

22 February 2024

## Response to Information Request from Logan City Council

Prepared for                      Quantum Investment Pty Ltd  
C/-                                      Saunders Havill Group

**Site Address**                      **62-84 and 86-108 Talinga Drive, Park Ridge QLD 4125**  
**Application Reference**        **COM/77/2023**

RE:                                      Information Request from Logan City Council dated 6 November 2023  
Document No 17085679  
**Item 5.6 Bushfire Hazard Area**

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### 1. BACKGROUND

Brisbane Bushfire Consulting was engaged to prepare a Bushfire Hazard Assessment for the proposed Reconfiguration of a Lot and Operational Works for Vegetation Clearing, Assessable Development Application for the *site* at 62-84 and 86-108 Talinga Drive, Park Ridge, Queensland 4125.

### 2. AMENDED PLAN IMPACTS

Following the original Bushfire Hazard Assessment report, the proposed layout has been subsequently refined to reduce the impact to vegetation at the drainage basin and Primary Vegetation Management Area. This has some minor impacts on the Bushfire Hazard Assessment as follows:

-The former Lot 800 Stormwater Basin, adjacent (east) to Zone 2 Road dedication, has been deleted. The area was considered low threat vegetation.

-The area now forms part of Lot 900 and is Environmental Open Space.  
Refer Attachment 1 - *Proposal Plan, Saunders Havill Group*.

-This former Stormwater Basin will become part of Zone 4 Rehabilitation Area -assisted regeneration (RE 12.9-10.12). Refer Attachment 2 *Rehabilitation Concept Zoning Plan, Saunders Havill Group*.

-The area is now considered in mature rehabilitation condition with classified *woodland* fuel load, in accordance with the Regional Ecosystem type and membership to Fire Regime Group (QFES, State of Queensland):

Vegetation Hazard Class is (VHC) 9.2 *Moist to dry eucalypt woodland on coastal lowlands and ranges*, Potential Fuel Load in full rehabilitated condition is:

Total overall fuel (W) 17.2 t/ha (non-remnant type, *Bushfire Resilient Communities, Technical Reference Guide for the SPP*), woodland equivalent total fuel load.



Actual fuel loads in Zone 4 will be lower than the calculated RE type, with limited surface fuels and no shrub/elevated fuels layers supplemented, to reduce the bushfire risk to the residential neighbourhood. The predicted rate of spread of fire would therefore be less than Method 2 BAL calculations indicate. The supplementary planting of tree species only is to provide canopy coverage for ecological connectivity of the corridor (Refer attachments *Rehabilitation Concept Zoning Plan*, Saunders Havill Group).

-Calculations for Bushfire Attack Levels (BAL) to proposed residential lots are revised to reflect the expanded extent of Lot 900 Rehabilitation Area, including change of slope under the new classified vegetation area and revised 100m buffer area (*Table 1*). All other rehabilitation vegetation proposed in Zone 3 (RE 12.3.11) is taken into consideration.

-The Bushfire Attack Level at proposed residential Lots 1 to 89 does not exceed BAL-12.5. Zone 2 Future Road Corridor is 23m wide and forms a low fuel Bushfire Protection Zone. The minimum setback from Lot 900 perimeter for BAL-12.5 is 20.6m (revised calculation). The overall severity of the bushfire risk has not increased, while one additional dwelling site at Lot 45, now falls partially in BAL-12.5 range. (Refer *Table 2*).

The extent of BAL-12.5 and BAL-LOW residential lots is mapped on Attachment 1, Proposal Plan (Saunders Havill Group)



Table 1.



