

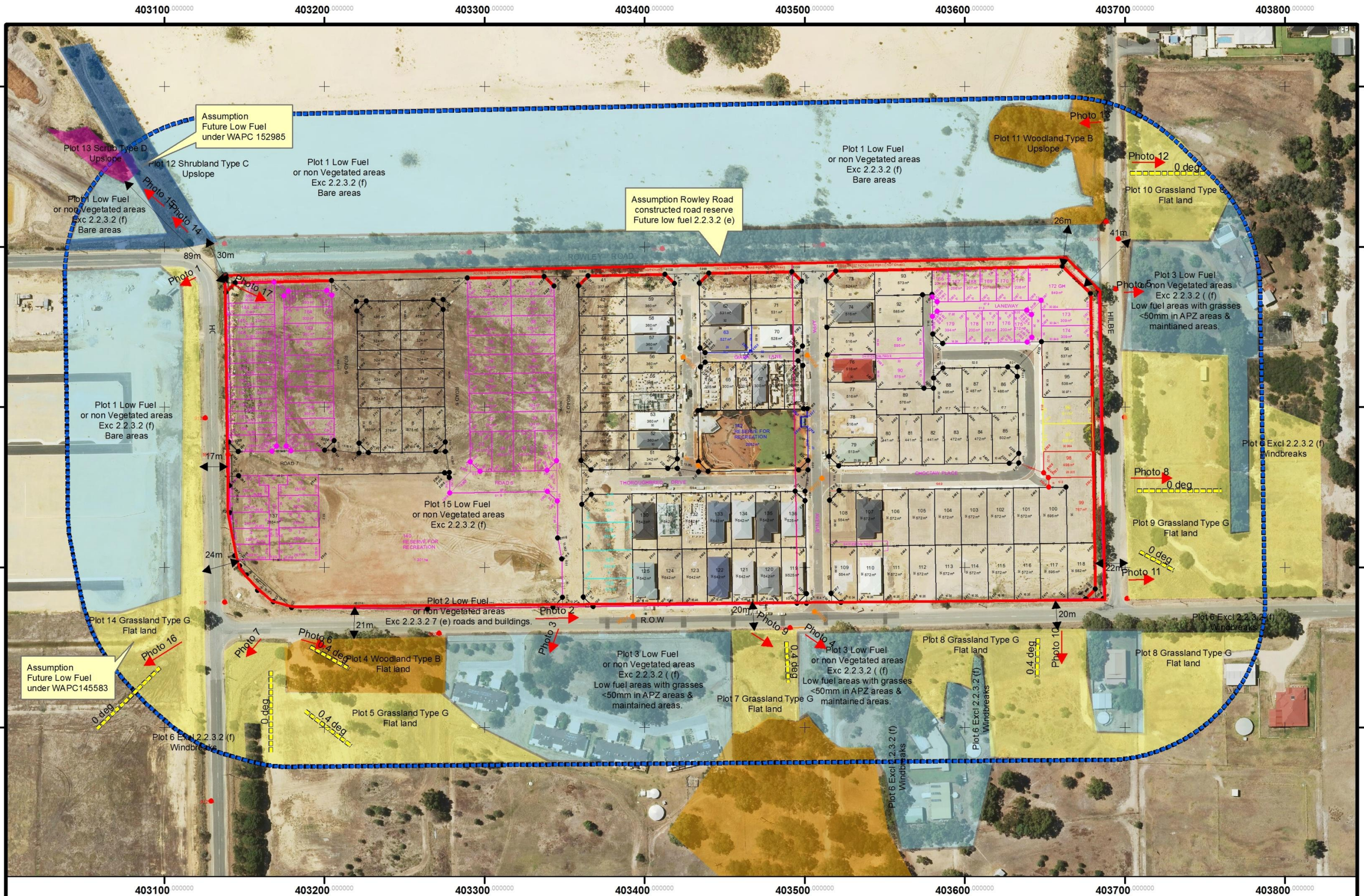
# AS 3959 Bushfire Attack Level (BAL)

## Contour Plan Report

Site Details			
Project Name	Rowley Road Development BAL Contour Plan		
Address:	(Lots 1 & 2 on Dia 50969) Rowley Road		
Suburb:	Darling Downs	State:	WA
Local Government Area:	Shire of Serpentine-Jarrahdale		
Description of Building Works:	Subdivision Development		
Stage of WAPC Planning	WAPC subdivision application (s)		

Report Details			
Report / Job Number:	TER011	Report Version:	FINAL
Assessment Date:	8/4/16	Report Date:	8/8/2016





### Legend

Photo Points

Shrubland Type C

Slope Degrees

Woodland Type B

Scrub Type D

Grassland Type G

100m Assessment Boundary

Low Fuel or Non Vegetated 2\_3\_2\_3

Subject site

SCALE  
1: 2,250 @ A3  
MGA GDA 94 Zone 50

0 10 20 40 60 80 100 Meters

This BAL Contour Plan was prepared by:  
Kathryn Kinnear, Bio Diverse Solutions  
Accreditation No: BPAD30794  
Valid to: Feb 2017  
Jurisdiction: Level 1 - WA

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CLIENT  
Darling Downs Estate C/o Terranovis Pty Ltd  
52 Kishorn Road  
Applecross WA 6153

