (07) 3888 5355	G8 Education Since 2010 Est. pre 1995	118	Limited <2 Limited >2	\$80.00	\$375.00	🍏 🍌 🍼 6:30am to 6:30pm Working Towards NQS
Goodstart Early Learning Moreton Downs 2-8 Mariner Bvd DECEPTION BAY 4508 QLD (07) 3204 2088	Goodstart Early Learning Since 2010 Est. 2004	75	V. Limited <2 V. Limited >2	\$93.00 - \$97.00	\$465.00 - \$485.00	🍏 🍌 🍼 6:30am to 6:30pm Exceeding NQS
Little Scholars School of Early Learning Deception Bay 121 Cross St DECEPTION BAY 4508 QLD (07) 3204 9755	Edge Early Education Since 2016 Est. 2009	75	Limited <2 Vacancies >2	\$96.00 - \$100.00	\$480.00 - \$500.00	🍏 🍌 🍼 6:30am to 6:30pm Meeting NQS
Moreton Downs Early Education Centre 31 Spencer Av DECEPTION BAY 4508 QLD (07) 3204 1199	Early Education Australia Est. 1996	75	Vacancies <2 Vacancies >2	\$91.40 - \$96.40	\$457.00 - \$482.00	🍏 🍌 6:00am to 6:00pm Working Towards NQS
Story House Early Learning Deception Bay 59-61 Shayne Av DECEPTION BAY 4508 QLD (07) 3204 8244	Story House Early Learning Since 2017 Est. 1998	102	Vacancies <2 Vacancies >2	\$87.00	\$435.00	🍏 🍌 🍼 6:00am to 6:00pm Meeting NQS
TOTALS / AVERAGES		529		\$92	\$458	

⁵ Information provided in the Supply Tables has been collated from state and federal government childcare information registers, Business Geographics databases and telephone surveys of the listed centres. In particular, the Licensed Places, Vacancy Rates and Fees provided are dependent on information supplied to us by staff at the centres and therefore should not be interpreted as conclusive. They represent the information supplied at a given point in time and their accuracy is subject to the interpretation of the relevant staff member.

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CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

SUPPLY TABLE – OTHER EARLY LEARNING SERVICES

The following section details other early learning services in the major catchment. These services do not provide long day care and have been excluded from supply for purposes of this report, however do offer alternative care options in Deception Bay.

----- KINDERGARTEN SERVICES -----			
DETAILS	PROVIDER & SERVICE APPROVAL DATE	LICENSED PLACES / QUALITY RATING	SERVICE TYPE
Bayview Kindergarten 33 Bayview Tc DECEPTION BAY 4508 QLD 07 3203 2093	Bayview Kindergarten Association Since. 2010	25 Exceeding NQS	Kindergarten
C&K Deception Bay North Community Kindergarten 47 Old Bay Rd DECEPTION BAY 4508 QLD 07 3293 4662	C&K Association Since. 2011	24 Exceeding NQS	Kindergarten

----- FAMILY DAY CARE SERVICES -----	
REGISTERED SCHEME	PROVIDER
Hatchling House Family Day Care - DECEPTION BAY	Terry's Place FDC Everley Kids FDC Carolyn's FDC
Peace of Mind Family Day Care Scheme	Chloe's FDC
Bramble Bay Family Day Care	Jackie's FDC



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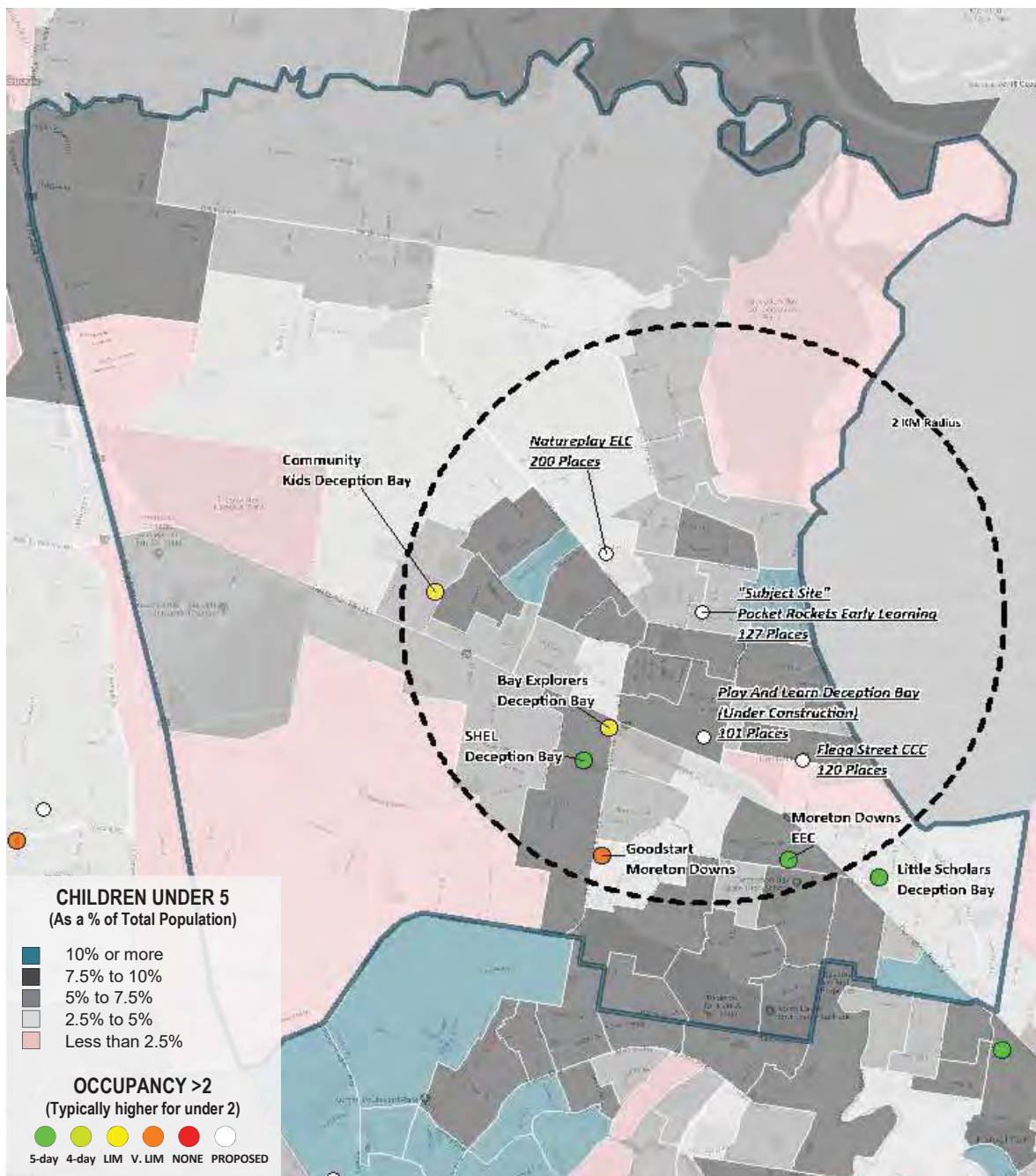
CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

DEMAND INDICATORS

This section identifies key demand drivers evident in the catchment area (based on the resident population).

Children Aged Under 5

The major catchment currently (2018) has an estimated population of 1,478 children (under 5), which represents 6.43% of the total population. The map below shows their concentration by neighbourhood.



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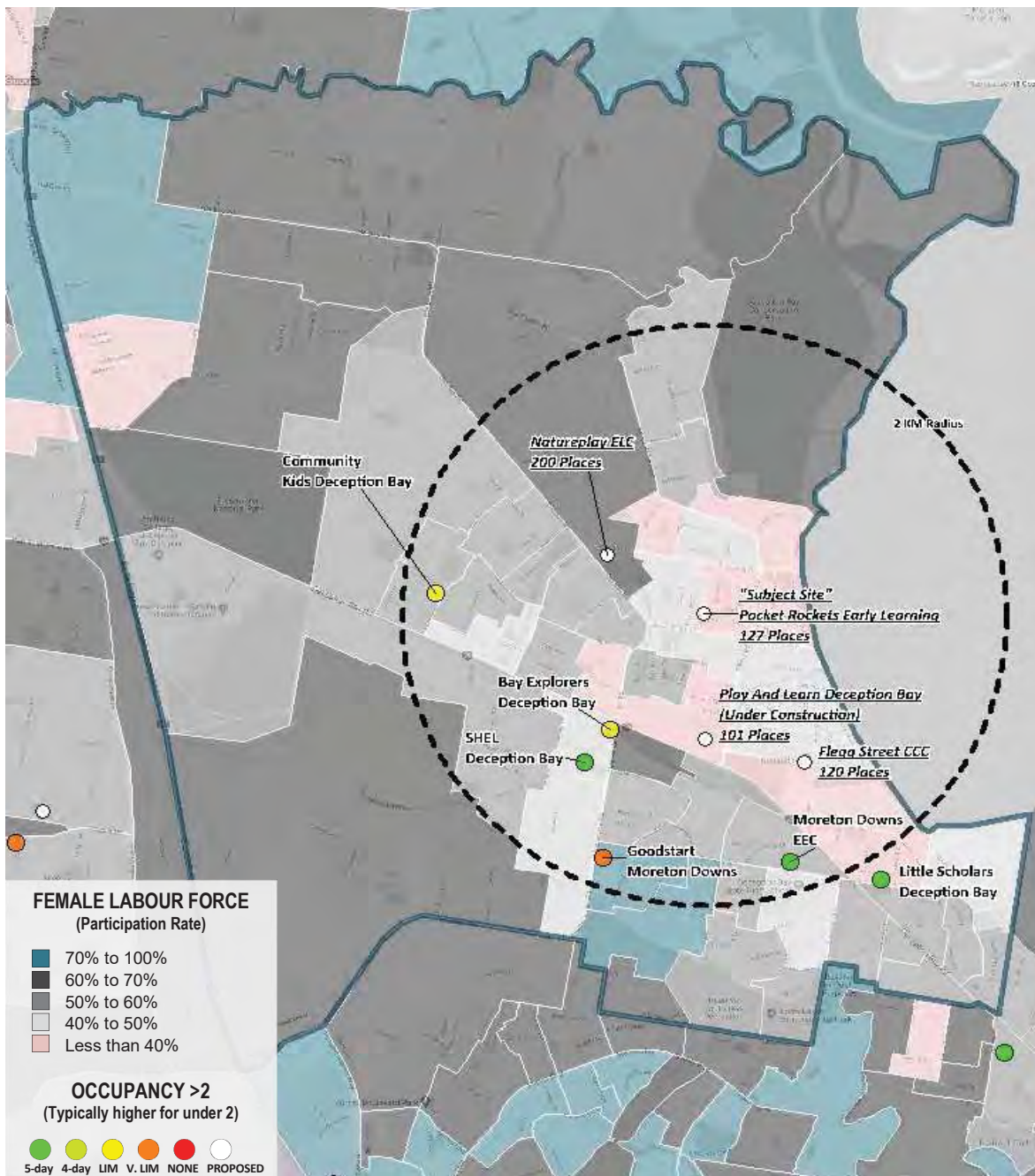


CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

Female Labour Force Participation Rate

Another important demand driver for long day care is the female labour force participation rate. One of the main social contributions of long day care is to support labour force participation (particularly amongst women). Areas with existing high levels of female labour force participation tend to have high rates of demand for long day care.

The map below highlights about average female labour force participation rates in the major catchment.



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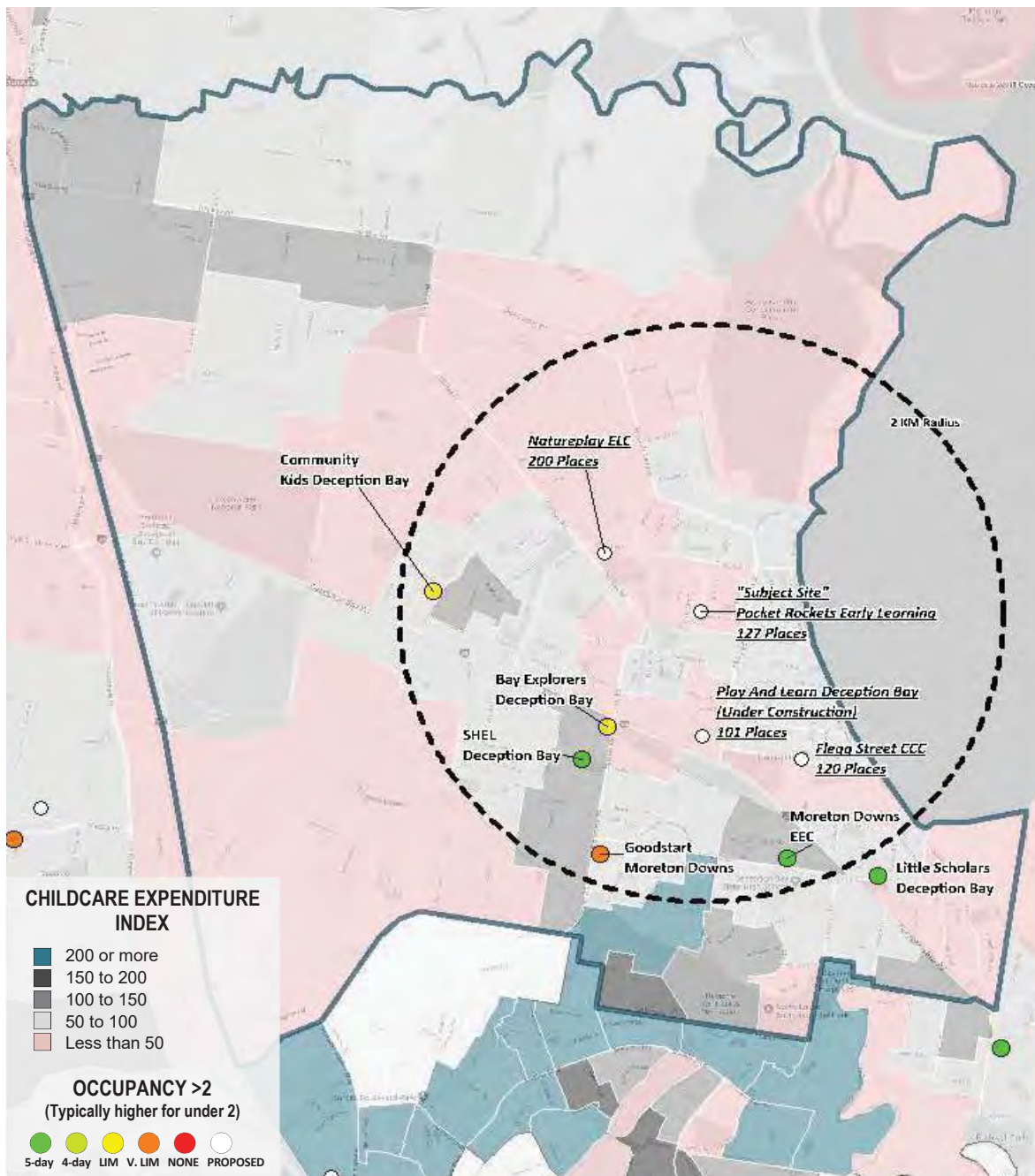


CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

Child Care Expenditure

The proportion of income spent on long day care services is another useful indicator of demand and helps to qualify the propensity of households to use long day care.

The map below compares neighbourhoods based on the proportion of their income spent on formal childcare services. Each neighbourhood is compared to the average for all neighbourhoods in Australia. The data is derived from the Household Expenditure Survey conducted by the Australian Bureau of Statistics.