**Talinga Drive East (Rehabilitation Vegetation at Lot 900)**

<b>Minimum Distance Calculator - AS3959-2018 (Method 2)</b>			
Inputs		Outputs	
Fire Danger Index	40	Rate of spread	0.82 km/h
Vegetation classification	Woodland	Flame length	8.369 m
Understorey fuel load	15 t/ha (actual rehab FL is lower)	Flame angle	55 °, 66 °, 74 °, 80 °, 81 ° & 86 °
Total fuel load	25 t/ha	Elevation of receiver	3.18 m, 3.49 m, 3.53 m, 3.4 m, 3.26 m & 1.81 m
Vegetation height	n/a	Fire intensity	10,676 kW/m
Effective slope	2 °	Transmissivity	0.885, 0.872, 0.853, 0.831, 0.8179 & 0.747
Site slope	2 °	Viewfactor	0.588, 0.434, 0.292, 0.1973, 0.1601 & 0.0439
Flame width	100 m	Minimum distance to BAL -40 kW/m <sup>2</sup>	6.9 m
Windspeed	n/a	Minimum distance to BAL -29 kW/m <sup>2</sup>	9.4 m
Heat of combustion	18,600 kJ/kg	Minimum distance to BAL -19 kW/m <sup>2</sup>	14 m
Flame temperature	1,090 K	Minimum distance to BAL -12.5 kW/m <sup>2</sup>	20.6 m



Table 2. REVISED TABLE OF BAL RATING AT PROPOSED LOTS

<b>TABLE 4.1 Bushfire Attack Level Assessment</b>		
<b>LOT</b>	<b>BAL ASSESSMENT Unrestricted siting</b>	<b>Construction requirements per AS 3959-2018 Section</b>
1	BAL-12.5	Section 3 and Section 5
2	BAL-12.5	Section 3 and Section 5
3	BAL-LOW all parts of Lot	Nil per Section 4
4	BAL-LOW all parts of Lot	Nil per Section 4
5	BAL-LOW all parts of Lot	Nil per Section 4
6	BAL-LOW all parts of Lot	Nil per Section 4
7	BAL-LOW all parts of Lot	Nil per Section 4
8	BAL-LOW all parts of Lot	Nil per Section 4
9	BAL-LOW all parts of Lot	Nil per Section 4
10	BAL-LOW all parts of Lot	Nil per Section 4
11	BAL-LOW all parts of Lot	Nil per Section 4
12	BAL-LOW all parts of Lot	Nil per Section 4
13	BAL-LOW all parts of Lot	Nil per Section 4
14	BAL-LOW all parts of Lot	Nil per Section 4
15	BAL-LOW all parts of Lot	Nil per Section 4
16	BAL-LOW all parts of Lot	Nil per Section 4
17	BAL-LOW all parts of Lot	Nil per Section 4
18	BAL-LOW all parts of Lot	Nil per Section 4
19	BAL-LOW all parts of Lot	Nil per Section 4
20	BAL-LOW all parts of Lot	Nil per Section 4
21	BAL-LOW all parts of Lot	Nil per Section 4
22	BAL-LOW all parts of Lot	Nil per Section 4
23	BAL-LOW all parts of Lot	Nil per Section 4
24	BAL-LOW all parts of Lot	Nil per Section 4
25	BAL-LOW all parts of Lot	Nil per Section 4
26	BAL-LOW all parts of Lot	Nil per Section 4
27	BAL-LOW all parts of Lot	Nil per Section 4
28	BAL-LOW all parts of Lot	Nil per Section 4
29	BAL-LOW all parts of Lot	Nil per Section 4
30	BAL-LOW all parts of Lot	Nil per Section 4
31	BAL-LOW all parts of Lot	Nil per Section 4
32	BAL-LOW all parts of Lot	Nil per Section 4
33	BAL-LOW all parts of Lot	Nil per Section 4
34	BAL-LOW all parts of Lot	Nil per Section 4
35	BAL-LOW all parts of Lot	Nil per Section 4
36	BAL-LOW all parts of Lot	Nil per Section 4
37	BAL-LOW all parts of Lot	Nil per Section 4
38	BAL-LOW all parts of Lot	Nil per Section 4
39	BAL-LOW all parts of Lot	Nil per Section 4
40	BAL-12.5	Section 3 and Section 5