### Vegetation Classes Map


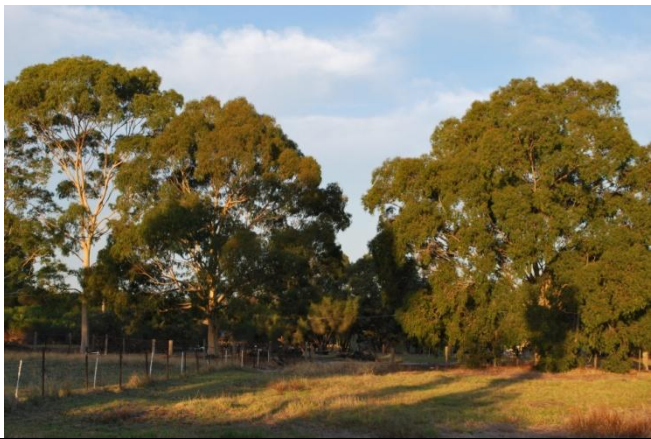

STATUS	FILE	DATE
FINAL	TER011	8/8/2016

## SECTION 1 - Vegetation Classification




All vegetation within 100m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2009. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.



Plot	1	Classification or Exclusion Clause	Low fuel or non-vegetated area Clause 2.2.3.2 (f)
			<p>Exclusion clause 2.2.3.2 (f)</p> <p>Low threat vegetation, bare soil associated with bare areas of adjacent subdivision developments to the north and west of the subject site.</p>
<i>Photo ID: Photo 1 view of bare areas associated with the development to the west of the subject site. View from north east to south west.</i>			
Plot	2	Classification or Exclusion Clause	Low fuel or non-vegetated area Clause 2.2.3.2 (e)
			<p>Exclusion clause 2.2.3.2 (e)</p> <p>Low threat vegetation associated with buildings, dwellings, footpaths and roads</p>
<i>Photo ID: Photo2 view along Rowley Road from the west to east.</i>			
Plot	3	Classification or Exclusion Clause	Low fuel or non-vegetated area Clause 2.2.3.2 (f)
			<p>Exclusion clause 2.2.3.2 (f)</p> <p>Low threat vegetation associated with APZ areas adjacent to buildings and dwellings</p> <p>Grasses mowed and maintained &lt;50mm in height.</p>
<i>Photo ID: Photo3 View of low fuel to the south of Rowley Road and dwellings (background) with maintained APZ areas. View from north to south.</i>			

Plot	3 cont	Classification or Exclusion Clause	Low fuel or non-vegetated area Clause 2.2.3.2 (f)
			<p>Exclusion clause 2.2.3.2 (f)</p> <p>Low threat vegetation associated with APZ areas adjacent to buildings and dwellings</p> <p>Grasses mowed and maintained &lt;50mm in height.</p>
<i>Photo ID: Photo 4 view of low fuel areas grasses &lt;50mm in height. View from north to south from Rowley Road.</i>			
Plot	3 cont	Classification or Exclusion Clause	Low fuel or non-vegetated area Clause 2.2.3.2 (f)
			<p>Exclusion clause 2.2.3.2 (f)</p> <p>Low threat vegetation associated with APZ areas adjacent to buildings and dwellings</p> <p>Grasses mowed and maintained &lt;50mm in height.</p>
<i>Photo ID: Photo 5 view of low fuel areas of a dwelling along Hilbert Road tot eh east of the subject site. View from west to east.</i>			
Plot	4	Classification or Exclusion Clause	Woodland Type B
			<p>Eucalypts 6-12m</p> <p>Not multilayered, grassy understorey, possibly grazed 10-30% vegetative cover.</p> <p>Located south of the subject site</p> <p>21m from subject site (along Rowley Road Road)</p> <p>Effective Slopes 0.4 degrees (flat land) to upslope of site.</p>
<i>Photo ID: Photo 6 view of Woodland Type B to the south of the Subject site, view from north west to south east.</i>			

<b>Plot</b>	<b>5</b>	<b>Classification or Exclusion Clause</b>	<b>Grassland Type G</b>
			<p>Paddock grasses 50-200mm in height</p> <p>Not grazed in road verges, grazed in paddocks</p> <p>Fuel loading 2 T/ha</p> <p>Located adjacent to subject site to the south and west in road verges and paddocks adjacent</p> <p>Effective Slope 0 to 0.4 ° (degrees)</p> <p>Located east of Rowley Road 21m from subject site</p> <p>&lt;10% trees</p>
<i>Photo ID: Photo 7 view of Grassland Type G to the south of the subject site in Rowley Road reserve.</i>			
<b>Plot</b>	<b>6</b>	<b>Classification or Exclusion Clause</b>	<b>Low fuel or non-vegetated area Clause 2.2.3.2 (f)</b>
			<p>Low fuel or non vegetated areas Clause 2.2.3.2 (f)</p> <p>Planted windbreaks</p>
<i>Photo ID: Photo 8 view of Planted windbreak in property to the east of the subject site. Photo view from west to east from Hilbert Road.</i>			
<b>Plot</b>	<b>7</b>	<b>Classification or Exclusion Clause</b>	<b>Grassland Type G</b>
			<p>Paddock grasses 300-400mm in height</p> <p>Possibly grazed, unmanaged grasses</p> <p>Fuel loading 2 T/ha</p> <p>Located adjacent to subject site to the south</p> <p>Effective Slope 0.4 degrees (flat land) to upslope of site.</p> <p>&lt;10% trees</p> <p>Located 20m south of subject site.</p>
<i>Photo ID: Photo 9 view of Grassland Type G to the south of the subject site. View from Rowley Road from the north west to the south east.</i>			