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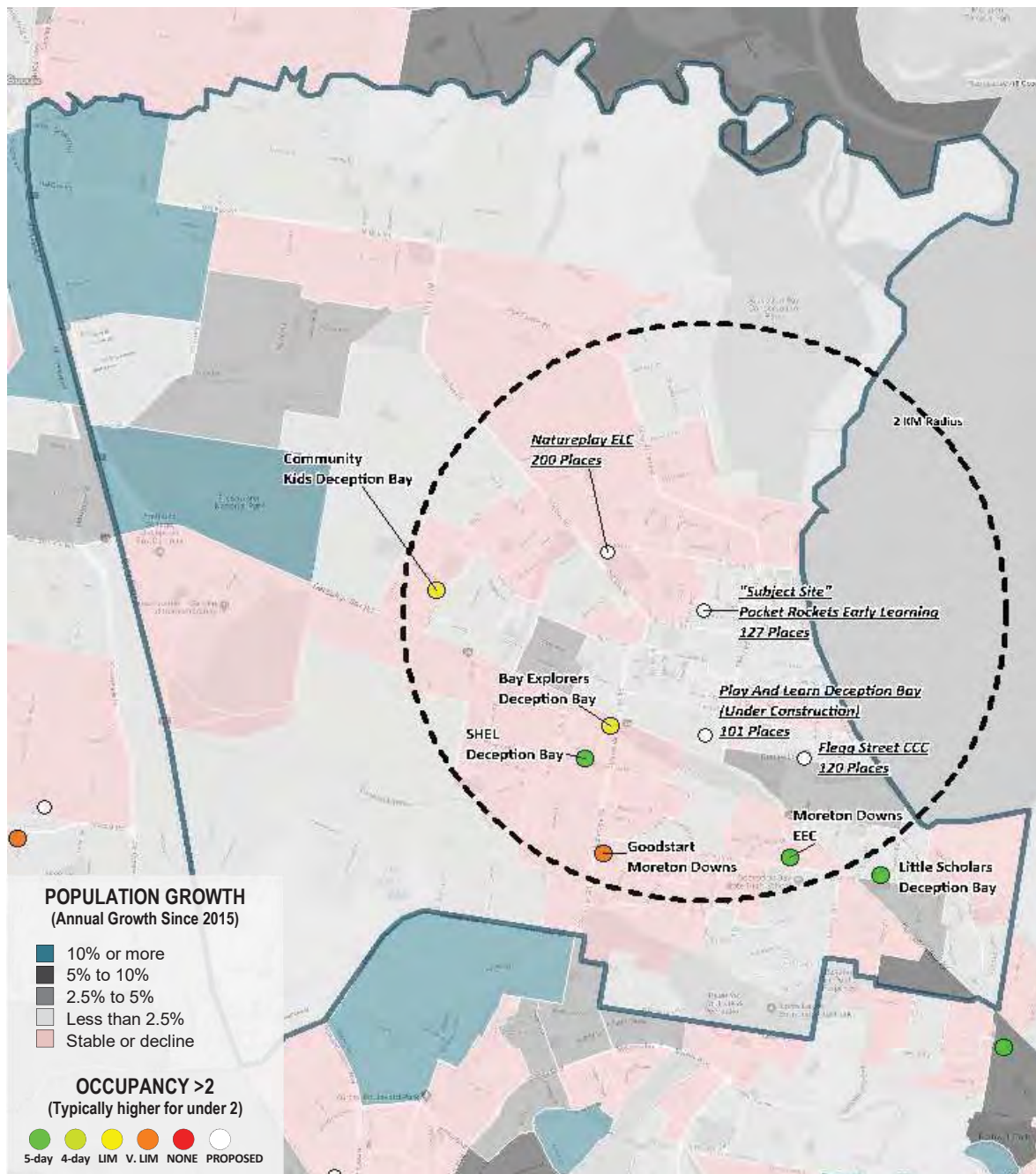


CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

Population Growth

Population growth is another important indicator of demand for long day care with growth often representing the establishment of residential neighbourhoods and family formation.

The map below shows the average annual population growth rate by neighbourhood since 2015. Green areas have high rates of population growth (10% or more), while pink areas indicate a stable or declining population growth (0% or less).



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CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

DEMAND TABLE

The following table details the estimated demand for long day care from the population of children aged under 5 based on state benchmarks for participation and attendance and the specific socio-demographic characteristics of the major catchment area.

Resident Demand for long day care in the major catchment is estimated at 399 places. This has been estimated based on an assumed Long Day Care Participation Rate of 45% (slightly below the Queensland average of 50%) and an Attendance Rate of 3 days per week (60% full-time).

Resident Demand is forecast to increase at a rate of approx. 0.97% to 3.30% per annum, depending on the participation rate, which equates to an increase of between 19 to 66 places (4.85% to 16.50%) over the next five years to 2023.

Non-resident Demand (from the working population) is estimated at 49 places.

Total Demand is estimated at 448 places and forecast to increase by 26 - 74 places (5.75% - 16.60%) over the next five years to 2023.

----- HISTORIC, CURRENT & FORECAST DEMAND FOR LONG DAY CARE -----										
	2016		2018		2023		2023		Change (2018-23)	
	(actual)		(estimate)		(low forecast)		(high forecast)		(low - high)	
	No.	%	No.	%	No.	%	No.	%	No. total	% p.a.
Total Population	22,466	100.00%	22,976	100.00%	24,092	100%	24,092	100%	1,115	0.97%
Children Aged 0 - 4	1,473	6.56%	1,478	6.43%	1,549	6.43%	1,549	6.43%	72	0.97%
Estimated Participation Rate *	45%		45%		45%		50%		-	-
Children Attending Long Day Care	663		665		697		775		32 - 110	0.97% - 3.30%
Attendance Rate #	60%		60%		60%		60%		-	-
Resident Population Daily Demand	398		399		418		465		19 - 66	0.97% - 3.30%
Net Demand Loss/Gain	0		0		0		0		-	-
Working Population Daily Demand	45		49		55		58		6 - 9	2.61% - 3.48%
Total Estimated Daily Demand	443		448		474		522		26 - 74	1.15% - 3.32%

*Estimated Participation Rate – The participation rate is the number of children aged under 5 that attend long day care and is typically based on a Queensland average of 50%. The figure used for the major catchment is slightly below this average. The forecast participation rate is expected to range from 45% (on par with the current estimate) to 50% (high forecast) by 2023.

Attendance Rate – Data from the Office of Early Childhood Education & Child Care shows that the average time that a child spends in long day care is approx. 28 hours per week. This rate of attendance has been relatively stable for a number of years. For the purposes of this report, it is assumed that the average attendance rate of children at long day care is 3 days per week or 60% full-time.

Source: ABS, State & Local Government Population Forecasts & estimates calculated by Business Geographics.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

NEEDS ASSESSMENT – LONG DAY CARE

This section provides an assessment of whether there is any unmet demand (undersupply) or oversupply of long day care services within the major catchment area.

CHILDCARE MARKET OVERVIEW

At present (November 2018), there are six (6) long day care centres in the major catchment supplying a total of 529 places to an estimated resident market of 1,478 children under 5 and a non resident workforce population of 4,600 persons. This represents a relatively well-supplied ratio of 2.79 (resident) children per place.

The average occupancy rate is estimated at 84.70% which suggests a relatively BALANCED market in which most parents should be able to find a place for their children in the local area, although not necessarily at their preferred centre. At the same time the majority of centres should be achieving benchmark returns.

This assessment is supported by a telephone survey to centres in the major catchment, which revealed that, for children over 2, three (3) centres reported VACANCIES and three (3) centres reported LIMITED or VERY LIMITED VACANCIES. Places were more limited for children under 2, although this is typical in most markets due to higher staffing ratios and fewer places offered.

With no centres within 1 km radius of the subject site, it is likely that currently underlying demand in this radius is being met by centres elsewhere in Deception Bay. Evidence of this is that there were Limited Vacancies reported at Bay Explorers Deception Bay childcare centre and Community Kids Child Care and Education Hub - Deception Bay, which are the nearest two (2) centres.

FORECAST CHILDCARE DEMAND

Assuming no change in the participation rate (low forecast) and steady growth in the number of full-time workers, demand in the major catchment is expected to grow by an additional 26 places (5.75%) in the 5 years to 2023. That said, there is scope for an increase in the participation rate (in response to increased supply) as well as for additional employment growth within the major catchment. Assuming an increase in the participation rate (50%) and a high-growth employment scenario (5,400 workers to 2023), total demand could potentially increase by up to 74 places (16.60%) to 2023.

It is therefore estimated that the market could support an additional 60 to 120 places by 2023 without creating a significant long term oversupply of places. This scenario is shown in the table below. The market could maintain a BALANCED relationship between demand and supply if no more than 120 places are added over then next five (5) years to 2023.

----- NEEDS ASSESSMENT TABLE -----						
	2016	2018	2023*		Change (2018-23)	
	(actual)	(estimate)	(low forecast)	(high forecast)	(low – high)	
	No. %	No. %	No. %	No. %	No.	%
Estimated Daily Demand for LDC	443	448	474	522	26 - 74	5.75% - 16.60%
Estimated Daily Supply of LDC	529	529	589	649	60 - 120	11.34% - 22.68%
Average Estimated Occupancy Rate**	83.65%	84.70%	80.44%	80.50%		
Needs Assessment	BALANCED	BALANCED	BALANCED	BALANCED		

*2023 - This allows for population growth to 2023 and assumes an increase in the supply of places by 60 - 120 places.

** Average Estimated Occupancy Rate across the entire Catchment. Average Occupancy Rates over 85% indicate some supply restriction, whilst rates below 75% suggest some oversupply. 80% is considered to be balanced.

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CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

FORECAST CHILDCARE SUPPLY

However, there is very strong interest in the area from childcare developers and a significant proposed development pipeline with one (1) pending and three (3) approved applications in Deception Bay.

The total increase in supply (if all proposed projects proceed as planned) would be 548 places (A 103.59% increase on 2018 levels). This compares to the projected increase in children aged under 5 of only 4.85% over the same period. Considering the existing supply of places (as at November 2018) is meeting current levels of demand, a significant oversupply of childcare in Deception Bay appears inevitable. Indeed, an analysis of the childcare supply pipeline has identified that a SIGNIFICANT OVERSUPPLY of childcare places is forecast in Deception Bay within 12 months.

The expected delivery of an additional 228 places by the end of 2019 (Based on the opening of Pocket Rockets Early Learning (127 places) and Play and Learn Deception Bay (101 places) by the end of 2019 will push the market into SIGNIFICANT OVERSUPPLY with average estimated occupancy rates forecast to drop to <60%. Moreover, with the population of children aged under 5 forecast to increase by only 4.85% over the next five (5) years, market conditions are not expected to improve in the short to medium term.

The table below examines the impact on average occupancy rates of the forecast childcare supply in Deception Bay.

- The 2020 forecast shows the impact of the delivery of Play & Learn & Pocket Rockets through 2019.
- The 2023 forecasts show the impact if Natureplay ELC opens (low forecast) and Flegg Street ELC (high forecast).

Childcare Occupancy Assessment Table: Economic Effect of Increase in Supply					
	2016	2018	2020	2023	2023
	(actual)	(estimate)	(forecast)	(low forecast)	(high forecast)
Assessed Demand (Places)	443	448	454	474	522
Supply (Places)	529	529	757	957	1,077
Estimated Average Occupancy (%)	83.65%	84.70%	59.97%	49.5%	48.5%
ASSESSMENT OF MARKET	BALANCED	BALANCED	SIGNIFICANT OVERSUPPLY	CRITICAL OVERSUPPLY	CRITICAL OVERSUPPLY

ECONOMIC IMPACTS OF PROPOSED SUPPLY

It is Business Geographic’s view that the future delivery of the Natureplay Early Learning Centre (200 places) will result in a CRITICAL OVERSUPPLY of long day care and undermine the economic viability of other existing (and proposed) childcare centres in Deception Bay.

The proposed Natureplay Early Learning Centre alone represents a large 37.8% increase in supply (200 places) compared to current levels. An increase in supply of this magnitude would be expected to have profound and long-term adverse impacts on existing supply. It would create a highly competitive environment in which average occupancy rates would decline significantly (<50%). In this environment some operators would trade below levels required to maintain profitability. This may ultimately result in some rationalisation of supply.

Approval of the proposed Natureplay Early Learning Centre would likely undermine the economic viability of the three (3) other approved childcare developments in Deception Bay. In particular, these impacts would be most acutely felt by the subject site “Pocket Rockets Early Learning Centre” which is located less than 1km from the subject site.

It should also be noted that if the Natureplay Early Learning Centre was to proceed in addition to other developments, a CRITICAL OVERSUPPLY is likely which will persist over the long term (ie. beyond 2023). A CRITICAL OVERSUPPLY may also adversely affect childcare markets in surrounding areas such as Burpengary, Morayfield, Rothwell and even parts of North Lakes with operators repricing/ providing incentives to meet the market to attract demand from outside of the catchment. This repricing or implementation of enrolment incentives will lower benchmark returns for operators in these areas and will affect profitability over the medium to long term.

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CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

NEEDS ASSESSMENT

It's Business Geographic's view that the proposed Natureplay Early Learning Centre development is not required to meet the current or future needs for long day care in the local area. There are already three (3) approved childcare developments in Deception Bay which are more than sufficient to meet the forecast needs of the area.

It is noted that the Play and Learn Deception Bay (101 places) is currently under construction and due for completion in early 2019, and the subject site (Pocket Rockets ELC) will be delivered by the end of 2019. Together these developments will add 228 places to supply by the end of 2019 – an increase in supply of 43.1% on 2018 levels.

Even without the delivery of 200-place Natureplay Early Learning Centre, which is nearly as large as the combined size of supply due for completion in 2019, the market will be in state of SIGNIFICANT OVERSUPPLY, with some existing centres likely to be performing below levels required to operate profitably.

The proposed Natureplay Early Learning Centre will have significant adverse impacts on the existing (and proposed) childcare network and will undermine the economic viability of these centres. These impacts may persist over the long-term and also adversely impact childcare markets in surrounding areas.

These negative economic impacts far outweigh any potential community benefits of the proposed development.

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APPENDIX 1 - TERMS USED IN THIS REPORT

ATTENDANCE RATE

Data from the **Report on Government Services (2016) prepared by the Productivity Commission (Volume B Chapter 3 Early Education & Care)** reveals that the average time that a child spends in long day care is approximately 28 hours per week (out of a typical 50 hour week). This rate of attendance has been relatively stable for a number of years. For the purposes of this report, it is assumed that average attendance rate of children at long day care is 30 hours or 3 days per week or 60% of full-time. It's also worth noting that attendance is not consistent throughout the year as children tend to enter and leave care at different points of the year, depending on the family's circumstances. The number of children that use long day care across a given year is therefore greater than the number using care at any point in time.

BALANCED MARKET

A BALANCED Market is where current levels of supply are MEETING current estimated levels of demand. There are long day care places available within the local area for parents that need care for their children. At the same time, the majority of centres will have solid occupancy rates and be achieving benchmark returns. A Balanced Market is typically evidenced by an average estimated occupancy rate close to 80%, a ratio of children (aged under 5) per long day care place of between 3:1 and 4:1 (in metropolitan markets - higher in regional markets) and reports of LIMITED VACANCIES at existing centres.

ESTIMATED AVERAGE OCCUPANCY RATE

This figure represents a statistical estimate of the occupancy level at all existing centres in the catchment area. It is calculated by dividing the total estimated daily demand by the observed daily supply of places. The Office of Early Childhood Education & Child Care collects data on vacancies for long day care centres on a quarterly basis. Trend data for the past two years shows average occupancy rates nationally at between 75% and 80%. For the purposes of this report, Average Occupancy Rates over 85% indicate RESTRICTED SUPPLY, while more than 100% indicates an UNDERSUPPLY. Rates below 75% suggest a tendency to some oversupply while rates less than 70% indicate an OVERSUPPLY. An estimated average occupancy rate of 80% tends to indicate a BALANCED market.

HIGH FORECAST SCENARIO

This scenario assumes the occurrence of one or more events which may boost future Demand for long day care through increased participation rates. Some of these events may include but are not limited to: greater levels of social assistance (payments to families to help cover the cost of childcare), growth in female labour participation (specifically those with dependent children), an increase in the working population traveling to (or through) the catchment (that utilise services in the catchment), an increase in the real household disposable income (households with higher disposable incomes are more likely to be able to afford childcare services), an increase in the Supply (e.g. a new centre) and/or enhancements to the current Supply (renovations or refurbishments), increasing choice and attracting parents seeking modern or purpose-built facilities.

MAJOR CATCHMENT AREA

The Major Catchment Area used in this report is the expected catchment area for the subject site. In excess of 80% of enrolments are expected to originate from within this Catchment Area. The boundary of a relevant Catchment Area is assessed by taking into account the unique geographic characteristics of each site. Research conducted by Business Geographics reveals that a 2km – 3km catchment is typical in a metropolitan market, whilst slightly larger catchments are found in regional areas. Unless otherwise stated, the demographic statistics provided in this report relate to the defined major catchment area.

OVERSUPPLIED MARKET

An OVERSUPPLIED market is where current levels of supply are EXCEEDING current estimated levels of demand. Some, if not all centres, will have difficulty achieving benchmark returns. Occupancy rates are lower than the benchmark – typically < 70%, and the ratio of children aged under 5 per long day care place is typically < 3:1 (in metropolitan markets – but can be higher in regional markets). Centres in the local area will report VACANCIES across a broad range of age groups, including for children under the age of 2. Places in this age group are typically the most restricted even in a balanced market, so markets with low occupancy rates for children under 2 are typically OVERSUPPLIED.