41	BAL-12.5	Section 3 and Section 5
42	BAL-12.5	Section 3 and Section 5
43	BAL-12.5	Section 3 and Section 5
44	BAL-12.5	Section 3 and Section 5
45 (Amended)	BAL-12.5 (partial)	Section 3 and Section 5
46	BAL-LOW all parts of Lot	Nil per Section 4
47	BAL-LOW all parts of Lot	Nil per Section 4
48	BAL-LOW all parts of Lot	Nil per Section 4
49	BAL-LOW all parts of Lot	Nil per Section 4
50	BAL-LOW all parts of Lot	Nil per Section 4
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55	BAL-LOW all parts of Lot	Nil per Section 4
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57	BAL-LOW all parts of Lot	Nil per Section 4
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73	BAL-LOW all parts of Lot	Nil per Section 4
72	BAL-LOW all parts of Lot	Nil per Section 4
73	BAL-LOW all parts of Lot	Nil per Section 4
74	BAL-LOW all parts of Lot	Nil per Section 4
75	BAL-LOW all parts of Lot	Nil per Section 4
76	BAL-LOW all parts of Lot	Nil per Section 4
77	BAL-LOW all parts of Lot	Nil per Section 4
78	BAL-LOW all parts of Lot	Nil per Section 4
79	BAL-LOW all parts of Lot	Nil per Section 4



80	BAL-12.5	Section 3 and Section 5
81	BAL-12.5	Section 3 and Section 5
82	BAL-12.5	Section 3 and Section 5
83	BAL-12.5	Section 3 and Section 5
84	BAL-12.5	Section 3 and Section 5
85	BAL-12.5	Section 3 and Section 5
86	BAL-12.5	Section 3 and Section 5
87	BAL-12.5	Section 3 and Section 5
88	BAL-12.5	Section 3 and Section 5
89	BAL-12.5	Section 3 and Section 5



### 3. INFORMATION RESPONSE

#### Item 5.6 Bushfire Hazard Area

Demonstrate the area proposed to be dedicated for future road and the proposed rehabilitation area in Zone 4a along the eastern boundary, has a bushfire hazard level appropriate for the adjoining residential lot if the areas are not actively maintained by Council.

#### Advice Note

*The submitted Bushfire Hazard Assessment (BHA) identifies the proposed rehabilitation in Zone 4a as being a potential impact buffer area if the canopy perimeter is 5m clear of the eastern boundary and if periodic reviews of fuel loads are undertaken. This area will not be maintained for bushfire purposes by Council once dedicated and a response should confirm the potential bushfire hazard of the abovementioned areas of vegetation if maintenance regimes are not consistent with the recommendations of the BHA.*

*The BHA and management plan should consider any amendments to the proposed rehabilitation plan as a result of information request items under Biodiversity management areas and be consistent with all regional ecosystems nominated for rehabilitation within Zones 3, 4 and 4A and corresponding vegetation hazard classes.*

#### RESPONSE TO ITEM 5.6

The future road corridor, Zone 2 area, is a *necessary firebreak* and has a significant function that provides separation between the new residential lots and Zone 4 assisted regeneration area. The adjacent Zone 4, Environmental Open Space, will form classified woodland vegetation over time, connected to further vegetation corridor areas to the north. The composition of Zone 4 vegetation is assisted regeneration, with generally tree species only, to provide canopy coverage for ecological connectivity of the corridor. The overall fuel loads and bushfire risk is reduced, with limited understorey vegetation (surface and elevated fuels), reducing the potential intensity and rate of spread of bushfire.

Zone 2 future road corridor is a necessary Bushfire Management Zone that functions to:

1. Provide a low fuel *firebreak* at the bushland/urban interface between residential dwellings and (future) bushfire sources. A 20m minimum perimeter firebreak (or up to 1.5 times tallest tree) for bushfire risk mitigation is supported by State *Exempt Clearing* legislation.
2. Provides a *firetrail* to access existing classified vegetation (bushfire sources) on adjoining land north of the site. Access is required in a bushfire event for effective and fast suppression of fire, to protect ecological values in the vegetation corridor, as well as protection of property in the surrounding residential areas. The firetrail access is also required for ongoing vegetation maintenance, periodically undertaken at the bushland/urban interface by QFES and Council, including hazard reduction or cool burns to reduce hazardous fuel loads and periodic ecological burns, as required for the health of the Regional Ecosystem type. Undertaking these tasks with no firebreak separation has inherent risk to adjacent areas.



3. Provides an alternative egress pathway and separation of emergency services vehicles from other residential traffic, in the event of a bushfire.

