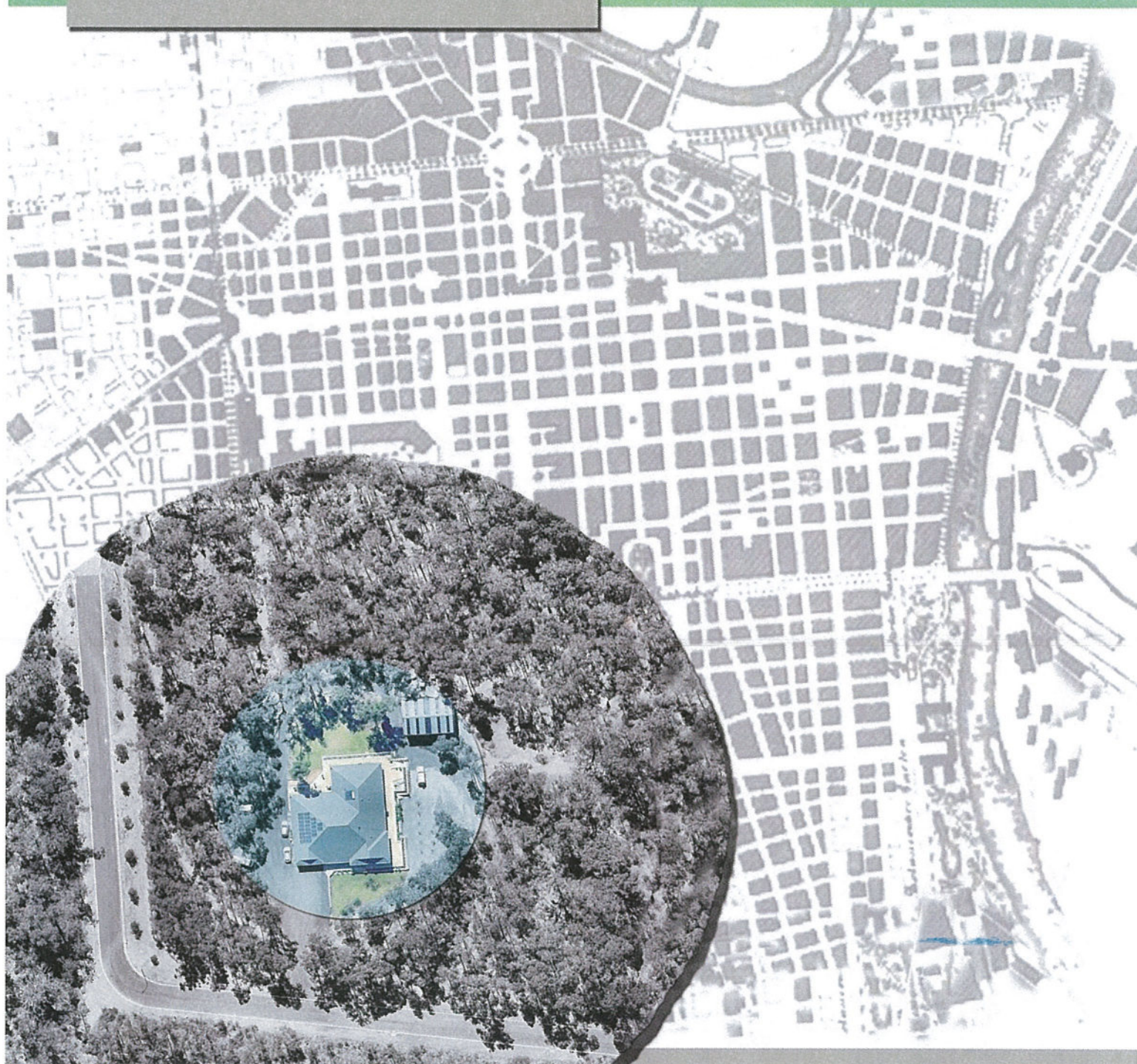


Bushfire Management Plan



Report Details		
Project:	Proposed Bulkhead Development	
Project Address:	39 Knotts Road, Balladong, WA 6302	
Prepared by:	James Terenciuk, BPAD Accredited Level 2 Assessor, BPAD36529, MAIBS, AIMM.	
Report / Job Number 5578	Report Version 3	Assessment Date: 26 June 2017



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Executive Summary

The aim of this report is to take a detailed look into bushfire management strategies to reduce the risk to future development on the subject site. A preliminary site assessment resulted in a BAL rating of BAL-FZ. Through the implementation of the elements and recommendations of this BMP a BAL rating of BAL-29 can be achieved. Furthermore, development of the land is consistent with the principles of orderly and proper planning and is not considered to impact the safety of future occupants.