<b>Plot</b>	<b>8</b>	<b>Classification or Exclusion Clause</b>	<b>Grassland Type G</b>
			<p>Paddock grasses 300-400mm in height</p> <p>Grazed, unmanaged grasses</p> <p>Fuel loading 2 T/ha</p> <p>Located adjacent to subject site to the east</p> <p>Effective Slope 0 degrees (flat land) to upslope of site.</p> <p>&lt;10% trees</p> <p>Located 20m South of Subject site.</p>
<i>Photo ID: Photo 10 view of Grassland Type G to the south of the subject site. View from Rowley Road from the north to the south.</i>			
<b>Plot</b>	<b>9</b>	<b>Classification or Exclusion Clause</b>	<b>Grassland Type G</b>
			<p>Paddock grasses 300-400mm in height</p> <p>Grazed, unmanaged grasses</p> <p>Fuel loading 2 T/ha</p> <p>Located adjacent to subject site to the south east</p> <p>Effective Slope 0 degrees (flat land)</p> <p>&lt;10% trees.</p> <p>Located 22.4m from eastern boundary wall.</p>
<i>Photo ID: Photo 11 view of Grassland Type G to the east of the site, view from west to east from Hilbert Road</i>			
<b>Plot</b>	<b>10</b>	<b>Classification or Exclusion Clause</b>	<b>Grassland Type G</b>
			<p>Paddock grasses 300-400mm in height</p> <p>Grazed, unmanaged grasses</p> <p>Fuel loading 2 T/ha</p> <p>Located adjacent to subject site to the north east</p> <p>Effective Slope 0 degrees (flat land)</p> <p>&lt;10% trees.</p> <p>Located 41m from north east corner of subject site</p>
<i>Photo ID: Photo 12 view of Grassland type G to the north east of the subject site. View from Hilbert street from the west to east</i>			

Plot	11	Classification or Exclusion Clause	Woodland Type B
			<p>Eucalypts 6-12m</p> <p>Not multilayered, grassy understorey, possibly grazed 10-30% vegetative cover.</p> <p>Located north (north east) of the subject site</p> <p>21m from subject site (along future Rowley Road Reserve)</p> <p>Effective Slope -upslope of site.</p> <p>Located 26m north of subject site.</p> <p>Assumption in BAL Contour this will be removed as per approved WAPC application over the area. Future Low Fuel 2.2.3.2 (e) and (f)</p>
Photo ID: Photo 13 view of Woodland Type B to the north of Rowley Road Reserve. View from Hilbert Street from the east to the west.			
Plot	12	Classification or Exclusion Clause	Shrubland Type C
			<p>Grasses and sedges to 1m</p> <p>Dead vegetation and unmanaged</p> <p>15T/ha available fuels</p> <p>Located 30m from the subject site to the north west.</p> <p>Effective slope - upslope</p>
Photo ID: Photo 14 view of Shrubland Type C to the north west of the site. View from the southeast to the northwest.			
Plot	13	Classification or Exclusion Clause	Scrub Type D
			<p>Spearwood, Woolly bush and Acacia Scrub</p> <p>3.0 – 4.0m in height</p> <p>Would be excludable as &lt;0.25ha in size but connected to Plot 12 (shrubland)</p> <p>25T/ha available fuels</p> <p>Located upslope of the subject site to the north west 89m.</p> <p>Effective slope - upslope</p>
Photo ID: Photo 15 view of Scrub Type D to the north west of the site. View from the southeast to the northwest.			

Plot	14	Classification or Exclusion Clause	Grassland Type G
			<p>Paddock grasses 300-400mm in height</p> <p>Possibly grazed, unmanaged grasses</p> <p>Fuel loading 2 T/ha</p> <p>Located adjacent to subject site to the west in paddocks and the road reserve</p> <p>Effective Slope Flat land - 0 degrees</p> <p>No trees</p> <p>17-24m from subject site</p>
<i>Photo ID: Photo 16 view of Grassland Type G to the west of the subject site. View from the north east to the south west in private property.</i>			
Plot	15	Classification or Exclusion Clause	Low fuel or non vegetated areas
			<p>Low fuel Exclusion 2.2.3.2 (f)</p> <p>All internal areas, bare ground or managed grasses to &lt;100mm</p>
<i>Photo ID: Photo 17 view of built up bare areas in the subject site in preparation for development. View from the north west to the south east.</i>			

### SECTION 3: Potential Bushfire Impacts

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below. Refer to BAL Contour Plan Page 11.