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CHILDCARE SUPPLY ANALYSIS - DECEPTION BAY QLD

PARTICIPATION RATE

According to the **Report on Government Services (2016) prepared by the Productivity Commission (Volume B Chapter 3 Early Education & Care)** an estimated 45% of children aged 0 – 5 attend long day care nationally.

This figure varies from state to state and forms the basis for calculating the estimated participation rate in the local catchment area – that is, the number of children that attend long day care. Average participation rates are highest in QLD and ACT (50%), about average in NSW (45%), slightly lower in VIC, SA and TAS (40%) and lowest in WA and NT (30%). Participation Rates in a local market may vary from state benchmarks depending on the specific socio-demographic characteristics of the local market. A well-supplied market with a high proportion of children aged under 5 and higher labour-force participation rates could be expected to have a higher long day care participation rate than an under-supplied market with few children.

Interestingly, long day care participation rates are typically lower in communities with high proportions of persons from Non-English-Speaking Backgrounds and in Regional areas. However low income families tend to have higher long day care participation rates than average.

POTENTIAL ADDITIONAL MARKET NEED

Potential Additional Market Need is the number of additional places the market demands, and could potentially support, without creating a significant long-term oversupply. This is indicative only and assumes a constant participation rate. An assessment of need should not be interpreted in isolation as an assessment of the commercial feasibility for centre development, acquisition or disposal.

RATIO OF CHILDREN (AGED UNDER 5) PER LONG DAY CARE PLACE

This is a useful indicator of the local long day care market. A ratio of less than 3:1 will often be found in markets that are OVERSUPPLIED. A ratio greater than 4:1 can sometimes indicate a market that has some restricted supply. It's worth noting that ratios in regional areas with a BALANCED market are often higher than those in metropolitan areas.

UNDERSUPPLIED MARKET

A market that is UNDERSUPPLIED has fewer places available than demanded – that is, demand EXCEEDS supply. Such a market is characterised by very high occupancy rates (in excess of 85%) and a relatively high ratio of children aged under 5 per long day care place supplied – often > 4:1 (in metropolitan markets – but can be higher in regional markets).

In an undersupplied market, not all parents are able to meet their childcare needs locally and may have to look outside of the local area (Primary Catchment) to obtain care or make alternative arrangements. This may mean utilising informal care providers such as Family Day Care or relatives (extended family).

It's worth noting that an undersupply of suitable long day care may also result in lower than expected take-up rates with new mothers choosing to defer a return to work.

VACANCY RATES REPORTED BY LONG DAY CARE CENTRES

Vacancy Rates reported by centres in the telephone survey are classified into three categories depending on the perceived availability of places. These Vacancy Rates are estimated based on the response of centre staff to an enrolment enquiry. It's important to note that Vacancies for children under 2 tend to be more restricted than for older children but this is typical of most markets.

A centre that is classified as having NO VACANCIES has no places available for any age groups or on any days. Centres with NO VACANCIES have 100% occupancy and will often run a waiting list for future enrolments.

A centre that reports LIMITED VACANCIES will typically have some vacancies either for specific age groups or on selected days only. Centres with LIMITED VACANCIES are likely to have occupancy rates in excess of 70% but less than 100%.

A centre that reports VACANCIES has one or more places available on all days for the nominated age group. Centres with VACANCIES will often have occupancy rates of less than 70%.

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Our Ref: PR18189

Date: 19 November 2018

Michael Niven

Via Email - amniven@bigpond.net.au

Dear Michael,

RE: REVIEW OF THE ECOLOGICAL AND BUSHFIRE ASSESSMENT FOR THE PROPOSED DEVELOPMENT AT 54-66 OLD BAY ROAD, DECEPTION BAY

Please find herewith our assessment regarding the ecological and bushfire matters for the site at 54-66 Old Bay Road, Deception Bay.

We understand that a proponent has submitted a development application for the construction of a Childcare Centre over the above site. Green Tape Solutions was commissioned to undertake an assessment of the potential impact of the development with respect to the ecological and bushfire matters of the site and provide expert advice regarding the reports prepared by S5 Environmental.

As part of our scope of work, we reviewed the following reports:

- Detailed Ecological Assessment report prepared by S5 Environmental dated 20th August 2018 (Reference S50374ER001 REVB);
- Natural Hazard Bushfire Assessment report by S5 Environmental dated 20th August 2018 (reference S50374ER002 REVB);
- Tree Retention Plan prepared by S5 Environmental dated 20th August 2018; and
- Proposed Childcare Development Plan prepared by Whiteroom Architects dated 18 September 2018.

The following sections outline keys environmental matters that are of great concern for the site and surrounding area.

1. Review of the S5 Environmental Detailed Ecological Assessment Report

- S5 Environmental did one-day site investigation and did not confirm the presence of any threatened fauna or flora species on site. Section 4.3.2 of their ecological report states that *'no evidence of Koala activity was found and due to the surrounding level of development it would be unlikely that the Koala would occur'*. The Wildlife Online extract for the site revealed that there has been 73 Koalas sightings recorded within a 1 km radius of the site. We have also undertaken a site investigation of the surrounding area (access on site was not permitted) on 16th November 2018 and found evidence of the presence of Koala (e.g. fresh scats on the edge of the trees and within the waterway corridor and Koala scratches on the numerous trunks).
- S5 Environmental did not undertake the appropriate Koala survey as per the *Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) referral guidelines for the vulnerable koala* (DoEE, 2014). These guidelines require the use of the Spot Assessment Technique (SAT) which consists of

Green Tape Solutions | ACN 162 130 627 | ABN 20 162 130 627
PO BOX 222, Moggill, QLD, 4070 | PO BOX 282, Morayfield, QLD, 4506 | www.greentapesolutions.com.au
Telephone: 07 5428 6372 | Email: kelly.matthews@greentapesolutions.com.au

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a tree-based sampling methodology that provides presence/absence data. This method is used to gather comparative data regarding Koala habitat usage and preference. Due to the large number of Koala records obtained from the Wildlife Online search for this area, SAT surveys should have been undertaken and data recorded by S5 Environmental. While their field methodology outlines that random meanders were undertaken during the site visit, the SAT would have been able to capture more information on the presence of Koala scats on site.

- A non-juvenile Koala habitat tree is defined by the *Planning Regulation 2017* as:

a Koala habitat tree (Corymbia, Melaleuca, Lophostemon or Eucalyptus genera that is edible by Koalas; or a tree of a type typically used by Koalas for shelter, including, for example, a tree of the Angophora genus) that—

(a) is more than 4m tall; or

(b) has a trunk with a circumference of more than 31.5 cm, measured at 1.3 m above the ground.

The tree retention plan provided by S5 Environmental only includes Koala habitat trees that are 150 mm diameter at breast height (DBH). The tree survey should have included all non-juvenile Koala trees with >100mm DBH. It is highly likely that the number of non-juvenile Koala trees on site was underestimated and will be removed as part of the development.

- The report refers to the *Land Protection (Pest and Stock Route Management) Act 2002* (LPA) and the *Biosecurity Act 2014*. The latter supersedes the LPA and provides details of the seven categories of restricted matters in Queensland (QLD). The ecological report is erroneous and should be updated to reflect the current Qld environmental legislation.
- The proposed clearing is over 80% of the site area, including a large proportion of the site outside of the development footprint. The report does not justify this excessive clearing.
- As required under the QLD Environmental Offset Policy, the ecological report has not demonstrated that the development has been designed to avoid the loss of habitat for threatened fauna species in the first place. Avoidance should be demonstrated by providing for the retention of a greater number of non-juvenile Koala trees on the site. Mitigation shall be provided through the proposed rehabilitation of the waterway corridor and resultant improvement of ecological connectivity. An offset should be provided for all residual impact on Koala habitat in accordance with the Qld Environmental Offset Policy.
- The proposal encroaches (through cut and fill) the Q100 creek flood inundation area.
- The ecological report outlines that the site is composed of stand of trees that function largely in isolation with other adjacent remnant patches of vegetation. While the waterway is man-made, it has been significantly revegetated and provides good habitat and connectivity for wildlife movement across the landscape. In particular, there is evidence that wildlife movement occurs north-south to the adjacent vegetation patches. While the road could present some barriers, the existing culvert under Thompson road supports this wildlife movement and additional measures could be taken into consideration to increase and improve this movement. Indeed, ecological connectivity would benefit from having mammal poles and ropes connecting canopy vegetation from both vegetated sites on either side of Thompson road.

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- The table mentioned that an assessment of the development impacts on threatened flora and fauna species is provided in Section 5.3.2. This section is missing from the report. The only assessment provided on the presence of threatened flora and fauna is Table 1, which provides the likelihood of occurrence for each threatened species listed as potentially occurring on site. This table does not provide any assessment of the desktop review, in particular it does not address nor justify the number of Koala sightings recorded by others. A detailed Koala population analysis for the site and surrounding area should be provided to understand the true impact of the development on the survival and viability of this local population.

2. Review of the S5 Environmental Nature Bushfire Hazard Assessment Report

- The bushfire hazard units (BHU) provided in S5 Environmental's bushfire report is significantly different to the vegetation communities described in their ecological report. As a consequence, the S5 Environmental bushfire report misrepresents the hazard score associated with the vegetation communities on site. The ecological report illustrates that the majority of the site (Vegetation community 1) consists of *Eucalyptus racemosa* Open Forest which has a hazard score of 8. However, the bushfire report states that the grassy Eucalypt community dominates the site's vegetation which has a hazard score of 6 is dominant. There are inconsistencies between the S5 Environmental ecological and bushfire report.
- BHU 4 (Scribbly gum forest) has been assessed and confirmed as Medium Bushfire Hazard by S5 Environmental. This vegetation covers most of the site and is also occurring in proximity (north) of the development. The bushfire assessment assumes that the entire site will be cleared of vegetation and does not take into consideration the vegetation within the waterway, which is also connected to medium bushfire hazard vegetation. S5 Environmental's assessment also does not take into consideration the requirement to improve and rehabilitate the waterway corridor which is directly connected to a larger patch of vegetation.
- The S5 Environmental bushfire report refers to previous / superseded legislation related to bushfire assessment which creates some confusion within the bushfire hazard assessment. For instance, the report uses the superseded Draft State Planning Policy (SPP) Guidelines 1/03 Mitigating the Adverse Impact of Flood, Bushfire and Landslide (SPP 1/03). We understand that Moreton Bay Regional Council's bushfire planning scheme policy has been prepared in accordance with the State Planning Policy (December 2013) and associated Draft SPP Guideline. With the SPP Guideline having been finalised in 2017, the most recent guidelines should be used. The S5 Environmental bushfire report also refers to the 'Australian Standard (AS 3959 – 1999) Building in Bushfire Prone Areas' instead of the most recent AS - Australian Standard (AS 3959 – 2009) Construction of buildings in bushfire-prone areas'. The report does not provide accurate information based on the most current standards and has assessed the site's bushfire risks and hazard against the older superseded standard.
- While the current development layout provides sufficient bushfire buffer to the proposed retained vegetation (e.g. construction of parking and road access between the building and the waterway), the proposed management of vegetation outlined in the bushfire management plan is inconsistent with the recommended rehabilitation work of the waterway corridor. Rehabilitation of the waterway shall be provided to improve ecological values of the riparian vegetation community. This will likely increase

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the level of bushfire hazard and an assessment of the vegetation taking into consideration the rehabilitated in its fully mature state should be provided in the report.

3. Assessment of the development against the Moreton Bay Regional Council Planning Scheme

The site is mapped within the General residential zone – Suburban neighbourhood precinct under the Moreton Bay Regional Council Planning Scheme. It is mapped within the following environmental overlays:

- Bushfire hazard;
- Environmental areas; and
- Riparian and Wetland Setbacks.

Consequently, the development is required to comply with the following codes:

- Part D of the General residential zone code – Criteria for assessable development in the 6.2.6.2 'Suburban neighbourhood precinct'.

Table 1 illustrates the area of non-compliance from an ecological perspective.

Table 1: Assessment against the General Residential Code (Environmental sections only)

Performance outcomes	Assessment of compliance
Clearing of habitat trees where not located in the Environmental areas overlay map	
<p>PO15</p> <p>a. Development ensures that the biodiversity quality and integrity of habitats is not adversely impacted upon but maintained and protected.</p> <p>b. Development does not result in the net loss of fauna habitat. Where development does result in the loss of a habitat tree, development will provide replacement fauna nesting boxes at the following rate of 1 nest box for every hollow removed. Where hollows have not yet formed in trees > 80cm in diameter at 1.3m height, 3 nest boxes are required for every habitat tree removed.</p> <p>c. Development does not result in soil erosion or land degradation or leave land exposed for an unreasonable period of time but is rehabilitated in a timely manner</p>	<p>Not compliant with PO15</p> <p>Green Tape Solutions' field assessment and desktop review revealed the presence of threatened fauna species on site – Koala listed as Vulnerable under the <i>Nature Conservation Act 1992</i> and EPBC Act. Currently, the proposed development will require the removal of more than 80% of site vegetation, including a large proportion of non-juvenile Koala trees. The development will result in the net loss of fauna habitat and does not propose for any offset or compensation in accordance with the local, state or commonwealth legislation.</p>
<p>PO36 - The clearing of vegetation on-site:</p> <p>a. is limited to the area of infrastructure works, building areas and other necessary areas for the works; and</p> <p>b. includes the removal of declared weeds and other materials which are detrimental to the intended use of the land;</p>	<p>Not compliant with PO36</p> <p>The development proposes the removal of most of the vegetation within the site, including the vegetation north of the proposed childcare centre which is not justified. The clearing of this vegetation should be limited to the infrastructure works.</p>

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<p>c. is disposed of in a manner which minimises nuisance and annoyance to existing premises.</p>	
<p>PO42 Development does not result in</p> <ul style="list-style-type: none"> a. adverse impacts on the hydrological and hydraulic capacity of the waterway or floodway; b. increased flood inundation outside the site; c. any reduction in the flood storage capacity in the floodway; d. and any clearing of native vegetation. 	<p>Not compliant with PO42</p> <p>The vegetation on site is dominated by Scribbly gum with large amount of Melaleuca species. which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.</p> <p>The proposed development will require the removal of more than 80% of the vegetation on site which will likely result in the significant reduction of the flood storage for the area and would most likely have significant impact upon the hydrological capacity of the waterway.</p> <p>The development did not provide any mitigation measures to ensure that the current hydrology of the site and water quality is maintained.</p> <p>The development will also result in direct clearing of the vegetation of the wetland which is not compliant with PO 42(d).</p>
<p>PO77 Development provides for safe, unimpeded, convenient and ongoing wildlife movement and establishes and maintains habitat connectivity by:</p> <ul style="list-style-type: none"> a. retaining habitat trees; b. providing contiguous patches of habitat; c. provide replacement and rehabilitation planting to improve connectivity; d. avoiding the creation of fragmented and isolated patches of habitat; e. providing wildlife movement infrastructure 	<p>Not compliant with PO77</p> <p>The S5 Environmental ecological assessment report acknowledges that the site provides some good habitat for a range of wildlife (reptiles, birds and mammals). The site is also directly connected to adjacent large remaining vegetated patches (north and south) through the existing waterway and culvert under Thompson road.</p> <p>The development has failed to demonstrate that significant vegetation (large hollow bearing trees) will be retained and does not propose any improvement of ecological connectivity beyond rehabilitation. Ecological connectivity would benefit from having mammal poles and ropes (wildlife movement infrastructure) connecting canopy vegetation from both vegetated sites on either side of Thompson road.</p>
<p>PO78 Development ensures that the biodiversity quality and integrity of habitats is not adversely impacted upon but maintained and protected.</p>	<p>Not compliant with PO78</p> <p>The development will require the removal of significant amount (more than 80%) of vegetation on site including vegetation outside of the proposed development footprint. Field investigations and a desktop assessment undertaken by Green Tape Solutions has revealed that the site supports threatened fauna species (Koala) and the clearing of the vegetation will be detrimental to the quality and integrity of their habitat. The clearing will result in an adverse impact upon threatened wildlife. No avoidance, mitigation measures or offset is proposed to</p>