1. Background Information

This Bushfire Management Plan was prepared to provide guidance for the planning and management of potential bushfire threat. The standards and recommendations within this plan are based on the performance criteria as set out in Guidelines for Planning in Bushfire Prone Areas (2017).

This Bushfire Management Plan meets the requirements of SPP 3.7 and the Guidelines for Planning in Bushfire Prone Areas



James Terenciuk
Level 2 BPAD Practitioner

1.1 Purpose of Plan

The purpose of this Plan is to minimise the occurrence and impact of bushfires and their devastating effects to life, property and the environment, and to document fire prevention requirements at the Site. By providing acceptable solutions the BAL level can be managed to an acceptable level.

1.2 Proposed Development

The proposal at 39 Knotts Road, Balladong seeks erection of two bulkheads, a new driveway, weighbridge, weighbridge hut and pits on an existing site. The site has been identified as being located within a bushfire prone area according to the most recent map published by the Department of Fire and Emergency Services.

1.3 Objectives

The objectives of this Plan are to:

- Define areas where values are located
- Define and rank hazard areas
- Identify individuals and organizations responsible for fire management and associated works within the area of the plan
- Develop fire management strategies for all land with regard to life, property and the environment
- Nominate an assessment procedure that evaluates the effectiveness and impact of proposed and existing fire prevention work and strategies
- Identify performance criteria and acceptable solutions for all fire management works, including acceptable solutions for fire breaks, low fuel areas and building construction standards.

This Plan will achieve the objectives by:

- Assessing the bushfire hazard level
- Assessing the bushfire attack level
- Determining bushfire management requirements
- Determining ongoing management responsibilities

1.4 Site Details and Overview

The Site address is 39 Knotts Road Balladong, located approximately 85km east of the Perth CBD. The Site lot area is approximately 18.556ha. The Site is located in a bushfire prone area. A development is proposed at the Site.

1.5 Bushfire Risk Assessment

Risk	Impact	Pre BMP Risk Level	Strategy	Post development Risk Level
The potential of bushfire to cause injury or death.	People	Moderate	Egress available in 2 directions.	Low
The potential of bushfire to cause damage to the proposed buildings.	Buildings	Moderate	APZ to be created.	Low
The potential of bushfire to cause damage to the environment	Environment	Low	No significant clearing proposed. Agricultural land.	Low

1.6 Solutions applied

The Guidelines for Planning in Bushfire Prone Areas require a statement of which Acceptable Solutions are proposed, and where applicable, a summary of any alternative solutions proposed and in what sections of the Bushfire Management Plan they are documented.

Applicable Acceptable Solutions addressed in Part 4 of this Bushfire Management Plan: A1.1, A2.1, A3.1, A3.5, A3.8 & A4.1.

Alternative Solutions forming part of this report: Nil.

2. Spatial Considerations of Bushfire Threat

The location and extent of the classifiable vegetation in relation to the proposed developments have been assessed and recorded in the attached BAL Assessment Report extract. The BAL Assessment Report is produced based on a methodology 1 assessment, with the vegetation being assessed “as is” in accordance with AS3959. The initial BAL rating is given in the table below. The BAL assessment results in a BAL of BAL-FZ in relation to the proposed bulkheads, and BAL-19 for the Proposed weighbridge hut, in accordance with the Guide to Planning in Bushfire Prone Areas.

Building Envelope	Vegetation Classification	Effective Slope	Separation	Preliminary BAL Rating
Proposed Bulkheads	Class G Grassland	Flatland	0 m	BAL-FZ
Proposed Weighbridge Hut	Class B Woodland	Flatland	26.72 m	BAL-19