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL	:Lots affected
1	Low Fuel or non vegetated area 2.2.3.2 (f)	N/A	N/A	Low	N/A
2	Low Fuel or non vegetated area 2.2.3.2 (e)	N/A	N/A	Low	N/A
3	Low Fuel or non vegetated area 2.2.3.2 (f)	N/A	N/A	Low	N/A
4	Woodland Type B	Upslope and Flat Land	21	BAL 29-12.5 can apply	Rec reserve
5	Grassland Type G	Flat Land	21m	BAL 12.5 can apply	Rec reserve
6	Low Fuel or non vegetated area 2.2.3.2 (f)	N/A	N/A	Low	N/A
7	Grassland Type G	Upslope and Flat Land	20m	BAL 12.5 can apply	119-123 & 109-110
8	Grassland Type G	Upslope and Flat Land	20m	BAL 12.5 can apply	110-119
9	Grassland Type G	Upslope and Flat Land	22m	BAL 12.5 can apply	118, 94-99 & 173-174
10	Grassland Type G	Upslope and Flat Land	41m	BAL 12.5 can apply	172
11	Future Low Fuel or non vegetated area 2.2.3.2 (f) & (E)	N/A	N/A	Low	N/A
12	Shrubland Type C	Upslope and Flat Land	30m	BAL 12.5 can apply	143-151, 160-165
13	Scrub Type D	Upslope	89m	BAL 12.5 can apply	143
14	Grassland Type G	Upslope and Flat Land	17-24m	BAL 12.5 can apply	1144-155, 1-5
15	Low Fuel or non vegetated area 2.2.3.2 (f)	N/A	N/A	Low	N/A

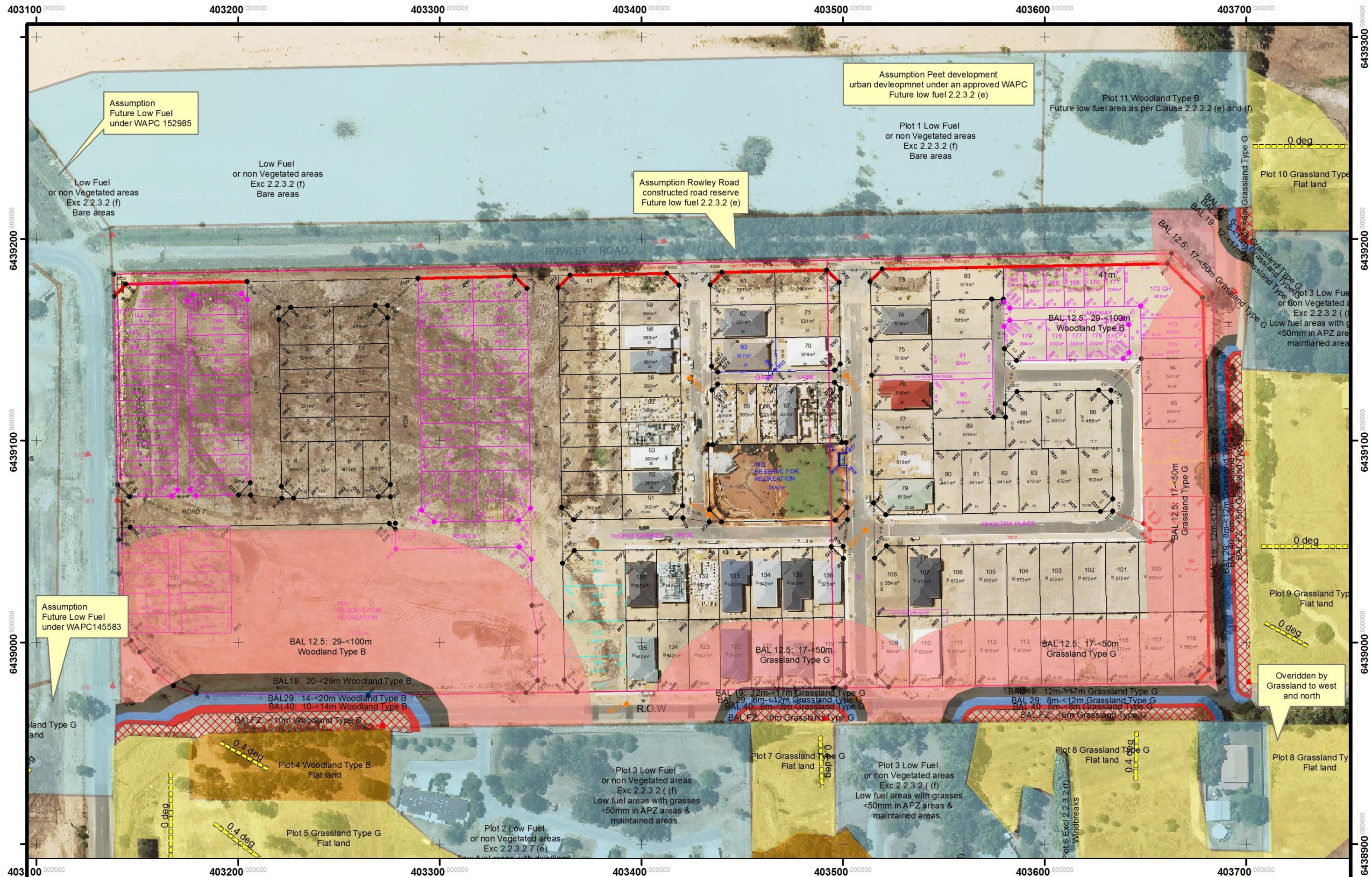
#### COMMENTS ON BAL CALCULATIONS:

- Distances from vegetation were made based on surface fuels to ledge of lot (subject site) boundary;
- Effective slopes were measured in the field using a Nikon Forestry Pro and represented on the respective plots;
- Method 1 (AS3959-2009) Simplified procedure was used for vegetation classification and BAL Assessment process;
- Vegetation was classified within 100m of the lot boundaries;
- The perimeter of the vegetation was measured using field GPS and notations on field GIS maps;
- The BAL Contour Plan was prepared by an Experienced Level 2 Bushfire Planning Practitioner (pending Accreditation by FPA); and

- The BAL Contour Map has been prepared in accordance with Department of Planning (WAPC) Fact Sheet – BAL Contour Maps (Version 2, January 2016).

#### **ASSUMPTIONS**

- Internal areas of the subdivision will be maintained in a low fuel state (as per APZ standards and AS3959-2009 Clause 2.2.3.2 (f)) by the developer until individual lot construction occurs.
- Rowley Road to the north is proposed to be developed within 12 months and construction will involve the resulting road reserve to be in a low fuel state consistent with AS3959-2009 Clause 2.2.3.2 (f).
- The land north of the future Rowley road is under an approved WAPC subdivision application and urban development is progressing, this area is designated as future low fuel area as per AS3959-2009 Clause 2.2.3.2 (e) and (f)
- The land north west of the subject site is under an approved WAPC subdivision application (WAPC # 152985) and urban development is progressing, this area is designated as future low fuel area as per AS3959-2009 Clause 2.2.3.2 (e) and (f)
- The land south west of the subject site is under an approved WAPC subdivision application (WAPC b# 145583) and urban development is progressing, this area is designated as future low fuel area as per AS3959-2009 Clause 2.2.3.2 (e) and (f)



## Legend

- Slope Degrees
- Scrub Type D
- Woodland Type B
- Grassland Type G
- BAL 12.5
- BAL 19
- BAL 29
- BAL 40
- BAL FZ
- Low Fuel or Non Vegetated 2\_3\_2\_3

SCALE  
1: 1,750 @ A3  
MGA GDA 94 Zone 50

0 10 20 40 60 80 100 Meters



This BAL Contour Plan was prepared by:  
Kathryn Kinnear, Bio Diverse Solutions  
Accreditation No: BPAD30794  
Valid to: Feb 2017  
Jurisdiction: Level 1 - WA



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CLIENT Darling Downs Estate C/o Terranovis Pty Ltd  
52 Kishorn Road  
Applecross WA 6153

## BAL Contour Plan

STATUS	FILE	DATE
FINAL	TER011	8/8/2016

#### SECTION 4: DISCLAIMER

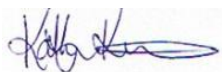
*The recommendations and measures contained in this assessment report are based on the requirements of the Australian Standards 3959-2009 – Building in Bushfire prone Areas, WAPC State Planning Policy 3.7 (WAPC, 2015), WAPC Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015), and CSIRO’s research into Bushfire behaviour. These are considered the minimum standards required to balance the protection of the proposed dwelling and occupants with the aesthetic and environmental conditions required by local, state and federal government authorities. They DO NOT guarantee that a building will not be destroyed or damaged by a bushfire. All surveys and forecasts, projections and recommendations made in this assessment report and associated with this proposed dwelling are made in good faith on the basis of the information available to the fire protection consultant at the time of assessment. The achievement of the level of implementation of fire precautions will depend amongst other things on actions of the landowner or occupiers of the land, over which the fire protection consultant has no control. Notwithstanding anything contained within, the fire consultant/s or local government authority will not, except as the law may require, be liable for any loss or other consequences (whether or not due to negligence of the fire consultant/s and the local government authority, their servants or agents) arising out of the services rendered by the fire consultant/s or local government authority.*

**AS3959-2009 disclaimer:** It should be borne in mind that the measures contained within this Standard (AS3959-2009) cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather condition.  
(AS3959, 2009)

Building to AS3959-2009 is a standard primarily concerned with improving the ability of buildings in designated bushfire prone areas to better withstand attack from bushfire thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself.

#### SECTION 7: Certification

I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of AS 3959-2009 (Incorporating Amendment Nos 1, 2 and 3).



SIGNED, ASSESSOR: ..... DATE: 8/8/2016

Kathryn Kinnear, Bio Diverse Solutions  
Accredited Level 1 BAL Assessor (Accreditation No: BPAD30794)  
“Experienced” Level 2 and 3 Bushfire Practitioner pending accreditation.



## Appendix 2: – Additional Information / Advisory Notes / Justifications Related to Assessment

Vegetation types analysed to AS3959-2009 with the following justifications:

### Vegetation Woodland Type B

- Not multi-layered vegetation structure;
- Surface fuels and could reach 15-25T/ha surface fuels;
- <30% vegetative structure/cover; and
- Eucalypt Trees 8-15m

### Shrubland Type C

- Shrubs to 1m;
- 15T/ha available fuel loading;
- Dominated by grasses and sedges; and
- No to few trees

### Scrub Type D:

- Acacia, Spearwood, Melaleuca scrubs 2-3m;
- Dense single layer of fuels;
- No to few trees >4m; and
- Some understorey grasses, mainly midstorey and scrub species to 2.5-3m.