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	compensate for the loss of biodiversity and threatened species habitat.
<p>PO80 Development ensures safe, unimpeded, convenient and ongoing wildlife movement and habitat connectivity by:</p> <ul style="list-style-type: none"> a. providing contiguous patches of habitat; b. avoiding the creation of fragmented and isolated patches of habitat; c. providing wildlife movement infrastructure; d. providing replacement and rehabilitation planting to improve connectivity. 	<p>Not compliant with PO80</p> <p>The S5 Environmental report acknowledges that the site provides some good habitat for a range of wildlife (reptiles, birds and mammals). The site is also directly connected to adjacent large remaining vegetated patches (north and south) through the existing waterway and culvert under Thompson road.</p> <p>The development has failed to demonstrate that significant vegetation (large hollow bearing trees) will be retained and does not propose any improvement of ecological connectivity beyond rehabilitation. Ecological connectivity would benefit from having mammal poles and ropes (wildlife movement infrastructure) connecting canopy vegetation from both vegetated sites on either side of Thompson road.</p>
<p>PO82 Development maintains or improves the quality of groundwater and surface water within, and downstream, of a site by:</p> <ul style="list-style-type: none"> a. ensuring an effective vegetated buffers and setbacks from waterbodies is retained to achieve natural filtration and reduce sediment loads; b. avoiding or minimising changes to landforms to maintain hydrological water flows; c. adopting suitable measures to exclude livestock from entering a waterbody where a site is being used for animal husbandry and animal keeping activities. 	<p>Not compliant with PO82</p> <p>The vegetation on site is dominated by scribbly gum with large amount of melaleuca species which contributes to flood mitigation within the site and is essential to maintain the hydrological and hydraulic capacity of the adjacent waterway /floodway.</p> <p>The proposed development will require the removal of more than 80% of the melaleuca vegetation community on site which will likely result in the significant reduction of the water quality of surface water for the area and would most likely have significant impact upon the hydrological capacity of the waterway.</p> <p>The development failed to provide any mitigations measures to ensure that the current hydrology of the site and water quality is maintained.</p>
<p>PO85 Development minimises potential adverse 'edge effects' on ecological values by:</p> <ul style="list-style-type: none"> a. providing dense planting buffers of native vegetation between a development and environmental areas; b. retaining patches of native vegetation of greatest possible size where located between a development and environmental areas ; c. restoring, rehabilitating and increasing the size of existing patches of native vegetation d. ensuring that buildings and access (public and vehicle) are setback as far as possible from environmental areas and corridors; e. landscaping with native plants of local origin. 	<p>Not compliant with PO85</p> <p>The proposed development will require the removal of more than 80% of the vegetation on site and S5 Environmental's ecological report has not addressed the impacts of edge effects on the site's ecological values. The report fails to recognise the presence of threatened fauna species (Koala)</p> <p>The clearing will result in an adverse impact upon threatened wildlife. No avoidance, mitigation measures or offset is proposed to compensate the loss of biodiversity.</p>

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<p>PO87 Where development results in the unavoidable loss of native vegetation within a Value Offset Area MLES waterway buffer or a Value Offset Area MLES wetland buffer, an environmental offset is required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas.</p>	<p>Not compliant with PO87</p> <p>The site is mapped as having MLES waterway buffer or a Value Offset Area MLES wetland buffer along the eastern side (waterway corridor). However, there is strong evidence that the mapped MLES should cover the whole site due to the presence of threatened fauna species. An environmental offset shall be required in accordance with the environmental offset requirements identified in Planning scheme policy - Environmental areas. This has not been proposed by the proponent.</p>
<p>Riparian and wetland setbacks (refer Overlay map - Riparian and wetland setback to determine if the following requirements apply)</p>	
<p>PO115 Development provides and maintains a suitable setback from waterways and wetlands that protects natural and environmental values. This is achieved by recognising and responding to the following matters:</p> <ol style="list-style-type: none"> a. impact on fauna habitats; b. impact on wildlife corridors and connectivity; c. impact on stream integrity; d. impact of opportunities for revegetation and all other wetlands. rehabilitation planting; e. edge effects. 	<p>Not compliant with PO115</p> <p>The proposed level of vegetation retention is inadequate and fails to provide and maintain a suitable setback from waterways and wetlands that protects natural and environmental values.</p> <p>The ecological values of the site have been significantly under-valued by the proponent and the ecological report fails to recognise and respond to the following matters:</p> <ol style="list-style-type: none"> a. impact on fauna habitats; b. impact on wildlife corridors and connectivity; c. impact on stream integrity; d. impact of opportunities for revegetation and all other wetlands. rehabilitation planting; e. edge effects.

4. Assessment of the development against the *Planning Act 2016* and *Nature Conservation Act 1992*

While the site is not mapped within a Koala Assessable Development Area, the presence of Koala on the site was confirmed (recent scats and scratches on trunk and 73 sightings within 1 km of the site). We understand that errors in the State mapping can occur however, where Koala habitat and the presence of Koala is confirmed on a site, the following measures should be put in place:

- Provision of a species management plan to meet the requirements of the NC Act;
- Assessment against the State Planning Policy, including demonstration of how the development avoids, mitigates and offset the loss of threatened fauna species habitat.

The site design must avoid clearing of non-juvenile Koala habitat trees in bushland and rehabilitation areas. Any unavoidable clearing requires appropriate offset planting of Koala habitat. The applicant has ignored this requirement. As a general comment, the applicant could avoid the removal of vegetation by better incorporating existing Koala habitat trees within the layout and retaining all vegetation north of the proposed buildings. The applicant has made no effort to retain significant vegetation within the development footprint.

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5. Assessment of the development against the Commonwealth EPBC Act

- S5 Environmental did not undertake the appropriate Koala survey as per the EPBC Act referral guidelines for the vulnerable Koala. The guidelines require the use of SAT surveys which consists of a tree-based sampling methodology that provides presence/absence data.
- A large number of Koala records are recorded within the Wildlife Online database search for this area (73 sightings within 1km of the site). The presence of Koala was also confirmed on and surrounding the site during Green Tape Solutions' field investigation (e.g. fresh scats and scratches were confirmed present directly adjacent to the site). A detail assessment of the development's impact on the local Koala population must be provided against the EPBC Act referral guidelines for the vulnerable Koala and the EPBC Significant Impact Guidelines 1.1 - Matters of National Environmental Significance.
- Koala populations within Moreton Bay Regional Council area are in decline due to dog attack, habitat clearing and disease. All remaining patches of vegetation must be retained to sustain the last remaining populations of Koalas. If vegetation clearing is proposed, a detailed Koala population analysis should be undertaken to accurately define the impact of the development on this population.

6. Conclusion

The site contains a large number of non-juvenile Koala trees. Large-scale tree removal for remaining local bushland should not be supported. The development proposal does not adequately justify the loss of biodiversity values and Koala habitat on the site, in particular the vegetation north of the proposed development.

The proposal ignores the extent of the waterway corridor lines, and the Q100 creek flood line has not been clearly plotted. The applicant has made limited effort to protect the waterway or provide a reasonable buffer from the development as require in the Riparian and Wetland Setbacks Code.

The ecological report mentioned that the site provides 'substantial habitat for reptiles', 'supports large amount of hollow-bearing trees with tree larger than 800mm DBH', and 'the remnant vegetation [...] provides refuge for a host of species due to its maturity, and the presence large Scribbly and Forest Red Gums onsite' (sic). It is evident that the vegetation on site provides significant habitat value for wildlife. The reduction of significant vegetation and food sources has already impacted on the biodiversity present within the area and further development will result in major biodiversity loss which is not acceptable. The loss of habitat should be avoided, mitigated and offset to meet the legislative requirements.

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Considering the ecological report provider has not undertaken a fauna survey and therefore ignores the extent of biodiversity present on site, this application should not be supported.

We trust that the above information satisfies the bushfire conditions associated with this development. Should you have any queries regarding this matter, please do not hesitate to contact me.

Yours sincerely



Kelly Matthews

Director

Green Tape Solutions

Curriculum Vitae Attached below

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KELLY MATTHEWS

Director – Environment

Masters in Environmental Management, Griffith University, Queensland
Masters in Ecology and Biology of Populations and Ecosystems, Lille University, France
Accredited Prince2 Project Management
Certified Environmental Practitioner (EIANZ)

AREAS OF EXPERTISE

Kelly is a consultant with 17 years professional experience across a wide range of industries and locations, within both government and private sectors. Her core skills comprise the development of environmental strategy, ecological flora and fauna assessment, development and implementation of environmental management plans, provision of technical and specialist advice on ecological constraints and environmental legislation.

Kelly completed and reviewed over 2,000 technical reports, including Environmental Impact Statement (EIS) - Ecology chapters and appendices and Fauna and flora Management Plan. She has conducted a number of fauna surveys and monitoring programs and contributed to numerous ecological assessment reports across Australia and internationally including New Caledonia and Europe. Kelly has worked as an environmental advisor and undertook approvals and ecological activities to support infrastructure, development approvals and associated processes. Along with her highly qualify technical skills, Kelly has sound knowledge of the environmental legislation and gained excellent understanding of Commonwealth, State and Local government requirements which make her the perfect candidate to achieve favourable outcomes for clients. She has vast experience in delivering practical outcomes and management plans that aim to deliver sustainable solutions for clients and the natural environment.

- Environmental planning, survey and assessment
- Ecological (flora/fauna) Survey and Biodiversity Assessment and Monitoring
- Environmental Impact Statement (EIS)
- EPBC referrals and field reports
- Offset Strategy and Management Plan
- Fauna Management Plan
- Environmental Management Plans
- Environmental Risk Assessments
- Vegetation Management Plan and Monitoring
- Rehabilitation Management Plan and Monitoring
- Pre-clearance Surveys, including Threatened Species, Weed Identification and Inspection of Animal Breeding Places
- Bushfire Assessment/Management Plan
- Qualified Fauna Spotter Catcher
- Wildlife Carer (specialised in microbats)
- Koala Spotter and Other Threatened Fauna Species Survey and Monitoring
- Significant Species Management Plan
- Quality, Safety and Environmental Systems Audits and Reporting.

RELEVANT PROJECT EXPERIENCE

Fauna Spotting

- Fauna spotting activities include identifying the presence of fauna species and using best practice methods for the safe and ethical relocation of fauna prior to and during clearing operations. Recent activities include:
 - Miles, site work/development clearance – 05/10/2017 to 15/10/2017
 - Moranbah, 50km pipeline and site work clearance – 10/02/2016 to 28/02/2016

Co FX Pty Ltd trading as Green Tape Solutions - ACN 162 130 627 - ABN 20 162 130 627
PO BOX 222, Moggill, QLD, 4070 - www.greentapesolutions.com.au
Telephone: 0423 081 428 - Email: kelly.matthews@greentapesolutions.com.au

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- Miles, 45km pipeline clearance – 6/10/2014 to 28/11/2014
- Development site clearance across Qld – 2010/Ongoing (more than 20 sites per year)

Expert Witness

Kelly has advised clients on environmental and development approvals and planning appeals. She has also advised on the interpretation of planning schemes and related legislation, compensation issues and environmental compliance and enforcement issues. Kelly has assisted senior expert witness with technical issues that arise throughout a development or project, including with respect to grounds for refusal, approval requirements or defending enforcement/prosecution actions. She has helped with the provision of evidence, reporting (join report) for development /project and Councils. Some of Kelly's experience, includes:

- o Fauna and Flora (Residential Development) - Moggill rd, Moggill/Brisbane City Council - P&E Court Advice - 2013/2014
- o Fauna and Flora (Residential Development) Lacey road Bald Hills/Brisbane City Council - P&E Court Advice – 2013
- o Fauna (Master-planned Development) – Rainbow Shores - P&E Court Advice – 2012/2013
- o Ecological Assessment (Subdivision for residential development) – Karawatha/Brisbane city Council - P&E Court Advice – 2007

URBAN DEVELOPMENT AND LINEAR INFRASTRUCTURE PROJECTS

- **EPBC targeted survey – Stockland Pty Ltd, 2011– Ongoing:** Kelly directed intensive trapping surveys for seven major development projects with Stockland across South East Queensland (each project included 500 to 2,000 lots subdivision). The work was undertaken to identify the potential environmental constraints, opportunities and impacts of the development on EPBC listed species in particular Koala (*Phascolarctos cinereus*), Spotted-tailed Quoll (*Dasyurus maculatus*), Little Pied Bat (*Chalinolobus picatus*) and Brigalow Scaly Foot (*Paradelma orientalis* – now delisted from the EPBC list). Kelly coordinated and supervised fauna trapping following the Federal Government (DoE) guideline. She wrote seven EPBC referrals (six of them resulting in a “Not a Controlled Action” outcome). Kelly developed Ecological Due Diligence reports, Vegetation Management Plans, Environmental Management Plan, Flora and Fauna Management Plans and Biodiversity Offset Strategy for supporting Preliminary Documentation as a result of EPBC Referral. Management plan were used to operational works and helped providing advice on environmental constraints and opportunities for the residential development located in Ipswich, Brisbane, Gold Coast, Sunshine Coast and Rockampton. She undertook and coordinated baseline and threatened flora survey in accordance with the State and Federal Government guidelines and finalised the EPBC referrals. She project managed all ecological reports of the development application and participated in ongoing communication with Local and State Government, Stockland and all contractors, other consultants where necessary.
- **Ecological assessment for EPBC referral – DTMR, 2015-2017:** Principal ecologist responsible for the delivery of Preliminary Documentation regarding an EPBC Act referral for the Bruce Highway Upgrade Project. Kelly project managed the project and supervised technical field investigation including targeted threatened species surveys. The report provided an assessment of all relevant impacts (direct and indirect) on all listed species and communities, specifically addressing Lowland Rainforest of Subtropical Australia (Threatened Ecological Community) and Koalas (listed as Vulnerable). Kelly provides ongoing technical support and liaison with the Federal Government to facilitate fast approval of the project.
- **Environmental Impact Statement, Terrestrial Ecology, Iwasaky, Yeppoon – Iwasaki Sangyo Co. (Aust) Pty Ltd, Completed 2015:** Kelly provided technical ecological advice for the development of the Initial Advice Statement, an EPBC Act referral and the first stage of the Environmental Impact Assessment for the development of

Curriculum Vitae - CONTINUED -

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the Capricorn Integrated Resort. Kelly project managed a team of terrestrial ecology in the field to determine potential impacts associated with the Capricorn Integrated Resort. This report presented results from wet and dry season ecological surveys undertaken within the project development footprint area and provided a preliminary impact assessment based on the conception development plan. Fauna surveys included the use of different trapping techniques such as spotlighting, playback calls, pit fall traps and active searches. In the development of the report, Kelly took particular attention in responding to the TOR and address relevant Commonwealth, State and Local Government relevant guidelines and policies. The report is currently with the client for submission to Queensland Coordinator-General for decision.

- **Environmental Management Plan, Vegetation Management Plan, Koala Management Plan and Bushfire Management Plan, Redhead – Penfold Property Group, Completed 2014** – Kelly project managed the development of a series of Management Plan to meet condition of approval for a residential development (500 lots subdivision). The ecological assessment report, fauna survey and vegetation management plan were prepared in accordance with Sunshine Coast Ecological Assessment Guidelines. The plans were relying upon existing survey data, and five days fauna survey was conducted to determine the existing condition and threatened species habitat of the site. The VMP set the framework for vegetation management actions on site, and included objectives, methods and responsibilities during operational work. The Koala Management Plan was developed in accordance with the *Offsets for Net Gain of Koala habitat in South-east Queensland* policy and the Bushfire Management Plan was designated in accordance with the Australian Standard *AS3959-2009 Construction of buildings in bushfire prone areas*. The offset plan required a detailed survey of all non-juvenile Koala habitat trees (NJKHT), and information on the protection of these species. All management plans included the location and description of all vegetation to be retained and removed, as well as the location of vegetation protection measures to be implemented. Kelly prepared a tree clearing and retention plan for the operational work submission, which was successfully approved by Council and implemented by the operational team.
- **Environmental Restoration Plan at Chinderah – Private Owner, Completed 2014** – Kelly undertook a field survey in preparation of the Environmental Management Plan and Restoration/Offset Plan to assess the current extent of existing vegetation and habitat for threatened species, including Koala, on the site, and determine the scope and area for offset works. The restoration strategy detailed the extent of existing vegetation and locations of the proposed restoration zone, including areas suitable for replanting, weed control works and ongoing maintenance and monitoring requirements. Kelly provided detailed on the restoration works required to stabilise and revegetate areas disturbed during the construction phase as a result of excavation works and other construction activity. The Environmental Management Plan illustrated compliance with the approval condition package and allowed for completion of the development work in a timely manner.
- **Ecological Assessment and Ecological Restoration Plan at Trinity Green – Hatia Property Corporation, Completed August 2013/2014**: Kelly prepared an Ecological Assessment report and provided specialist advice on rehabilitation for the site located in Brisbane City Council. She also organised and supervised a fauna survey, targeting Koalas, and provided specialist advice on the EPBC referral for the site. She developed a Vegetation Management Plan and a Biodiversity Offset Plan to comply with the local legislation, which facilitated the approval of the proposed residential development (62 lots).
- **EPBC Referral, Ecological Assessment at Trinity Green – Hatia Property Corporation, Completed 2013**: Kelly prepared an Ecological Assessment report, threatened fauna management plan and provided specialist advice on rehabilitation/offset for the site located in Brisbane City Council. She organised and supervised a detailed fauna survey, targeting Koala population, and provided specialist advice on the EPBC referral for the site. She developed a Biodiversity Offset Management Plan which facilitated the DA approval of the proposed residential development. The project was declared as “Not a Controlled Action”.