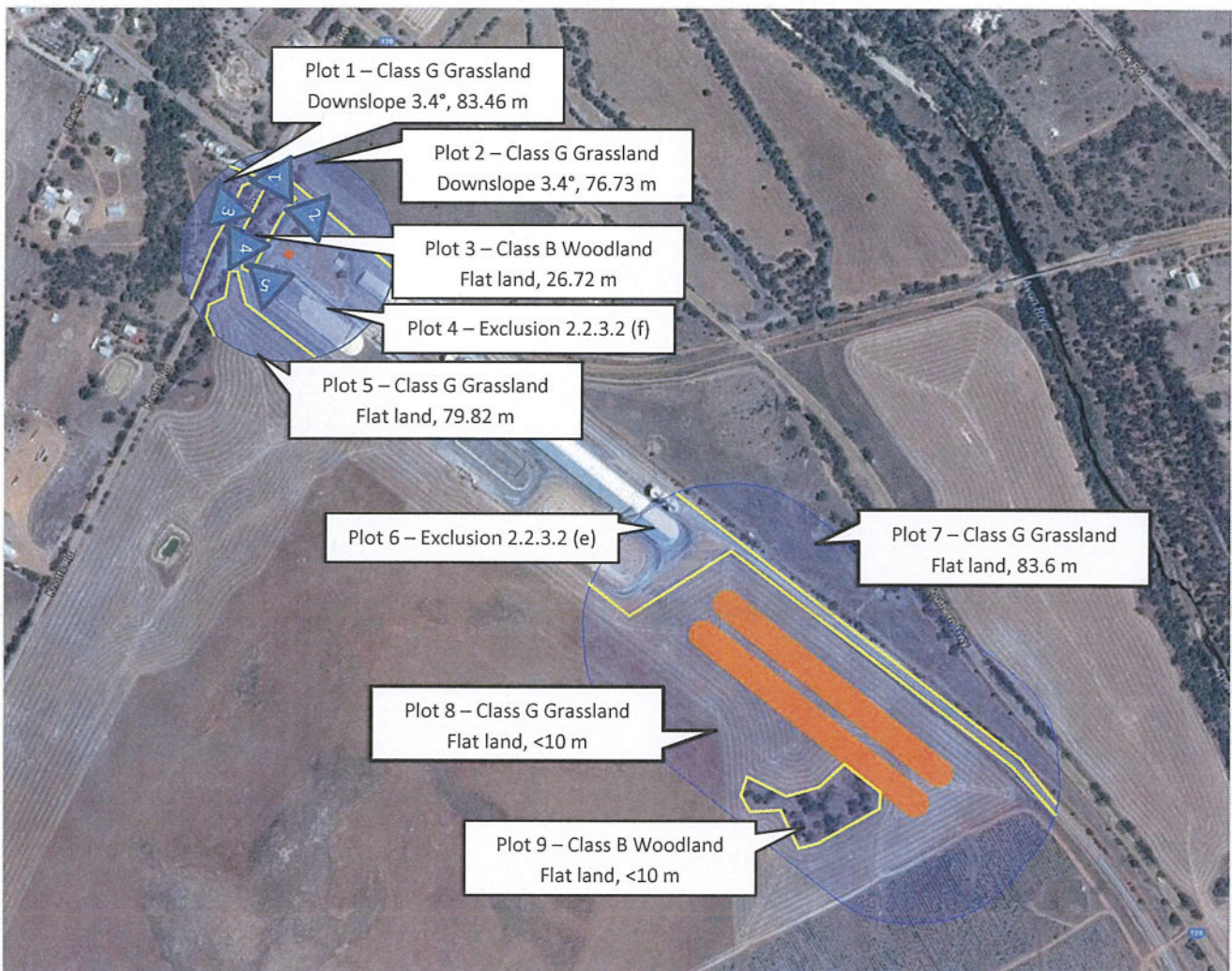
Upon the implementation of the recommendations outlined in this BMP, A BAL rating of BAL-29 or below will be achieved, as indicated below through the required separation distances from classified vegetation.

Building Envelope	Vegetation Classification	Effective Slope	Proposed Separation	Indicative BAL Rating
Proposed Bulkheads	Class G Grassland	Flatland	8 m	BAL-29
Proposed Bulkheads	Class B Woodland	Flatland	14 m	BAL-29
Proposed Weighbridge Hut	Class B Woodland	Flatland	14 m	BAL-29

2.1 Preliminary BAL Assessment

2.1.1 Site Assessment & Site Plans

The assessment of this site / development was undertaken on 21 June 2017 by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 - 2009 Simplified Procedure (Method 1).



Legend








-  = Photo location
-  = 150m wide buffer
-  = Vegetation plots
-  = Building envelope/s