### Grassland Type G

- Unmanaged grasslands – not regularly slashed or grazed;
- Average heights of grasses 50-250mm
- Dominated by grass species; and
- <10% tree/scrub species present.

### Low Fuel and non-vegetated areas (AS3959-2009 2.2.3.2):

*Clause (e) – Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.*

- Footpaths;
- Buildings;
- Bare ground;
- Carparks; and
- Roads

*Clause (f) – Low threat vegetation including managed grassland in minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated ornamental gardens, commercial nurseries, nature strips and wind breaks.*

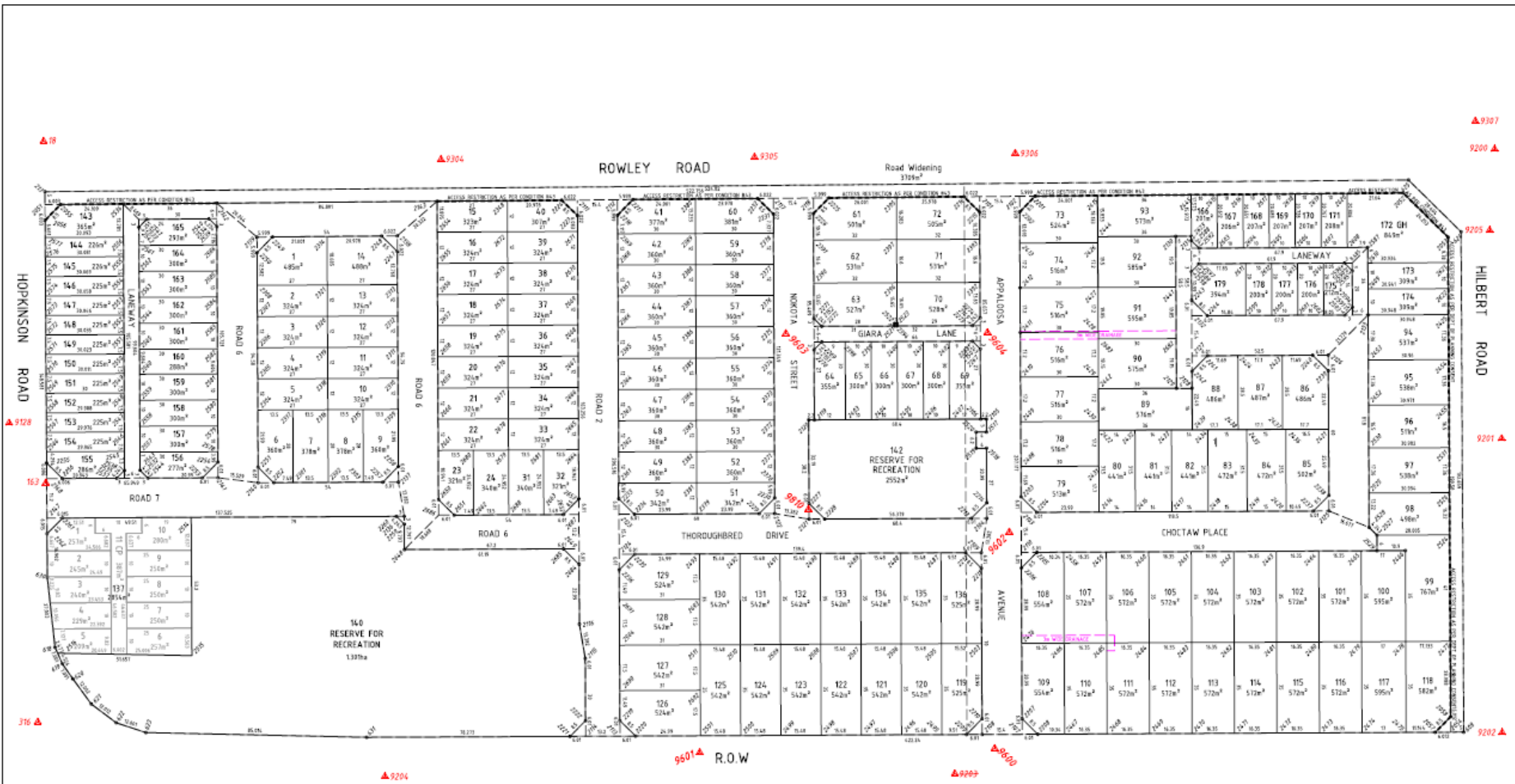
- Low fuel areas associated with managed grasslands, ornamental gardens in APZ areas of established buildings/dwellings.
- Managed grasses <100mm in height, evidence of regular mowing.

BAL Assessment undertaken by an Experienced Level 2 Bushfire Practitioner. Method 1 AS3959-2009 applied for BAL Assessment.