Curriculum Vitae - CONTINUED -

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- **EPBC Referral at Heathwood – Pra Projects Pty Ltd, Completed 2013** – Kelly undertook Koala targeted survey to assess the requirement for EPBC referral in accordance with the relevant Federal guidelines (e.g. using SAT methodology). As part of the development approval, Kelly developed a Flora and Fauna Management Plan and Offset Strategy/Management Plan to comply with the conditions of approval for the reconfiguration of lot (>100 lots). She successfully managed the project through regular meeting and liaison with the project manager and relevant Council's officers. The project was declared as "Not a Controlled Action".
- **Ecological Assessment, Species Management Plan and Rehabilitation Plan – Stockland Pty Ltd, 2014:** Kelly project managed the development and approval by Sunshine Coast City Council and DEHP, of an Ecological Assessment report and a Species Management Plan (SMP) for a water and sewer alignment associated with the Bells Reach Development at Caloundra South. The SMP addressed fauna management during the vegetation clearing and operational work process and ensure that protection and retention of known habitat for the threatened Wallum Froglet (*Crinia tinnula*), Wallum Sedgefrog (*Litoria olongburensis*) and Wallum Rocketfrog (*Litoria freycineti*).
- **Vegetation Management Plan, Koala Management Plan and Bushfire Management Plan, Redhead – Penfold Property Group, 2014** – Senior Ecologist who supervised and facilitated the development of a series of Management Plan required for the site to meet condition of Approval for a residential development. The Vegetation Management Plan set the framework for vegetation management actions on site, and included objectives, methods and responsibilities during operational work. The Koala Management Plan was also developed in accordance with the Queensland Environmental Offsets Policy and the Bushfire Management Plan was designated in accordance with the Australian Standard AS3959-2009 *Construction of buildings in bushfire prone areas*. The development was successfully approved by Council.

ENERGY AND RESOURCES

- **Ecological Assessment and specialist advice for a Solar and Wind Farm, Clarke Creek – Lancour, 2017- Current:** In partnership with NGH, Kelly supervised and managed Commonwealth and State Department applications of the Clarke Creek Wind and Solar Farm at Clarke Creek in Central Far North Queensland. Kelly completed an ecological constraint analysis, which included detailed fauna and flora surveys by foot and with the use of innovative technologies such as the drone. Kelly also participated to the development of the EIS that focused primarily on potential impacts on threatened flora and fauna and World Heritage values. As an expert in the field, Kelly provided advice on key issues including potential impacts to birds and bats due to rotor strike or barotraumas and direct removal of species and habitat for threatened species within the access road and tower footprints.

Kelly is also developing the offset management plan to illustrate compliance with the State and Federal legislation and illustrate compliance with the relevant offset guidelines.

- **Cooper Gap Solar Farm, 2017- Current:** Kelly developed a series of ecological reports including vegetation management plan, bushfire management plan, rehabilitation management plan, weed and pest management plan and offset management plan to demonstrate compliance with the State's conditions of approval for the Coopers Gap Solar Farm. She is currently preparing the bushfire report for the construction of the substation and is in ongoing communication with the State relevant department facilitate the clearing permit.
- **EPBC self-assessment for a Solar Farm at Belli Creek – Solar Choice/First Solar, 2017:** Reviewed and finalised the biodiversity assessment of potential impacts on Matters of National Environmental Significance (MNES), including listed threatened ecological communities (TECs) and listed threatened flora and fauna species, for the Bulli Creek Solar Farm near Millmerran in Southern Queensland. Finalised the EPBC referral.
- **Ecological Assessment and specialist advice for a Solar and Wind Farm, Orange Creek – Lancour, 2017- Current:** Kelly provided due diligence advice regarding the potential ecological constraint for the proposed site at

Curriculum Vitae - CONTINUED -

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Orange Creek. First detailed fauna and flora seasonal surveys are to be undertaken later 2017 to understand the potential impacts on threatened flora and fauna and World Heritage values.

- **Pest Management Plan – Barcaldine Solar Farm, 2017:** Reviewed and finalised the pest management plan for the Solar Farm near Barcaldine in western Queensland. The plan incorporated strategies to manage existing and potential pest flora and fauna species, including locally significant, Weeds of National Significance (WoNS) and species listed as invasive plants under the *Biosecurity Act 2014* (Qld) for the pre-construction, construction and post-construction stages of the project.
- **Biodiversity Assessment Report - Barcaldine Solar Farm, 2016:** Prepared a Biodiversity Assessment Report to support development approval for a Material Change of Use and a Reconfiguration of Lot for the development of a solar farm to the north-eastern portion of the site. The assessment of the site was undertaken against the relevant Federal and State environmental legislation, in particular the State Development Assessment Provision, Module 8 – Native Vegetation Clearing (Queensland Vegetation Management State Code).
- **Ecological Assessment and EPBC referral for Mt Emerald Wind Farm – RATCH, 2013/2016:** Assisted with the Commonwealth and State Department approval of the MT Emerald Wind Farm at Springmount near Mareeba in Far North Queensland. Kelly completed an Environmental Impact Statement with the use of innovative technologies and detailed surveys. The EIS focuses primarily on potential impacts on threatened flora and fauna and World Heritage values. Kelly provided expert advice on key issues including potential impacts to birds and bats due to rotor strike or barotraumas and direct removal of species and habitat for threatened species within the access road and tower foot prints. Further involvement included obtaining initial approvals for the wind monitoring towers, developing a regulatory approvals strategy, a visual impact assessment and modelling, as well as coordinating community open days and liaison with government stakeholders.
- **Ecological Impact Assessment – Northern Peninsula Area Regional Council, 2015:** Principal ecologist responsible to provide ecological report and expert advice on the development of the new refuse facility at Bamaga. Kelly project managed threatened species surveys and the delivery of ecological report to assess the suitability of the proposed site for the new refuse facility. Recommendations was given in regard to the submission of an EPBC referral.
- **Alcan Gove Alumina Refinery – Rio Tinto, 2015:** Prepare field survey and provide expert advice to the project manager regarding the potential impacts on threatened fauna species. Kelly participated to the field survey and undertook GIS mapping for the submission to the State Government.
- **Ecological Impact Assessment for Coal Mine – Bengal Coal Pty Ltd, 2014:** Responsible for the preparation and coordination of an Initial Advice Statement including the Fauna and Flora Species Impact Assessment for a coal mine located in Dysart, Queensland (Bowen Basin). Coordinated and reviewed EPBC listed species surveys targeting in particular Koala, Collared Delma (*Delma torquata*) and Little Pied Bat (*Chalinolobus picatus*).
- **Significant Species Management Plans – QGC, 2014:** Developed eight SSMPs for integration into the QCLNG Gas Field SSMP's. Kelly prepared the fauna species related SSMPs using the review of published literature, specialist reports/databases and Local, State and Commonwealth websites. Detailed assessment of the conditions of approval and species presence on site resulted in a cost saving for QGC by reducing the original scope of work to seven species. The SSMPs were provided in a timely manner and satisfied QGC's requirement and relevant conditions of approval.
- **Ecological Assessment – BMA, 2014:** Project manager responsible for the development of a Significant Species Management Plan for threatened fauna species and to support application to the DEHP under the *Nature Conservation Act 1992*. As part of the application Kelly also conducted an ecological survey of the proposed development area around Emerald and Moranbah and identified habitat for threatened fauna and flora species to prove specialist advice and recommendation on approvals.

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- **Ecological Assessment for Pipeline Construction – APLNG, 2013:** Team leader who supervised a team of ecologists and conducted a flora and fauna trapping/surveys on several properties selected to provide offsets for APLNG (Surat Basin at Miles and Roma, Queensland). This work included targeted threatened fauna species surveys, ecological constraints assessment, the development of an offset strategy and assessment for Threatened Ecological Communities. Kelly undertook a BioCondition assessment, developed maps using GIS analysis tool, and wrote offset strategy report.
- **Dalwogan 3D Seismic for Pipeline Construction – APLNG, 2013:** Senior ecologist providing advice on a number of environmental legislation and obtaining the necessary subsidiary approvals to facilitate the construction of approximately 800km in length the gas pipeline. Kelly provided specialist ecological advice and developed a Fauna and Flora Management Plan to address the development approval conditions for nominated threatened and migratory fauna species listed under the EPBC Act. She supervised and coordinated pre-clearance and ecological surveys, threatened fauna species trapping surveys, and completed associated report in an allocated budget and timeframe.
- **Fauna Management Plan for Copper Mine Construction – Mining Ernest Henry Mine and Mount Margaret Mining Pty Ltd, 2013:** Senior ecologist who peer reviewed of the fauna survey methodology targeting the Julia Creek Dunnart for the construction of a Copper/Zinc/Hematite/Gold mine and the coordination of an intensive fauna trapping survey (>6 000 traps night). She also developed a Species Management Plan for this species which included mitigation measures and recovery plan for the site.
- **Ecological Assessment for Monto Coal Pipeline Construction – Peabody, 2012:** Senior ecologist responsible for preparation of a series of terrestrial flora and fauna assessment surveys which provided preliminary advice on the environmental constraints and opportunities of coal seam gas mine sites.
- **Roma, Fairview and Arcadia Valley CSG Gas Fields Remediation, Rehabilitation, Recovery and Monitoring Plan - Santos Pty Ltd, 2012:** Produced the Remediation, Rehabilitation, Recovery and Monitoring Plan Rehabilitation Management Plan which set a framework for staged rehabilitation for a range of infrastructure types as per approved conditions issued by the Commonwealth and State Coordinator General. Kelly reviewed and wrote key ecological features of the CSG fields and undertook field surveys in the CSG fields. To ensure the provision of accurate data to summarise the composition and condition of these communities, she performed a BioCondition assessment and associated reference site survey.

PREVIOUS EXPERIENCE

- **Director – Principal Ecologist**
Green Tape Solutions Consulting, Australia 2014-Present
- **Senior Ecologist**
RPS, Australia 2012-2014
- **Principal Ecologist/Bushfire Officer**
Development Assessment, Brisbane City Council, Australia 2009-2012
- **Invasive Species Officer**
Brisbane City Council, Australia 2006-2009
- **Environmental Scientist**
New Caledonia Government and World Wildlife Fund, New Caledonia 2005-2006
- **Technical Environmental Officer**
Natural Park of the Plains of L'Escaut, Belgium 2004-2005

Curriculum Vitae - CONTINUED -

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- **Conservation Officer**

Blongios – Non-Governmental Organisation, France

1999-2004

MEMBERSHIPS & ACHIEVEMENTS

License, Class A Bird Bander

Member, Queensland Environment Institute of Australia and New Zealand (EIANZ), Certified CEnvp

Active Member, Communication Committee of the EIANZ

Member, Urban Development Institute of Australia (UDIA)

Active Member, Queensland Environmental Law Association (QELA) / Planning and Environment Committee

Member, Birds Queensland, Birds Australia and Queensland Wader Studies Group

Member, Ecological Society of Australia

Member, Wildlife Preservation Society of Queensland

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Level 2 | 62 Astor Terrace | Spring Hill QLD 4000
PO Box 272 | Spring Hill QLD 4004
ABN 96 067 593 962
P 07 3839 6771
E mail@ptt.com.au
WWW.PTT.COM.AU

23 November 2018

Niven Family Trust
PO Box 3180
Hendra QLD 4011

Attention: Michael Niven

Dear Michael,

**RE: PROPOSED CHILDCARE CENTRE
OLD BAY ROAD, DECEPTION BAY
TRAFFIC ENGINEERING ASSESSMENT**

INTRODUCTION

This report has been prepared by Pekol Traffic and Transport (PTT) to assess the traffic engineering aspects of a proposed childcare centre at 54-66 Old Bay Road, Deception Bay (application reference 2018 / 37063 / V2C). The development site is located within the Moreton Bay Regional Council's (MBRC) area and has been assessed against MBRC's Planning Scheme and Australian Standards AS2890.1 for Off-Street Car Parking. A site visit was undertaken by PTT on Monday 12 November 2018 at 3:00pm to assess the operation of the existing road network in the vicinity of the subject site during the afternoon school peak period.

This report makes reference to the traffic impact assessment report prepared by Rytenskiid Traffic Engineering, dated 24 September 2018, which was submitted as part of the development application.

OVERVIEW

Subject Site

The proposed development site is formally described as Lot 32 on SP152335 and currently accommodates a residential dwelling. According to the MBRC Planning Scheme, the subject site is zoned for suburban neighbourhood uses. The site is bounded to the north by Thompson Road, to the south by an outdoor sports facility and to the west by Old Bay Road and the Old Bay Road / Thompson Road roundabout. Access to the site is via one driveway crossover on Old Bay Road, along the western frontage. The location of the site is indicated in Figure 1.



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PREPARED BY: MY

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Figure 1: SITE LOCALITY



Surrounding Area

Deception Bay North State School is located on Old Bay Road opposite the subject site, with access via three all-movements crossovers on Old Bay Road. It is understood the school currently accommodates 533 students and 74 staff. An existing childcare centre is co-located on the school grounds, as indicated in Figure 1. There is also an off-street parking area with capacity for 40 cars located on the northern side of Old Bay Road adjacent to the subject site. It is understood the car park is primarily used for student drop-off / pick-up. The surrounding area consists primarily of residential, educational and community uses.

Road Network

Old Bay Road is an undivided road with one lane of traffic in each direction and informal on-street parking on both sides. The road has a sealed pavement width of 12m, with 4m wide verges, and is classified as a sub-arterial road according to the MBRC Planning Scheme. The road has a posted speed limit of 60 km/h, with a 40 km/h school zone along the site frontage. Site observations indicate the existing on-street parking on Old Bay Road along the site frontage is well utilised during school peak periods. Pedestrian footpaths and on-street bicycle lanes are installed on both sides of Old Bay Road.

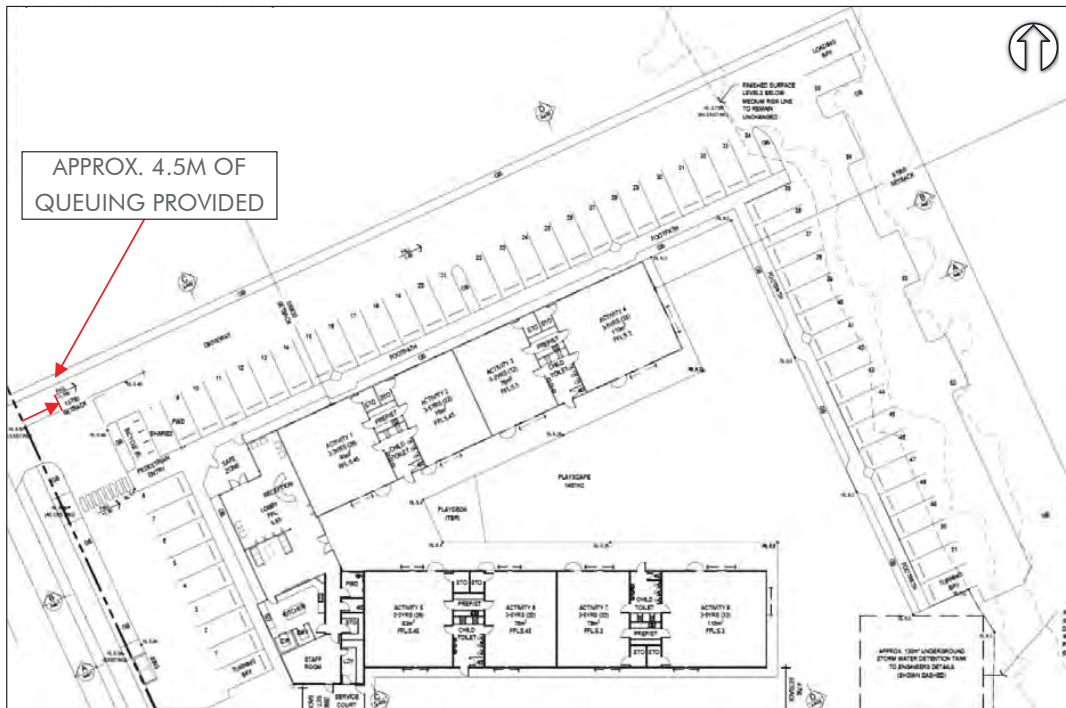
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PROPOSED DEVELOPMENT

The proposed development seeks a material change of use for a 200-place childcare centre. The development would be supported by a total 55 on-site car parking spaces. Vehicular access to the site is proposed via a 7m wide crossover from Old Bay Road, approximately 90m south of the Old Bay Road / Thompson Road / Warroo Drive roundabout. The proposed layout is shown in Figure 2.