Zone 2 currently has nil tree cover, ranging to a few isolated trees. It is proposed to remain in natural condition (refer attachments Rehabilitation Concept Zoning Plan, Saunders Havill Group). The Developer of the site undertakes to maintain Zone 2 periodically slashed for a *12 month on-maintenance period*, after dedication of the land. This is to maintain existing long grasses to a minimum height and to limit the establishment of new trees and shrubs.

The periodic slashing of the Zone 2 land dedication, future road corridor, is to be taken over by Logan City Council after the 12 month developer on-maintenance period, to maintain the important functions of the necessary firebreak and fire access trail, as detailed above. This is in accordance with similar regular maintenance slashing undertaken by all Councils at firebreaks and fire access trails at the urban interface with bushland. This *necessary firebreak and access trail* requires ongoing periodic slashing maintenance. The maintenance requirement will cease after construction of the roadway linking to further residential development. The maintenance allows Councils to fulfill land-owner legal obligations to:

1. contain bushfire within the dedicated land corridor (including regenerated land) and prevent escape of fire to adjoining land;
2. provide a low fuel firebreak to protect adjacent property and life, in accordance with *Fire and Emergency Services Act 1990* (Qld) (FESA) that may be enforced;
3. reduce excessive fuel loads safely, when may be deemed required in the future and enforced under *FESA* legislation.

Zone 4A is a 25 x 80m firebreak located at the eastern boundary, to mitigate bushfire risk to the adjacent established dwelling house at 110-114 Talinga Drive, Park Ridge. A 1.9m high Colorbond fence is proposed to be installed, to act as a radiant heat shield and barrier, to further reduce bushfire risk to adjacent property east.

Zone 4A has reduced fuel loads and is designed as more protective vegetation:

- reduced canopy coverage and use of less flammable species for supplementary plantings
- no underplanted shrubs and low flammability ground covers for weed suppression, to reduce growth of long grasses.

Periodic slashing of Zone 4A:

The Developer of the site undertakes to maintain Zone 4A periodically slashed as required, for a 12 month on-maintenance period after dedication of the land. This is to maintain understorey vegetation in low fuel condition, and to avoid ladder fuels to the canopy.

The periodic slashing of Zone 4A land dedication is to be taken over by Logan City Council after the 12 month developer on-maintenance period, to maintain the integrity of the low fuel firebreak and the



designed vegetation composition. This is in accordance with similar periodic maintenance slashing undertaken by all Councils at firebreaks at the bushland interface with established residential areas. This maintained Zone 4A allows Council to fulfill land-owner legal obligations to contain the escape of bushfire to neighbouring areas.

The installed 1.9m high non-combustible, Colorbond sheet fencing will provide shielding protection to the adjacent property, reducing the frequency of necessary maintenance to surface and any establishing understorey vegetation in Zone 4A.

If you have any questions or require further clarification, please email me on [mail@brisbanebushfire.com.au](mailto:mail@brisbanebushfire.com.au).

Kind regards,

*Halyna Tkacz*

**Halyna Tkacz on behalf of Brisbane Bushfire Consulting Pty. Ltd.**

*Graduate Certificate in Bushfire Protection, Western Sydney University, School of Computing, Engineering and Mathematics.*