OBRM BUSHFIRE PRONE MAPPING 8/12/15 & 20/5/2016



<https://maps.slp.wa.gov.au/landgate/bushfireprone/>



Surround Control - PCG94				
Pt No	Easting	Northing	RL	Description
18	64,699.585	238,232.422	25.727	MAG 18
163	64,700.436	238,100.877	26.035	BM FS63
316	64,697.345	238,008.800	26.349	SPK
9127	64,687.534	237,884.759		SPK
9128	64,686.323	238,123.901		SIP
9200	65,258.020	238,229.328		SIP
9201	65,260.724	238,117.910	27.295	SIP
9202	65,260.968	238,004.735	27.795	SIP
9204	65,260.244	237,988.914	26.996	SIP
9204	64,830.942	237,987.826	26.635	SIP
9205	65,256.125	238,198.109		DSPK IN BIT
9304	64,852.500	238,225.394	26.500	DSPK IN BIT
9305	64,973.196	238,226.325	26.649	DSPK IN BIT
9306	65,073.543	238,227.752	26.750	DSPK IN BIT
9307	65,250.640	238,240.160	27.716	HILT IN M/H SURROUND
9309	65,254.211	238,709.901	26.978	DSPK IN BIT

SSA Control - PCG94				
Pt No	Easting	Northing	RL	Description
9600	65,065.617	237,998.672	27.292	HILT IN RBEAM
9601	64,952.132	237,997.102	27.085	HILT IN RBEAM
9602	65,071.261	238,081.957	28.025	HILT IN RBEAM
9603	64,985.279	238,158.408	28.183	SPK IN BIT
9604	65,062.846	238,158.774	28.032	SPK IN BIT
9610	64,993.954	238,090.763	27.823	PLAQUE



Rev	Description	Date	Drawn	Check
1	Add SSA Control Stage 1		TRM	WJW/SPT
2	Amend Lots 11-24, 31-40, 50, 91 & 160. Add 93-119		TRM	WJW/SPT
3	Amend Lots 98 & 99		TRM	WJW/SPT
4	Amend Lots 91-99. Add Access Restrictions		TRM	WJW/SPT
5	Amendment to lots 63 & 162		TRM	WJW/SPT
6	Amend Lots 126-129		TRM	WJW/SPT

Surround Date: 16/11/2012 Survey Manager: RL  
 Drawn Date: 18/12/2013 Calc/Drafted: TOV/TCH  
 Scale (A2): 1:1000 WAPC No: 00000000  
 Har Datum: PCG94 Vert Datum: AHD  
 Data File: 16086-rowley-9-150820  
 (CAD File: 16086-002-r1.dgn Upload File: 16086-002-r1.dwg)  
 Path: s:\projects\16086\



**PRECALCULATION PLAN**  
 ROWLEY ROAD  
 DARLING DOWNS  
 LOTS 1 & 2 on Dia 50969  
 © This plan must not be reproduced without the permission of WHELAN'S  
**16086 - 000 - 002 - 07**  
 Job No From No Plan No Rev  
 Client: TERRACONIS

Checklist for proposal compliance and justification to SPP3.7 (2015) & Guidelines for Planning in Bushfire Prone Areas (2015) )			
BDS Project Name	BAL Contour Plan Rowely Road (Lots 1 & 2 on Dia 50969)		
BDS Job Number	TER011		
Date	15/7/2016	WAPC#	N/A
Client name	Terranovis	Condition #	N/A
Bushfire Prone Area	Yes (see attached)	Mapping	Yes see attached
Planning proposal	Subdivision application	Lots created	175
<b>1. Bushfire Protection Criteria Acceptable Solutions as defined by Guidelines for Planning for Bushfire Prone Areas (WAPC 2015).</b>			
Element	Compliant to Acceptable Solution– Yes/No	Justification	
Element 1 – Location	Yes	<p>Site has areas which are classified as low and moderate bushfire hazards. Low and moderate hazards are located to the north west, west, south, east and north east (Shrubland Type C, Grassland Type G, Woodland Type B). Proposed buildings can be in BAL 12.5 zones.</p> <p><b>Plan of subdivision is deemed to meet Acceptable Solutions for Element 1.</b></p>	
Element 2 - Siting and design of development	Yes	<p>A2.1: 20m APZ can be achieved within the proposed lots and within the parent lot or by use of low fuel areas such as roads.</p> <p>A2.2 Setbacks and building to BAL/AS3959-2009 can be achieved on all lots. No higher BAL allocation than BAL 12.5 to apply to proposed lots.</p> <p><b>Plan of subdivision is deemed to meet Acceptable Solutions for Element 2.</b></p>	
Element 3 - Vehicular access	Yes	<p>A3.1: Three access routes to the north, west and south (Rowley Road, Hopkinson Road and Rowley Road (South)).</p> <p>A3.2 Public roads to meet minimum grades</p> <p>A3.3 Cul-de-sacs proposed and meet minimum requirements</p> <p>A3.4 Battle axes not proposed</p> <p>A3.5 Private Driveways will meet minimum requirements</p> <p>A3.6 No EAW proposed, use the internal road network</p> <p>A3.7 No FSA proposed, use the internal road network</p> <p>A3.8 Firebreaks compliant by current owner</p> <p><b>Deemed to meet Acceptable Solutions for Element 3.</b></p>	
Element 4 – Water	Yes	<p>Connected to reticulated water, hydrants to WCWA standards.</p> <p><b>Deemed to meet Acceptable Solutions for Element 4.</b></p>	
Bushfire Hazard Assessment required	Yes	See Vegetation Classes Plan	
BAL Contour required	Yes	See attached BAL Contour Map.	
BMP required	No	Not deemed required	