Figure 2: PROPOSED SITE LAYOUT



ACCESS ARRANGEMENTS

Access Operation

As part of the traffic impact assessment, a SIDRA analysis of the proposed site access intersection was undertaken, to determine the impact of the proposed development on the operation of Old Bay Road. The analysis was based on traffic survey data collected by Rytsenskiid Traffic Engineering and a peak flow factor of 95%, which is the SIDRA default value. The results of the analysis demonstrate that the proposed site access is expected to operate satisfactorily, with an average delay of 6.5 seconds for vehicles undertaking a right-turn into the site.

However, the traffic survey data indicates the peak flow factors on Old Bay Road are 83% during the morning peak hour and 72% during the evening peak hour. This is consistent with the expected operation of Old Bay Road during the peak hours (ie with relatively short periods of high vehicle volumes associated with student drop-off / pick-up at Deception Bay North State School). The application of these peak flow

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factors results in an approximate 15% increase in traffic volumes during the morning peak period and 30% increase during the afternoon peak period, compared to the volumes used in the analysis. Therefore, the average delay expected for vehicles turning right into the site is likely to be significantly higher than indicated in the SIDRA analysis.

Performance Outcome (PO) 26 of the MBRC Planning Scheme General Residential Zone Code - Suburban Neighbourhood Precinct requires that road upgrade works be provided where necessary, to ensure that developments do not have a negative impact on the external road network. In our view, the application does not adequately demonstrate the impact of development generated traffic on the operation of the surrounding road network and does not comply with PO26 of the MBRC Suburban Neighbourhood Precinct Code. It is recommended that the applicant demonstrate satisfactory operation of the site access intersection, using the correct peak flow factors as determined from the traffic survey data.

Access Location and Design

PO25 of the MBRC Suburban Neighbourhood Precinct Code requires site access driveways on Council-controlled roads to be designed and located in accordance with AS2890.1 Section 3. For a Category 3 access facility (ie the proposed site access), AS2890.1 requires that the access not be located where right turning traffic entering the facility would obstruct through traffic.

As discussed above, the peak flow factors used in the SIDRA analysis of the site access intersection do not accurately reflect the existing conditions on Old Bay Road and as a result, the average delay expected for vehicles turning right into the site is likely to be higher than indicated by the results. Additionally, on-site observations indicate the existing informal on-street parking on both sides of Old Bay Road along the site frontage is well utilised during peak periods. Therefore, it is unlikely that through vehicles on Old Bay Road would be able to pass vehicles waiting to turn right into the site during peak periods.

In our view, the SIDRA analysis of the site access intersection does not demonstrate compliance with AS2890.1 Section 3 and PO25 of the MBRC Suburban Neighbourhood Precinct Code.

Queuing

PO25 of the MBRC Suburban Neighbourhood Precinct Code also requires queuing to be provided according to Schedule 8 of the MBRC Planning Scheme. For a car park with a capacity for 51-75 vehicles (ie the proposed development), the required queuing provision is equal to two vehicles (ie 12m), measured between the property boundary and first conflict point within the site. The proposed layout includes provision for approximately 4.5m of queuing within the site and fails to comply with PO25 of the MBRC Suburban Neighbourhood Precinct Code, as indicated in Figure 2.

MBRC have previously indicated that they may require road dedication of 1.5m on Old Bay Road in future, to accommodate road reserve widening for a 5.5m wide verge. This would further reduce the available queuing within the site to approximately 3m.

As outlined above, it is unlikely that through vehicles on Old Bay Road would be able to pass vehicles turning right into the site during peak periods. Therefore, any on-site queuing is likely to adversely impact the operation of the adjacent section of Old Bay Road. It is recommended that the applicant provide a minimum queuing provision of 12m within the site, in accordance with PO25 of the MBRC Suburban Neighbourhood Precinct Code.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CAR PARKING

Provision

MBRC's Planning Scheme Schedule 7: Car Parking requires childcare centres provide on-site parking at a rate of seven spaces per 100m² GFA. A total of 55 on-site car parking spaces are proposed, based on a total GFA of 784m². However, the proposed layout suggests the GFA of the childcare would likely be greater than 784m² and it is unclear how this value has been calculated. As a result, it is unclear whether the proposed development complies with Schedule 7 of the MBRC's Planning Scheme. In our view, the applicant should demonstrate how the proposed GFA of 784m² has been determined.

Design

PO67 of the MBRC Suburban Neighbourhood Precinct Code requires car parking areas to be designed according to Australian Standards AS2890.1 for Off-Street Car Parking. On-site parking is classified as Class 1 for employees and Class 3A for visitors. Requirements for bay and aisle dimensions are outlined below:

- for employee parking, bay lengths of 5.4m and widths of 2.4m, with 5.8m wide aisles
- for visitor parking, either:
 - bay lengths of 5.4m and widths of 2.6m, with 6.6m wide aisles
 - bay lengths of 5.4m and widths of 2.7m, with 6.2m wide aisles
- where parking spaces or aisles are located adjacent to a wall or obstruction more than 0.15m in height, an additional 0.3m clearance be provided
- where parallel parking bays are located on one side of an angled parking aisle, an additional 0.5m aisle width be provided

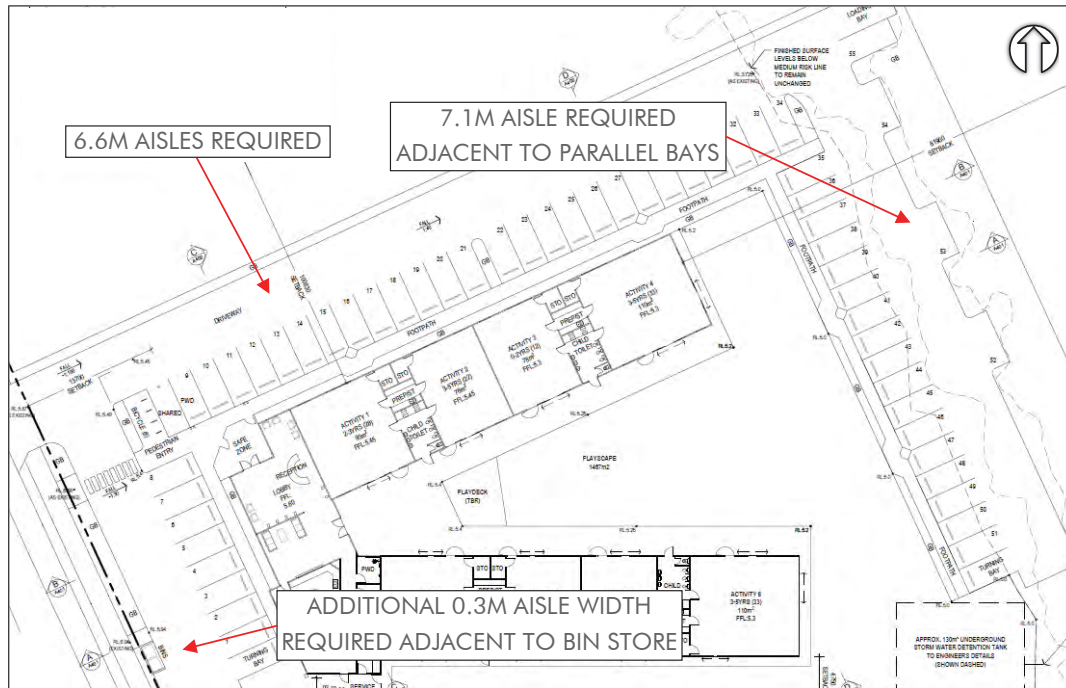
The proposed development appears to provide 6m wide aisles throughout the site. Furthermore, no additional aisle width is provided adjacent to obstructions (ie the bin storage area) or adjacent to the parallel parking bays at the rear of the site, as indicated in Figure 3. Therefore, the proposed development does not comply with AS2890.1 or PO67 of the Suburban Neighbourhood Precinct Code.

It is recommended that 6.6m wide aisles be provided throughout the site, with an additional 0.3m aisle width adjacent to the bin storage area and an additional 0.5m aisle width adjacent to the parallel parking bays at the rear of the site.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Figure 3: PARKING AISLE REQUIREMENTS



SERVICING

The proposed site layout and traffic impact assessment report indicate that bulk bins are to be used, with kerbside refuse collection proposed. According to MBRC’s Waste Planning Scheme Policy, on-street collection of bulk bins may be undertaken, provided a designated on-street Heavy Rigid Vehicle (HRV) parking bay is provided. The proposed development does not include provision of an HRV bay on-site or on Old Bay Road. In our view, the applicant has not adequately demonstrated compliance with the MBRC Waste Planning Scheme Policy.

TRAFFIC IMPACT

As outlined in the traffic impact assessment report, the development is expected to generate 160 trips during the peak hour, which represents an approximate 40% increase in traffic volumes on Old Bay Road during the morning peak hour and a 30% increase during the afternoon peak hour. Of the total development generated trips, 50% are expected to travel to / from the north via the Old Bay Road / Thompson Road / Warroo Drive roundabout. However, the traffic impact assessment has not considered the impact of the proposed childcare centre on the operation of the intersection and consequently does not comply with PO26 of the MBRC Suburban Neighbourhood Precinct Code.

It is recommended that the applicant quantify the impact of the proposed childcare centre on the operation of the Old Bay Road / Thompson Road / Warroo Drive roundabout (ie SIDRA analysis).

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



CONCLUSION

The proposed childcare centre at 54-66 Old Bay Road, Deception Bay has been assessed in terms of the access arrangements, site layout and impact on the surrounding road network. The main points to note are:

- the proposed childcare centre is expected to generate 160 trips in the peak hour, equal to an approximate 40% increase in traffic volumes on Old Bay Road during the morning peak hour and a 30% increase during the afternoon peak hour
- the SIDRA analysis of the site access intersection does not adequately demonstrate compliance with PO25 and PO26 of the MBRC Suburban Neighbourhood Precinct Code and AS2890.1
- the proposed on-site queuing provision of approximately 4.5m does not comply with PO25 of the MBRC Suburban Neighbourhood Precinct Code
- it is unclear how the proposed GFA has been determined for the purposes of calculating the on-site parking requirement
- the proposed layout does not comply with the requirements of AS2890.1 in terms of aisle width and thus does not comply with PO67 of the MBRC Suburban Neighbourhood Precinct Code
- the applicant has not adequately demonstrated compliance with the MBRC Waste Planning Scheme Policy
- the application has not considered the impact of the proposed development on the operation of the Old Bay Road / Thompson Road / Warroo Drive roundabout and consequently does not comply with PO26 of the MBRC Suburban Neighbourhood Precinct Code

In our opinion, the traffic engineering assessment undertaken to date by the applicant has not adequately addressed these impacts.

If you have any questions regarding the issues discussed above, please do not hesitate to contact us.

Yours sincerely,



Adam Pekol
Director (RPEQ 5286)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

amniven

From: Jodie | Cyber Drafting & Design <jodie@cyberdrafting.com.au>
Sent: Monday, 12 November 2018 12:24 PM
To: amniven
Subject: 54-66 Old Bay Road, Deception Bay

To whom it may concern,

I have reviewed the development application submission for 54-66 Old Bay Road, Deception Bay on behalf of Michael and Annette Niven and would like to raise the following concerns in relation to this project,

- Referencing the below definition for gross floor area and basing my calculations on the PDF plans I believe the gross floor area of this project to be in the range of 1000 to 1050sqm not the 784sqm nominated on the plans.
- There are insufficient plumbing fixtures nominated, with no hand basins or baby bath provided
- No end of travel facility in the disabled powder room
- No bottle prep provided to nursery
- Ratios in rooms are not in line with the national framework

gross floor area, for a building, means the total floor area of all storeys of the building, measured from the outside of the external walls and the centre of any common walls of the building, other than areas used for— (a) building services, plant or equipment; or (b) access between levels; or (c) a ground floor public lobby; or (d) a mall; or (e) parking, loading or manoeuvring vehicles; or (f) unenclosed private balconies, whether roofed or not.

Warm regards,

JODIE MARK

SENIOR BUILDING DESIGNER

M: 0400 404 135
T: 07 3393 9159
E: jodie@cyberdrafting.com.au
W: cyberservicesgroup.com.au



Moreton Bay Regional Council

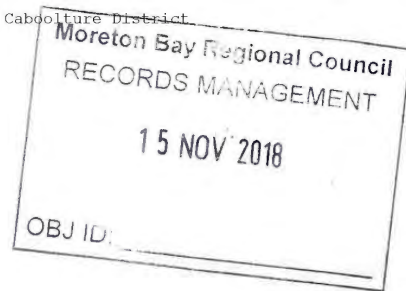
COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By: Jessica Southam@MBRCDOM On: 15/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au



Dear Sir/Madam

Objection to DA/37063/2018/V2C

I would like to formally object to the Material Change of Use for 200 place Childcare Centre (DA/37063/2018/V2C) at 54-66 Old Bay Road Deception Bay.

The purpose of the Suburban Neighbour Code 6.2.6.2.1 (e) states that

Community activities: (a childcare centre is defined as a community activity)

ii. do not negatively impact adjoining residents or the streetscape;

I believe that the proposed Childcare centre and the clearing of vegetation will negatively impact me because:

- Currently traffic is a problem around the Deception Bay North School in the mornings. The new childcare centre with 200 places will increase the traffic on the streets surrounding my property bringing more congestion and traffic noise to my property.
- The new staff will park outside the centre on Old Bay Rd (competing with residents dropping children to school) and this will cause problems with traffic in my area from 6am to 6pm Monday to Friday every day of the year.
- The traffic coming from the roundabout at Old Bay Rd and Thompson St cannot be seen from the driveway of the new childcare centre and this makes it dangerous for me driving to my property.
- The new childcare centre and the clearing of vegetation will ruin the natural environment in my area. We live here because we enjoy the natural beauty of the area without unnecessary development.
- Clearing of the vegetation will create an eyesore on the street scape. The natural environment will be lost forever and I will have to look at a barren wasteland with a huge building and a large surrounding carpark.
- Koalas are well known to be seen on this site and clearing the vegetation will ruin their habitat. This will prevent us and the local residents from seeing the koalas in their natural environment.

Regards

Zoe Anderson

Name

Signature

95 Warrad Dr
Deception Bay 4808

Address

Date 11/11/18

Moreton Bay Regional Council

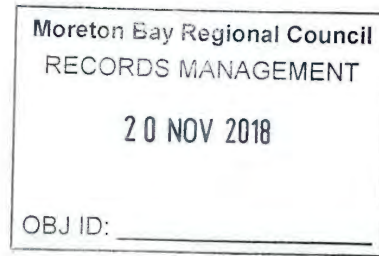
COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

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Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmail@moretonbay.qld.gov.au



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- Koalas have been seen on this site and clearing the vegetation will ruin their habitat. I do not wish for koala habitat to be destroyed on Old Bay Road for an unnecessary development. Our current enjoyment of the natural environment and native wildlife will be lost.
- The Old Bay Road roundabout and current road layout is somewhat messy and confusing already due to large number of queuing cars waiting for school children. The road and streetscape will ultimately be negatively impacted by more visual pollution if the development proceeds

Regards

Rachel Bishop

Name

Signature

6 Kaye street
Burrpengary QLD 4505

Address

14/11/18

Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmil@moretonbay.qld.gov.au

Moreton Bay Regional Council RECORDS MANAGEMENT 20 NOV 2018 OBJ ID: _____
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Regards

Andrew Bowdler

Name

Andrew Bowdler

Signature

41 Bellmee Road

13/11/18

Date

Address

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510



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1. I enjoy living in this community because of its current character including the semi-rural environment. The proposed development (removal of 80% of the native vegetation – some 359 native trees) will completely change the character and feel of our neighbourhood
2. The proposed development site is abundant with native trees that provide important habitat for the many native animals that we see on the property. I don't want to lose the local koala population that live on that site. There are many cockatoos that I also see in the trees there.
3. The removal of 359 native trees is unacceptable and has a major negative impact on our streetscape.
4. Traffic is a problem on Old Bay Road near the site as the school is located right nearby. The road is not wide enough to park a car so people park half way on the footpath. This causes potential accidents for pedestrians and cyclists that are often primary school aged children. I don't want our local kids put at any further risk.

o. Development avoids areas subject to constraint, limitation, or environmental value.