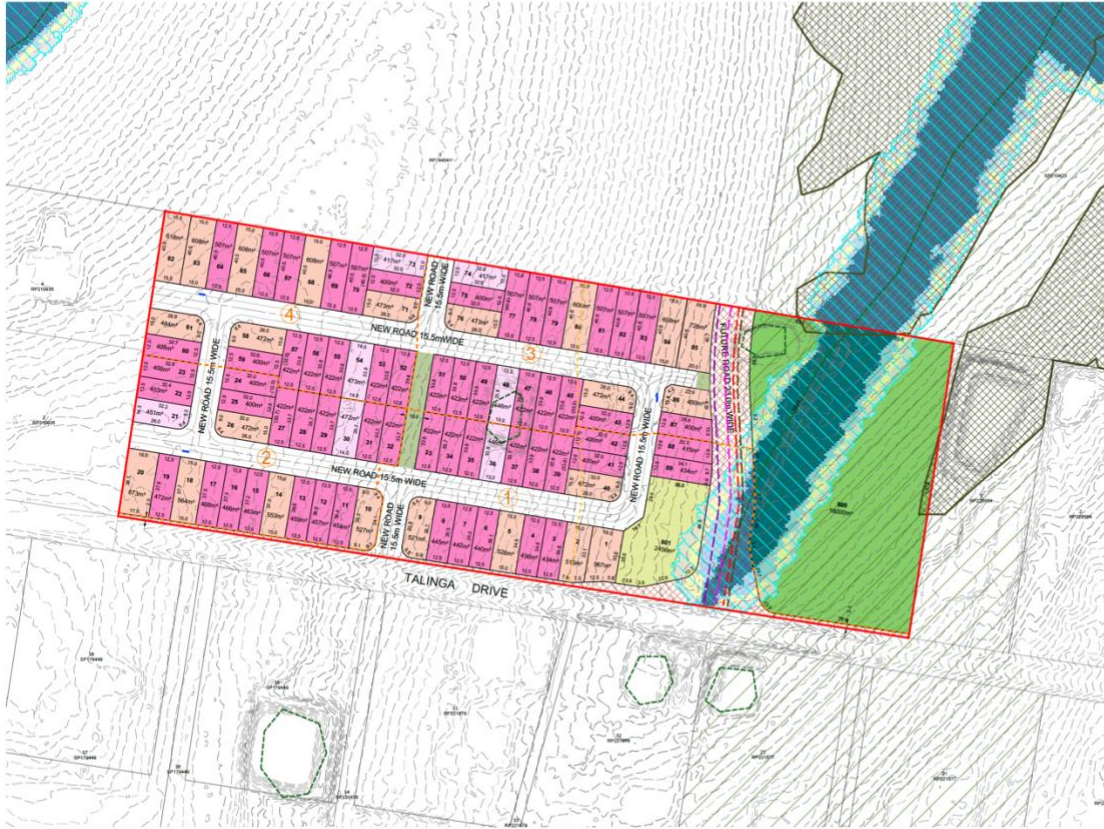
*Bachelor of Architecture (1<sup>st</sup> Class Honours), University of Melbourne, Architect*

*BOAQ Reg No 4362 Designated person under the Building Act (Qld) 1975.*



ATTACHMENT 1

PROPOSAL PLAN



NOT TO BE USED FOR ENGINEERING DESIGN OR CONSTRUCTION

**NOTES**

This plan was prepared as a conceptual layout only. The information on this plan is not suitable for any other purposes.

Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions.

No reliance should be placed on the information on this plan for detailed subdivision design or for any financial dealings involving the land.

Payments and contributions shown are indicative only and are subject to Engineering Design.

Saunders Havill Group disclaims any liability for any loss or damage whatsoever or howsoever caused, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

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PROJECTION - GDA2020 MGA56  
 SUBJECT BOUNDARIES PLOTTED FROM RECORDS

- LEGEND**
- Site Boundary
  - Major Contour (10m interval)
  - ① Stage no.
  - - - Staging Boundary
  - Core Koala Habitat Area
  - Biodiversity Corridor
  - MSES
  - LCC TLRP Flood Assessment Area
  - LCC TLRP High Flood Risk Area
  - LCC TLRP Moderate Flood Risk Area
  - LCC TLRP Low Flood Risk Area
  - LCC TLRP Very Low Flood Risk Area
  - BAL 40
  - BAL 29
  - BAL 19
  - BAL 12.5
  - BAL Low

**DEVELOPMENT STATISTICS**

RESIDENTIAL ALLOTMENTS	No. Lots	%	Net Area
13 - <15m Frontage	59	66.3%	2,956 ha
>15m Frontage	7	7.9%	0,332 ha
>15m Frontage	23	25.8%	1,260 ha
<b>Total Residential Allotments</b>	<b>89</b>	<b>100.0%</b>	<b>4,548 ha</b>

Land Budget	Area (ha)	%
Area of Subject Site / Stage	8,175 ha	—
Net Residential Area (no roads)	4,168 ha	51.0%
Detention / Drainage	0,246 ha	3.0%
Environmental Open Space	1,800 ha	22.0%
Recreation Link / Green Link	0,072 ha	0.9%
Shared Perforator / Milestone	0,595 ha	7.3%
Road Areas	1,294 ha	15.8%
<b>Total</b>	<b>8,175 ha</b>	<b>100.0%</b>