<b>2. Policy measures SPP3.7</b>		
<b>Policy Measure</b>	<b>Applicable – Yes/No</b>	<b>Justification</b>
<b>6.1 - Higher order strategic planning documents in bushfire prone areas</b>	No	Not a higher order strategic plan
<b>6.2 – Strategic planning proposals, subdivision and development applications:</b>	Yes	a) Subdivision proposal within a designated bushfire prone area, BAL and AS3959-2009 to apply to lots. Dwellings to be built to AS3959-2009 applying Acceptable Solutions, BAL 12.5 applied in newly created lots. Internal POS Low fuel areas.
<b>6.3 - Information to accompany strategic planning proposals:</b>	Yes	a) Results of the BHL in accordance with the detailed methodology in Guidelines and prepared by an accredited practitioner. b) BAL contour plan provided (see attached) BAL 12.5 can apply to lots. c) Brief assessment to Bushfire Protection Criteria (Elements) in the Guidelines indicated can meet the elements by applying Acceptable Solutions.
<b>6.4 - Information to accompany subdivision application</b>	Yes	a) BAL Contour map showing indicative BAL Contours across the subject site in accordance with the guidelines. b) BAL Contour Map prepared by an accredited Level 1 Bal Assessor and Experienced Level 2 Bushfire Practitioner. c) Brief assessment to Bushfire Protection Criteria (Elements) as per the Guidelines indicated can meet the elements by applying Acceptable Solutions
<b>6.5 Information to accompany Development applications</b>	No	Not applicable – not a Development Application
<b>6.6 Vulnerable or high-risk land uses</b>	No	No vulnerable or high risk uses proposed.
<b>6.7 Strategic Planning proposals, subdivision or development applications in areas where an extreme BHL and/or BAL-40 or BAL – FZ applies</b>	No	Not applicable
<b>6.8 Advice of State/relevant authorities for emergency services sought</b>	No	Not deemed required
<b>6.9 Advice of State/relevant agencies/authorities for environmental protection to be sought</b>	No	Not deemed required.
<b>6.10 Bushfire conditions may be imposed</b>	Yes	Yes, recommend notification on any new titles that building to AS3959-2009 to apply to any new buildings.
<b>6.11 Precautionary principle</b>	No	Not applied

### 3. Recommendations based on above checklist

1. Assessment to SPP3.7 Indicates that the subdivision has Moderate and Low BHLs to the north west, west, south, east and north east (Shrubland Type C, Grassland Type G, Woodland Type B) external to the site. Internal areas low fuel and maintained by the developer
2. BAL 12. can be achieved in the proposed lots.
3. Brief assessment to Guidelines indicated can meet the Elements by applying Acceptable Solutions can be achieved in the subsequent stages.
4. Detailed BMP not deemed required.
5. BAL Contour Plan based on assumptions that Rowley Road reserve will be built within the next 12 months.
6. Notification on title for newly created lot as condition of subdivision, building to AS3959-2009 to apply to any new dwellings.
7. Bushfire prone area mapping is correct as per the Map of Bush Fire Prone Areas identifying land falling within, or partially within, a bush fire prone area of Western Australia as designated by the Fire and Emergency Services (FES) Commissioner dated 8/12/2015 and 21/5/2016. Updates of this mapping will occur at the discretion of the FES Commissioner and the BAL Contour Mapping is considered valid for a period of 12 months from the date of production.

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#### Disclaimer

*The recommendations and measures contained in this assessment report are based on the requirements of the Australian Standards 3959 – 2009 Building in Bushfire prone Areas, Guidelines for Planning for Bushfire Prone Areas (WAPC, 2015), WA State Planning Policy 3.7 (WAPC, 2015) and CSIRO's research into Bushfire behaviour. These are considered the minimum standards required to balance the protection of the proposed dwelling and occupants with the aesthetic and environmental conditions required by local, state and federal government authorities. They DO NOT guarantee that a building will not be destroyed or damaged by a bushfire. All surveys and forecasts, projections and recommendations made in this assessment report and associated with this proposed dwelling are made in good faith on the basis of the information available to the fire protection consultant at the time of assessment. The achievement of the level of implementation of fire precautions will depend amongst other things on actions of the landowner or occupiers of the land, over which the fire protection consultant has no control. Notwithstanding anything contained within, the fire consultant/s or local government authority will not, except as the law may require, be liable for any loss or other consequences (whether or not due to negligence of the fire consultant/s and the local government authority, their servants or agents) arising out of the services rendered by the fire consultant/s or local government authority.*

#### References

Western Australian Planning Commission (WAPC) (2015) Guidelines for Planning in Bushfire Prone Areas. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.

Western Australian Planning Commission (WAPC) State Planning Policy 3.2 Planning in Bushfire Prone Areas. Department of Planning WA and Western Australian Planning Commission.

State Land Information Portal (SLIP) (2015 & 2016) map of Bushfire Prone Areas. Office of Bushfire Risk management (OBRM) data retrieved from:

<https://maps.slip.wa.gov.au/landgate/bushfireprone/>