The development site is poorly located for its intended vulnerable use – childcare centre. There are more appropriate sites available.

The site is located in an area of natural hazard - medium risk flood zone.
The site is located in an area of natural hazard – medium bush fire risk zone.
The site is located in an area of environmental value - priority species habitat - Koalas.
The site is located in an area of environmental value – natural waterways
The site is located in an area of environmental value – green infrastructure network

I can walk or drive to other nearby quality childcare centres with 5 minutes. The broad range of existing centres as well as the new centre opening soon at Market Square are well and truly sufficient for us.

Regards

Name	Signature
19, Old Bay Rd	18/11/18
Deception Bay	Date
Address	

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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CABOOLTURE QLD 4510
mbrcmil@moretonbay.qld.gov.au



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- ii. do not negatively impact adjoining residents or the streetscape;**

I believe that this development will negatively impact me because:

NATIVE ANIMAL COLONIES

① KOWALA'S

② WOOD DUCKS

③ NATIVE BIRDS .

④ REPTILE HABITAT THERE ALSO .

ENVIORMENTAL EROSION OF NATIVE HABITAT .

⑤ GREEN NATIVE TREE FROGS ETC.

Regards

Angelo P. Buiatti

Name

[Signature]

Signature

27 RAYMOND Terrace

Deception BAY

Address

12/11/2018

Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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PO Box 159
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mbrcmal@moretonbay.qld.gov.au



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Regards

Angelo P. Buiatti

Name

ABuiatti

Signature

27 RAYMOND TERRELL

Deception Bay

Address

ABuiatti

Date 12/11/2018

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au

Moreton Bay Regional Council RECORDS MANAGEMENT 20 NOV 2018 OBJ ID: _____
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Regards

ANDREW DAVEY

Name

AKL Davey

Signature

2 MADRINE DRIVE

MORAYFIELD

Address

13/11/18

Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By:marilynollaghan@MBRCDOM On: 29/11/2018 AM Moreton Bay Regional Council - Caboolture District

EXPRESS POST
099504700097

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510

Dear Sir/Madam

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The site is located in an area of environmental value – natural waterways

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I can walk or drive to other nearby quality childcare centres with 5 minutes. The broad range of existing centres as well as the new centre opening soon at Market Square are well and truly sufficient for us.

Regards

PHILIP FORBES

Name

P.R. Forbes

Signature

211 BELLMERE

ROAD

BELLMERE 4510

Address

Date 19/11/18

Moreton Bay Regional Council RECORDS MANAGEMENT 29 NOV 2018 OBJ ID: _____
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Moreton Bay Regional Council

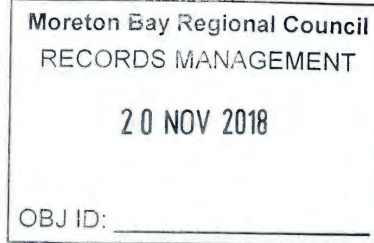
COORDINATION COMMITTEE MEETING
19 March 2019

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Agenda - Supporting Information Item 2.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By:schulzk@MBRCDOM On: 20/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmil@moretonbay.qld.gov.au



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Regards

..... KERRY GRIFFITH

Name

..... 

Signature

..... 1/78 FERNLEA AVE

..... SCARBOROUGH

Address

..... 12/11/2018

Date

Moreton Bay Regional Council

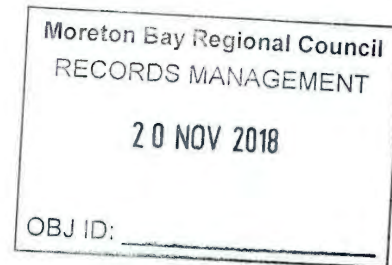
COORDINATION COMMITTEE MEETING
19 March 2019

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Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au



Dear Sir/Madam

Objection to DA/37063/2018/V2C

I would like to formally object to the Material Change of Use for 200 place Childcare Centre (DA/37063/2018/V2C) at 54-66 Old Bay Road Deception Bay.

The purpose of the Suburban Neighbour Code 6.2.6.2.1 (e) states that

Community activities: (a childcare centre is defined as a community activity)

ii. do not negatively impact adjoining residents or the streetscape;

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- Koalas have been seen on this site and clearing the vegetation will ruin their habitat. I do not wish for koala habitat to be destroyed on Old Bay Road for an unnecessary development. Our current enjoyment of the natural environment and native wildlife will be lost.
- The Old Bay Road roundabout and current road layout is somewhat messy and confusing already due to large number of queuing cars waiting for school children. The road and streetscape will ultimately be negatively impacted by more visual pollution if the development proceeds

Regards

Amy Hansen

Name

A. L. Ham

Signature

31 OGILVY RD.
BURPENGARY

Address

12-11-18.

Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By:schulzk@MBRCDOM On: 20/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au



Dear Sir/Madam

Objection to DA/37063/2018/V2C

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The purpose of the Suburban Neighbour Code 6.2.6.2.1 (e) states that

- Community activities: (a childcare centre is defined as a community activity)**
- ii. do not negatively impact adjoining residents or the streetscape;**

I believe that this development will negatively impact me because:

DESTRUCTION OF NATURAL FAUNA & FLORA,
AND THEIR NATURAL HABITAT. WHICH AFFECTS US ALL.

Regards

GAIL HANSEN

Name

Signature

13 PAMPHLETT PLACE

DECEPTION BAY

Address

12-11-18

Date

Moreton Bay Regional Council

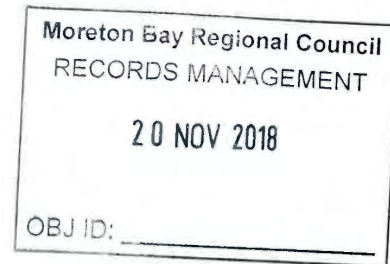
COORDINATION COMMITTEE MEETING
19 March 2019

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Scanned By:schulzk@MBRCDOM On: 20/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au



Dear Sir/Madam

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Regards

GREG HANSEN

Name

Signature

13 PAMPHLETT PL

DECEPTION BAY

Address

12-11-2018

Date

Moreton Bay Regional Council

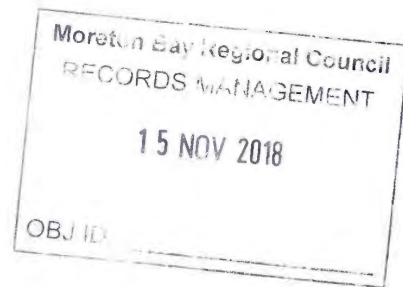
COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By: Jessica Southam@MBRCDOM On: 15/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmil@moretonbay.qld.gov.au



Dear Sir/Madam

Objection to DA/37063/2018/V2C

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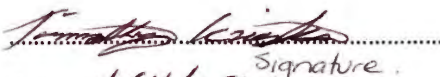
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- The new staff will park outside the centre on Old Bay Rd (competing with residents dropping children to school) and this will cause problems with traffic in my area from 6am to 6pm Monday to Friday every day of the year.
- The traffic coming from the roundabout at Old Bay Rd and Thompson St cannot be seen from the driveway of the new childcare centre and this makes it dangerous for me driving to my property.
- The new childcare centre and the clearing of vegetation will ruin the natural environment in my area. We live here because we enjoy the natural beauty of the area without unnecessary development.
- Clearing of the vegetation will create an eyesore on the street scape. The natural environment will be lost forever and I will have to look at a barren wasteland with a huge building and a large surrounding carpark.
- Koalas are well known to be seen on this site and clearing the vegetation will ruin their habitat. This will prevent us and the local residents from seeing the koalas in their natural environment.

Regards

Timothy
FIRST
Name

KNIGHT
LAST NAME
Signature

89 Thompson St
deception Bay
Address


Date 11/11/18
Signature

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By:marilynocallaghan@MBRCDOM On: 29/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510



Dear Sir/Madam

Objection to DA/37063/2018/V2C

I would like to formally object to the Material Change of Use for 200 place Childcare Centre (DA/37063/2018/V2C) at 54-66 Old Bay Road Deception Bay.

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1. I enjoy living in this community because of its current character including the semi-rural environment. The proposed development (removal of 80% of the native vegetation – some 359 native trees) will completely change the character and feel of our neighbourhood
2. The proposed development site is abundant with native trees that provide important habitat for the many native animals that we see on the property. I don't want to lose the local koala population that live on that site. There are many cockatoos that I also see in the trees there.
3. The removal of 359 native trees is unacceptable and has a major negative impact on our streetscape.
4. Traffic is a problem on Old Bay Road near the site as the school is located right nearby. The road is not wide enough to park a car so people park half way on the footpath. This causes potential accidents for pedestrians and cyclists that are often primary school aged children. I don't want our local kids put at any further risk.

o. Development avoids areas subject to constraint, limitation, or environmental value.

The development site is poorly located for its intended vulnerable use – childcare centre. There are more appropriate sites available.

The site is located in an area of natural hazard - medium risk flood zone.

The site is located in an area of natural hazard – medium bush fire risk zone.

The site is located in an area of environmental value - priority species habitat - Koalas.

The site is located in an area of environmental value – natural waterways

The site is located in an area of environmental value – green infrastructure network

I can walk or drive to other nearby quality childcare centres with 5 minutes. The broad range of existing centres as well as the new centre opening soon at Market Square are well and truly sufficient for us.

Regards

Arthur Marshman
Name

1088 Oakey Flat Rd
Address

Narangba
Address

Signature

19/11/18
Date

Moreton Bay Regional Council RECORDS MANAGEMENT 29 NOV 2018 OBJ ID: _____
--

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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Agenda - Supporting Information Item 2.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By:schulzk@MBRCDOM On: 20/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmil@moretonbay.qld.gov.au



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Regards

CLINTON MOYLER

Name

Signature

34 WARROO DRIVE

13/11/18

DECEPTION BAY

Date

Address

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By:schulzk@MBRCDOM On: 20/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmil@moretonbay.qld.gov.au



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Regards

MARK O'BRIEN

M O'Brien

Name

Signature

301 OAKLEY FLAT RD
MORAYFIELD

12/11/18

Date

Address

Moreton Bay Regional Council

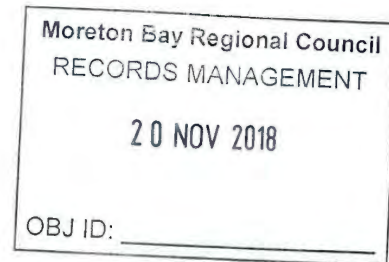
COORDINATION COMMITTEE MEETING
19 March 2019

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Scanned By:schulzk@MBRCDOM On: 20/11/2018 AM Moreton Bay Regional Council - Caboolture District

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au



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Regards

Aimee Slatter.....

Name

Aimee Slatter.....

Signature

41 Bellmere Rd.....

.....

Address

13/11/18.....

Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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Agenda - Supporting Information Item 2.1

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Scanned By:schulzk@MBRCDOM On: 20/11/2018 AM Moreton Bay Regional Council - Caboolture District



099504699094

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510

email: mbrcc mail @ moretonbay.qld.gov.au

Dear Sir/Madam

Objection to DA/37063/2018/V2C

Moreton Bay Regional Council RECORDS MANAGEMENT 20 NOV 2018 OBJ ID: _____
--

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Regards

.....
Name

.....
Signature

.....
Address

.....
Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmal@moretonbay.qld.gov.au

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- Koalas are well known to be seen on this site and clearing the vegetation will ruin their habitat. This will prevent us and the local residents from seeing the koalas in their natural environment.

Regards
• Our property (address below) has koala habitation & these animals regularly cross over to the property that is the subject of the application.

Graeme + Kerry CROSSKILL

Name



Signature

80 Old Bay Road
Deception Bay 4508

Address

Mon. 12.11.2018

Date

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

22 November 2018

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510
mbrcmail@moretonbay.qld.gov.au

Dear Sir/Madam

Objection to DA/37063/2018/V2C

This letter represents our formal objection to the Material Change of Use for 200 place Childcare Centre (DA/37063/2018/V2C) at 54-66 Old Bay Road Deception Bay.

The proposed development application fails to meet State Planning Guidelines including the Strategic Framework. It also fails to meet MBRC local planning laws including the General Residential Code – Suburban Neighbourhood Precinct.

3.3.1 - Integrate sustainability with land planning decision making

The proposed site development has a major adverse impact on the land quality, environment and local character.

The applicant proposes to remove approximately 80% of the trees on the subject site. Their proposal includes the removal of 359 trees from a total of 472 trees on the property. The sheer volume of tree removal increases climate change in the community. The removal of these 359 trees include 238 trees that the vulnerable species - koala use for both habitat and food source. The resulting development will greatly diminish the environmental values this site possesses.

3.3.3 Strategic Outcome - Natural hazards and adaptation

A childcare centre is classified as a vulnerable land use and should not be situated in locations posing any risks to children, staff and the community at large.

Flood Risk

We live directly across the road from the proposed development. We have lived in this area for 10+ years and have witnessed flooding on numerous occasions within the development site and surrounding streets. (See images below). We have witnessed flooding in Thompson Street, Waroo Drive, Old Bay Road and Brentwood Court, and road closures on Thompson Street and Old Bay Road due to flooding.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Images of flooding in proposed car park and development site



The development footprint encroaches into the medium flood area despite freely unencumbered available land outside of the flood zone. The development footprint of 9% of total land area should not encroach into the flood area.

The development site adjoins natural waterways and is adjacent to lots that have a very high risk of major flooding (recorded recent occurrence 2015).

The application has to failed to consider the proposed vegetation removal and the resulting consequences of enhanced natural hazards as a result of the development.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

3.4.1 Strategic Outcome - Biodiversity conservation

The site contains a broad and diverse array of native vegetation and wildlife. The site is well known to us as a local koala park with natural waterways.

The development does not protect the biodiversity and associated ecosystem located within the subject site.

The removal of trees fails to conserve the ecosystem of the area. The preferred and sustainable method of selective clearing of vegetation does not exist in the applicant's proposal.

The native vegetation located outside of the development footprint is only being cleared to reduce the natural risk hazard – bushfires located throughout the site. The vulnerable proposed use (childcare centre) is inappropriate given the environmental constraints for this property.

The site is not isolated from the surrounding rural environment and provides an effective, safe habitat and corridor in the area. A loss of ecological connectivity will occur as a result of the development.

The green infrastructure network is located directly adjoining the site. The green network has not been incorporated into the design of the development. The proposal fails to preserve the ongoing supply of existing ecosystems to the community and does not conserve biodiversity values. The site (being an adjacent lot and not protected in perpetuity) should be protected, rehabilitated where necessary and habitats enhanced for priority species.

3.4.2 Strategic Outcome - Priority species conservation

Over the 10+ years we have lived at our residence we have seen over 100 koalas in the development site and we hear them constantly at night during breeding season. Locals regularly walk their children through the area to view the wildlife including koalas

3.5.3 Strategic Outcomes - Sense of place and identity

The built form of the development reduces our sense of place and identity of the site. The site is well known for its rural like setting and abundance of native wildlife regularly seen from the pathway alongside.

3.7.3 Strategic Outcome - Location of new economic activities

The new economic activity proposed fails to provide diversified, broad-based local economic growth. The location of the site's proposed use is inappropriate given the level of local market saturation of childcare already in existence.

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

The new economic activity is located in natural hazard risks. Bushfire and flooding exist on the proposed site and also on the adjacent / adjoining properties and road infrastructure.

6.2.6.2 Suburban neighbourhood precinct

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 (e) states that

Community activities: (a childcare centre is defined as a community activity)

ii. do not negatively impact adjoining residents or the streetscape;

The proposed Childcare centre and the clearing of vegetation will negatively impact both the adjoining residents and the streetscape because:

- Currently traffic is a problem around the Deception Bay North School in the mornings. The new childcare centre with 200 places will increase the traffic on the streets surrounding nearby resident's property bringing more congestion and traffic noise to my property.
- The new staff will park outside the centre on Old Bay Rd (competing with residents dropping children to school) and this will cause problems with traffic in the area from 6am to 6pm Monday to Friday every day of the year.

Current issues with parking in Brentwood Court



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Current issues with parking Old Bay Road



- Pedestrians and cyclists currently compete with cars that park on the footpath because of Old Bay Road not being wide enough for parked cars and ongoing traffic. Many of these pedestrians and cyclists are of primary school age due to adjacent school.
- The traffic coming from the roundabout at Old Bay Rd and Thompson St cannot be seen from the driveway of the new childcare centre.
- The new childcare centre and the clearing of vegetation will ruin the natural environment in the immediate area. Residents live here because they enjoy the natural beauty of the area with a semi-rural atmosphere.
- Clearing of the vegetation will create an eyesore on the street scape. The natural environment will be lost forever and residents will have their neighbourhoods character modified to an extreme extent.
- Koalas are well known to be seen on this site and clearing the vegetation will ruin their habitat. This will stop the local residents from seeing the koalas in their natural environment.