Figure 1: Location plan

2.1.2 Vegetation Classification

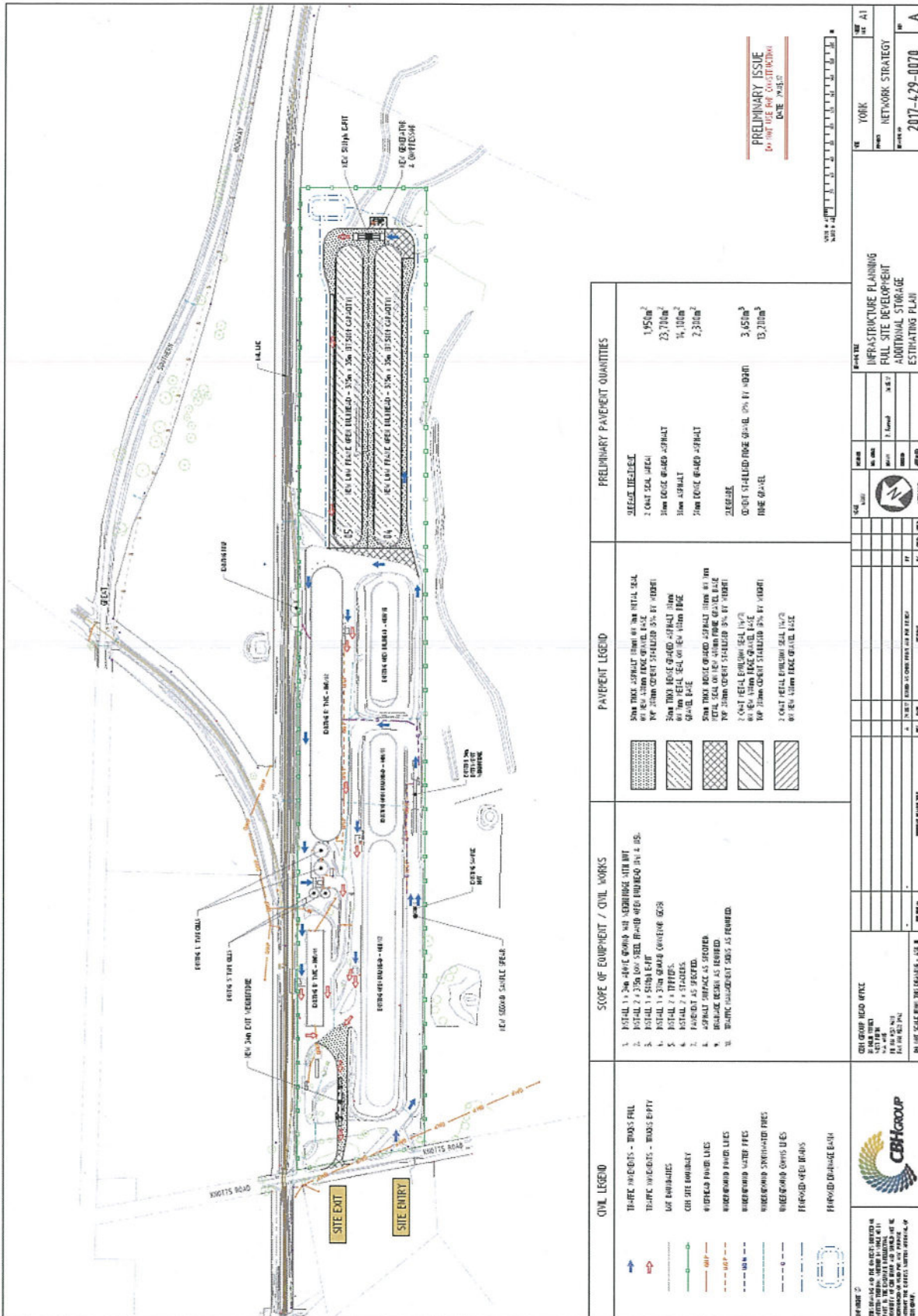
All vegetation within 100m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2009. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

<table border="1"> <tr> <td>Photo ID:</td> <td>1</td> <td>Plot:</td> <td>1</td> </tr> <tr> <td colspan="4">Vegetation Classification or Exclusion Clause</td> </tr> <tr> <td colspan="4">Class G Grassland – Closed tussock grassland G-21</td> </tr> <tr> <td colspan="4">Description / Justification for Classification</td> </tr> <tr> <td colspan="4">All forms, including situations with shrubs and trees, if the overstorey foliage cover is less than 10%.</td> </tr> </table>	Photo ID:	1	Plot:	1	Vegetation Classification or Exclusion Clause				Class G Grassland – Closed tussock grassland G-21				Description / Justification for Classification				All forms, including situations with shrubs and trees, if the overstorey foliage cover is less than 10%.				
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Description / Justification for Classification																					
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<p>Photo ID: 4 Plot: 4</p>	
<p>Vegetation Classification or Exclusion Clause</p>	
<p>Excludable - 2.2.3.2(f) Low Threat Vegetation</p>	
<p>Description / Justification for Classification</p>	
<p>Low threat vegetation managed in a minimal fuel condition including grassland, nature strips and windbreaks.</p>	
<p>Photo ID: 5 Plot: 5</p>	
<p>Vegetation Classification or Exclusion Clause</p>	
<p>Class G Grassland – Closed tussock grassland G-21</p>	
<p>Description / Justification for Classification</p>	
<p>All forms, including situations with shrubs and trees, if the overstorey foliage cover is less than 10%.</p>	
<p>Photo ID: 6 Plot: 6</p>	
<p>Vegetation Classification or Exclusion Clause</p>	
<p>Excludable - 2.2.3.2(e) Non Vegetated Areas</p>	
<p>Description / Justification for Classification</p>	
<p>Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.</p>	