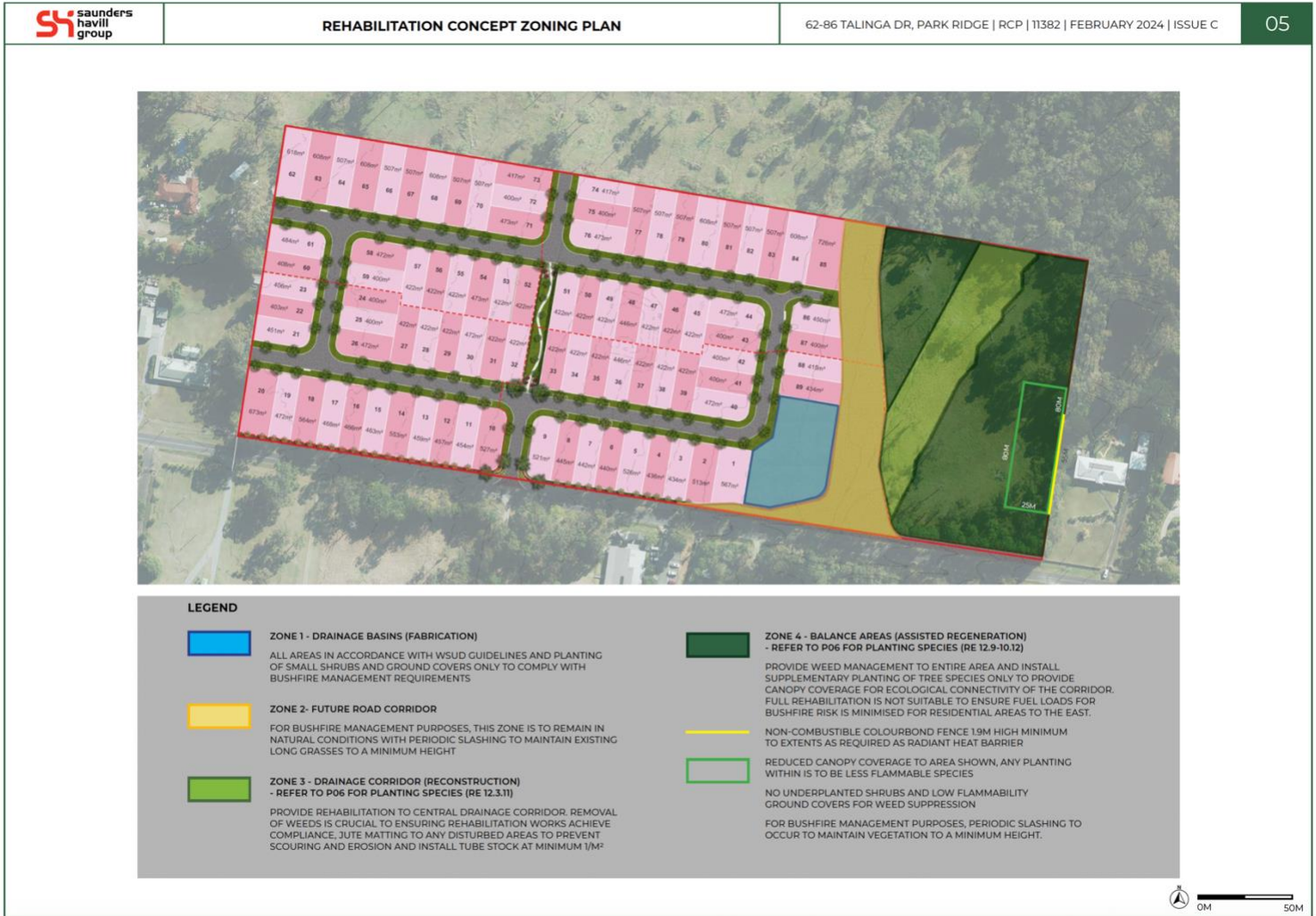
RP DESCRIPTION: Lot 3 & 4 on RP131003



**QUANTUM INVESTMENT PTY LTD**  
 62 & 86 TALINGA DR, PARK RIDGE ■ 25/01/2024 ■ 11382 P 03 Rev H - Bushfire Buffer



ATTACHMENT 2



End