6.2.6.2.1. Purpose - Suburban neighbourhood precinct

The purpose of the Suburban Neighbour Code 6.2.6.2.1 states that

o. Development avoids areas subject to constraint, limitation, or environmental value.

The development site is poorly located for its intended vulnerable use – childcare centre.

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The site is located in an area of natural hazard - medium risk flood zone.
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The site is located in an area of environmental value - priority species habitat.
The site is located in an area of environmental value – natural waterways
The site is located in an area of environmental value – green infrastructure network

There is a broad range of existing and newly approved childcare centres servicing the local community. The massive scale of the proposal greatly affects demand/supply constraints. Therefore, a least risk approach would be to exclude a vulnerable use activity on a site where there is no genuine need.

Where development cannot avoid these identified areas, it responds by:

i. adopting a 'least risk, least impact' approach when designing, siting and locating development in any area subject to a constraint, limitation or environmental value to minimise the potential risk to people, property and the environment;

The proposed use of a childcare centre on the affected site does not adopt “a least risk approach”. The siting of the building / carpark footprint is located in the medium risk flood zone despite available land outside of this area.

The proposed development does not minimise damage to the environment due to extensive land clearing.

B. the location, design and management of development to avoid or minimise adverse impacts on ecological systems and processes;

The proposed removal of 80% of the site’s vegetation does not minimise adverse impacts on ecological systems and processes.

v. protecting native species and protecting and enhancing species habitat;

The proposed removal of 80% of the site’s vegetation fails to protect native species locate on the site. Talk about how many times you have seen the koalas

Conclusion

We live at 59 Old Bay Road, Deception Bay. We purchased our property due to the streetscape and semi-rural surroundings. We walk our grandchildren through the surrounding parklands. We walk our pets through the surrounding parklands. We run a small business from home and our office looks directly on to the bushland. This is our community and our home, the proposed development will have and extremely negative impact on our way of life. It will ruin our streetscape, increase traffic and noise, increase risk of accidents, it will create an eyesore from our home office window and it will destroy our local wildlife.

Kind Regards,
Lauren Burrows & Michelle Timmins

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Jonny Lee

From: Angelique Esquivel <angesqui85@gmail.com>
Sent: Sunday, 11 November 2018 3:54 PM
To: MBRC Incoming Mail
Subject: Objection to DA/37063/2018/V2C
Attachments: image.jpg

To whom it may concern,

Please find attached the objection slip for this development. I fully and whole heartedly agree with everything listed in the objection. This development will be the nightmare from hell itself for all the surrounding residence.

I already contend with the traffic from the school and teachers parking their cars outside my property and blocking my view of oncoming traffic, without having to contend with this new development.

To think in this day and age where we use the koala as the emblem for our Commonwealth Games, that councils are so quick to let Chinese Developers decimate their habitat. I wonder what the public would think about this if printed in the local news papers?

Yours faithfully,

Angelique Esquivel.

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Jonny Lee

From: Angelique Esquivel <angesqui85@gmail.com>
Sent: Thursday, 29 November 2018 3:10 PM
To: MBRC Incoming Mail
Subject: Objection to proposed development Old Bay Road DA/37063/2018/V2C.
Attachments: E89C309F-D16B-46E7-B723-D379F0DEF48C.jpeg; A79F26DE-7D1E-4990-91AD-FFE13406FD6B.jpeg; 7C474A3C-B6B3-4644-BC2C-BF352590D890.jpeg; D6EE153A-B368-43F3-AC6C-1EB16926D7BC.jpeg

----- Forwarded message -----

From: **Angelique Esquivel** <angesqui85@gmail.com>
Date: Wednesday, November 28, 2018
Subject: Proposed development Old Bay Road.
To: Murrumba Electorate Office <murrumba@parliament.qld.gov.au>

To whom it may concern,

I have already sent a preprinted objection form for the proposed development at Old Bay Road across from the Deception Bay North Primary school (DA/37063/2018/V2C) but I wish to amend that letter to my own objection letter written forthwith.

I live at 53 Old Bay Road and have done so for twenty seven years. My Queenslanders was a garlic farm that was subdivided and I was the first owner there and watched all the houses being built around me. I used to have Kangaroos and Galahs feeding in my front lawn of a morning. USED TO!

The proposal to build a child care centre across the road from my property will greatly impact me and the whole area. There is apparently 35 child care workers for the centre and all of them will be parking on Old Bay Road. The congestion on this road will be ridiculous. I have footage of afternoon pick up at the school right out front of my house but unfortunately my iPad won't allow me to send it. Instead I have posted some photos showing parking conditions, parents and children, traffic and lack of safe vision from my drive way.

I have spent 27 years battling mothers parked across my drive way. I have plenty of stories to tell about that. The children run out between cars as it is and also with the encouragement of their parents.

When I leave my drive way (because I have a low set car) I can not see oncoming traffic because of the mothers vehicles. Since the school built their hall (over eight years ago) I have been battling teachers that think it is acceptable to park out front of my property for eight hours. I come and go from my property on a daily basis and my husband did have an accident years ago because of the lack of vision of oncoming vehicles.

I am a stay at home Mother and the noise pollution on Old Bay Road is disgusting. I don't need or want 40-70 extra cars slowing down into a driveway directly across the road from my property from 6am every morning (let alone squeeling kids and screaming parents).

I have already made complaints as early as last December to my local MP about gravel trucks using Old Bay Road. We had one truck every fifteen minutes passing our house. Over 40 trucks a day I counted. Other neighbours can verify this. The trucks did eventually subside in volume but we still have about fifteen trucks a day run up and down Old Bay Road from 6am to 7pm. They are gravel trucks, often with dog trailers and they are sometimes speeding. They use their air breaks at the roundabout and the noise is heard above my TV in the lounge room a good 50 metres away. This, coupled with children coming and going from school with mothers cars is a volatile situation, noise wise and safety wise. There are also plenty of crane trucks and large trucks transporting bulldozers and earth

Moreton Bay Regional Council

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

moving equipment that roar up and down past my property. I have never seen so many as in the last year and they would be due to new developments I assume. I used to tell my friends that even though I live on a main road that it is relatively quiet. I can not say that now and the centre will escalate this problem massively.

With the development of the child care centre most of the trees on the four acres of land will be demolished due to a fire hazard. This DISTRESSES me greatly. I have been depressed since learning about it. I will now look out onto an eyesore from my bedroom window. Those gumtrees are huge. They are native and they have been there years longer than I have. The worst part about it all is Koalas feed in those trees. Over the years I have seen plenty of them. The previous owners of that land can testify to that. You can hear them making noises at night. All my neighbours will testify that. This is the mascot that we used for the Commonwealth Games and yet it seems no problem to wipe out their habitat. There have been many witnesses to Koalas in the school grounds as well. So we all know they move through this area.

At this moment I know that Kookaburras dwell within that land and Boobook owls, as I see and hear them. There are also Sugar Gliders nesting there. I have watched them fly into my front yard and have been lucky enough to see them very close up.

This child care centre will greatly devalue the price of my property. Not that I want to sell. I love this area but it will never be the same if they gut that property. It sickens me to know what myself and the other permanent residents will experience if this goes through.

Also why is a child care centre going in? We have a new centre at the Deception Bay shopping centre being built as I write. We have one on the corner of Deception Bay Road and Lipscomb Road. We have one at the corner of Lipscomb and Mariner Boulevard. We have a new one at the corner of Buckley and Uhlmann Roads Burpengary East. This centre is by no means needed or wanted by anybody living around it!

National Geographic wrote an article on the loss of Koala habitat about two years ago targeting the depletion of Koalas within Deception Bay. They showed an aerial photograph of the Northlakes development and pointed out that these developments do not allow for wild life corridors. They also showed a confronting photo of dead Koalas lying on a blue tarp and stated that 14 Koalas a day are dying (by cars, dogs, etc) in and around Deception Bay. Do your homework and look this up. It's not a flattering way to get your Country and suburb mentioned internationally!

For once can this decision not be about money? I implore you to try to understand the gravity of this development on the surrounding properties and neighbourhood if you approve this! For the twenty seven years I've lived and loved my home. Please don't allow this to happen. For the millions of years that the Koalas have survived using this land, they implore you. You are their only voice for survival. Will you deny them?

Yours faithfully,

Angelique Esquivel.

*ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)*



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD,
DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Assessment Manager
Moreton Bay Regional Council
P0 Box 159
CABOOLTURE OLD 4510
mbrcmil@moretonbay.qld.gov.au

Dear Sir/Madam

Objection to DA/37063/2018/V2C

We would like to formally object to the Material Change of Use for 200 place Childcare Centre (DA/37063/2018/V2C) at 54-66 Old Bay Road Deception Bay.

The purpose of the Suburban Neighbour Code 6.2.6.2.1 (e) states that

**i Community activities: (a childcare centre is defined as a community activity)
do not negatively impact adjoining residents or the streetscape;**

I believe that the proposed Childcare centre and the clearing of vegetation will negatively impact our local area because:

- We enjoy living in this community because of its current character including the semi-rural environment. The proposed development (removal of 80% of the native vegetation – some 359 native trees) will completely change the character and feel of our neighbourhood. The natural environment will be lost forever. Koalas are well known to be seen on this site and clearing the vegetation will ruin their habitat. This will prevent us and other locals from seeing the koalas in their natural environment.
- Currently traffic is a growing problem near the site as the school is located across the road. The new childcare centre with 200 places will increase traffic dramatically on the local streets in our area bringing more congestion and more traffic noise to our property.
- The new staff will park outside the centre on Old Bay Rd (competing with residents dropping children to school) and this will cause major congestion in our local area from 6am to 6pm Monday to Friday all year.
- The traffic coming from the roundabout at Old Bay Rd and Thompson St cannot be seen from the driveway of the new childcare centre and this will make it dangerous for pedestrians, cyclists (that are often primary school aged children) and the increased traffic.

ii Development avoids areas subject to constraint, limitation or environmental value.

The development site is poorly located for its intended vulnerable use – childcare centre. There are more appropriate sites available.

The site is located in an area of natural hazard – medium risk flood zone
The site is located in an area of natural hazard – medium bush fire risk zone
The site is located in an area of environmental value – priority species habitat – Koalas
The site is located in an area of environmental value – natural waterways
The site is located in an area of environmental value – green infrastructure network.

There are other nearby quality childcare centres within 5 minutes' walk or drive. The broad range of existing centres as well as the new centre opening soon at Market Square are well and truly sufficient for our local area.

Thank you,

David and Susan Lee
103 Old Bay Road
Deception Bay Qld 4508

19th November 2018

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510

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1. I enjoy living in this community because of its current character including the semi-rural environment. The proposed development (removal of 80% of the native vegetation – some 359 native trees) will completely change the character and feel of our neighbourhood
2. The proposed development site is abundant with native trees that provide important habitat for the many native animals that we see on the property. I don't want to lose the local koala population that live on that site. There are many cockatoos that I also see in the trees there.
3. The removal of 359 native trees is unacceptable and has a major negative impact on our streetscape.
4. Traffic is a problem on Old Bay Road near the site as the school is located right nearby. The road is not wide enough to park a car so people park half way on the footpath. This causes potential accidents for pedestrians and cyclists that are often primary school aged children. I don't want our local kids put at any further risk.

o. Development avoids areas subject to constraint, limitation, or environmental value.

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The site is located in an area of natural hazard - medium risk flood zone.

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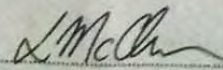
The site is located in an area of environmental value – natural waterways

The site is located in an area of environmental value – green infrastructure network

I can walk or drive to other nearby quality childcare centres with 5 minutes. The broad range of existing centres as well as the new centre opening soon at Market Square are well and truly sufficient for us.

Regards

Laura McClure
Name
2 Goodall Ave
Deception Bay
Address


Signature
18/11/18
Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Assessment Manager
Moreton Bay Regional Council
PO Box 159
CABOOLTURE QLD 4510

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The site is located in an area of environmental value – natural waterways

The site is located in an area of environmental value – green infrastructure network

I can walk or drive to other nearby quality childcare centres with 5 minutes. The broad range of existing centres as well as the new centre opening soon at Market Square are well and truly sufficient for us.

Regards

Janel Parker

Name

Brennwood Crd

Deception Bay

Address

J. Parker

Signature

26/11/18

Date

Moreton Bay Regional Council

COORDINATION COMMITTEE MEETING
19 March 2019

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ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

Assessment Manager
Moreton Bay Regional Council
P0 Box 159
CABOOLTURE OLD 4510
mbrcmail@moretonbay.qld.gov.au

Dear Sir/Madam

Objection to DA/37063/2018/V2C

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- We have lived in this area for over 40 years and over this period have encountered many koala sightings on this proposed development site. This bushland area is almost all the koalas and other wildlife have left in this area, surely, they are more important than another childcare centre of which we already have so many. We know for a fact the previous owner was forced by council to remove clean fill from the site because it interfered with the flood plain, so therefore was not permitted to build on half of this site.
- Currently traffic is a growing problem near the site as the school is located across the road. The new childcare centre with 200 places will increase traffic dramatically on the local streets in our area bringing more congestion and more traffic noise to our property.
- The new staff will park outside the centre on Old Bay Rd (competing with residents dropping children to school) and this will cause major congestion in our local area from 6am to 6pm Monday to Friday all year.
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There are other nearby quality childcare centres within 5 minutes' walk or drive. The broad range of existing centres as well as the new centre opening soon at Market Square are, we believe, well and truly sufficient for our local area.

Thank you,

Rodney & Jacqueline Paulsen
1 Jacqueline Court
Deception Bay Qld 4508


21st November 2018

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)



Assessment Manager
Moreton Bay Regional council
PO Box 159
Caboolture Qld 4510

Kirralie.Houghton@moretonbay.qld.gov.au
mbrc@moretonbay.qld.gov.au

Dear Ms Houghton

Re: Development Application No: DA/37063/2018/V2C
Property Location: 54-66 Old Bay Road, Deception Bay
Property Description: Lot 32 SP 152335
Development Type: Material Change of Use –
Development Permit for Child Care Centre

I am writing to you to raise my formal objections to the above redevelopment application.

This land is a crucial component of the koala corridor in the area, and I know from my time as a Councillor there were koalas present

I have been informed by constituents that there is still a thriving koala population on this area of land and they use this as a corridor to other areas and are regularly seen in the trees of the school grounds. The cutting down of the large gum trees in this area will substantially reduce the food available to the koala population.

There is a significant waterway running through this block and it must be protected.

I know this block is highly valued for its nearly pristine stand of trees and the scenic serenity it bring to the community.

I believe that the proposal is not consistent with and in fact compromises the Strategic Framework (Moreton Bay Regional Council (MBRC) Planning Scheme 2016, Part 3)

Also on viewing the applicant’s proposal I believe it is generally inconsistent with:

- The General Residential Zone (Suburban Neighbourhood Precinct) within the MBRC Planning Scheme
- Coastal and Riverlands Place Type

..2/..

ITEM 2.1 - MATERIAL CHANGE OF USE - DEVELOPMENT PERMIT FOR CHILD CARE CENTRE - 54-66 OLD BAY ROAD, DECEPTION BAY - DIVISION 2 - A18212535 (Cont.)

-2-

- Flood Overlay Code
- MBRC Scheme Policy – Policy bushfire Prone Areas
- MBRC Scheme Policy – Environmental Areas and Corridors
- MBRC Scheme Policy – Floor Hazard, Coastal Hazard and Overland Flow
- MBRC Scheme Policy – Integrated Transport
- MBRC Scheme Policy – Noise
- MBRC Scheme Policy – Stormwater Management
- MBRC Scheme Policy – Waste

I believe that the applicant's proposal also fails to apply the relevant State and Federal Acts, Guidelines and or policies in particular:

- Environmental Protection and Biodiversity Conservation Act 1999 referral guidelines for the vulnerable koala. I have attached a copy of the guidelines for your information.
- Nature Conservation Act 1992
- Planning Act 2016
- State Planning Policy (2017) State interest – natural hazards : Guidance on flood, bushfire and landslide hazard
- Australian standard (AS 3959-2009) Construction of buildings in bushfire-prone areas.

For all the above reasons I believe the MBRC should not approve this application for redevelopment of the site at 54-66 Old Bay Road, Deception Bay.

If you require any further information please contact my office on 3448 2100.

Yours sincerely



Chris Whiting MP
Member for Bancroft