<p>Photo ID: 7 Plot: 7</p> <p>Vegetation Classification or Exclusion Clause</p> <p>Class G Grassland – Closed tussock grassland G-21</p> <p>Description / Justification for Classification</p> <p>All forms, including situations with shrubs and trees, if the overstorey foliage cover is less than 10%.</p>	
<p>Photo ID: 8 Plot: 8</p> <p>Vegetation Classification or Exclusion Clause</p> <p>Class G Grassland – Closed tussock grassland G-21</p> <p>Description / Justification for Classification</p> <p>All forms, including situations with shrubs and trees, if the overstorey foliage cover is less than 10%.</p>	
<p>Photo ID: 9 Plot: 9</p> <p>Vegetation Classification or Exclusion Clause</p> <p>Class B Woodland - Woodland B-05</p> <p>Description / Justification for Classification</p> <p>Trees 10-30m high; 10-30%foliage cover dominated by eucalypts: understorey or low trees to tall shrubs typically dominated by Acacia, Callitris or Casuarina.</p>	

2.2 Site Plan



CIVIL LEGEND	SCOPE OF EQUIPMENT / CIVIL WORKS	PAVEMENT LEGEND	PRELIMINARY PAVEMENT QUANTITIES
<p>TRAFFIC MARKINGS - ROAD'S PAUL</p> <p>TRAFFIC MARKINGS - ROAD'S ENTRY</p> <p>LOT BOUNDARIES</p> <p>CIVIL SITE BOUNDARY</p> <p>UNDERGROUND POWER LINES</p> <p>UNDERGROUND WATER LINES</p> <p>UNDERGROUND WATER PIPES</p> <p>UNDERGROUND SPRAWLER PIPES</p> <p>UNDERGROUND OVERSILDES</p> <p>PERIMETER BENCH</p> <p>PERIMETER DRAINAGE BENCH</p>	<p>1. INSTALL 1.2m x 400mm x 40mm REINFORCED WITH BIT</p> <p>2. INSTALL 2.25m x 35m x 40mm REINFORCED WITH BIT</p> <p>3. INSTALL 1.2m x 30m x 40mm</p> <p>4. INSTALL 1.2m x 30m x 40mm</p> <p>5. INSTALL 2.25m x 35m x 40mm</p> <p>6. INSTALL 2.25m x 35m x 40mm</p> <p>7. FURNISH AS SPECIFIED</p> <p>8. FURNISH AS SPECIFIED</p> <p>9. FURNISH AS SPECIFIED</p> <p>10. FURNISH AS SPECIFIED</p> <p>11. FURNISH AS SPECIFIED</p>	<p>300mm THICK ASPHALT SURFACE WITH 100mm REINFORCED STABILISED 5% BY WEIGHT GRAVEL BASE</p> <p>200mm THICK ASPHALT SURFACE WITH 100mm REINFORCED STABILISED 5% BY WEIGHT GRAVEL BASE</p> <p>150mm THICK ASPHALT SURFACE WITH 100mm REINFORCED STABILISED 5% BY WEIGHT GRAVEL BASE</p> <p>100mm THICK ASPHALT SURFACE WITH 100mm REINFORCED STABILISED 5% BY WEIGHT GRAVEL BASE</p> <p>50mm THICK ASPHALT SURFACE WITH 100mm REINFORCED STABILISED 5% BY WEIGHT GRAVEL BASE</p> <p>200mm THICK ASPHALT SURFACE WITH 100mm REINFORCED STABILISED 5% BY WEIGHT GRAVEL BASE</p> <p>100mm THICK ASPHALT SURFACE WITH 100mm REINFORCED STABILISED 5% BY WEIGHT GRAVEL BASE</p>	<p>SEALING: 1,950m²</p> <p>200mm THICK ASPHALT: 23,700m²</p> <p>150mm THICK ASPHALT: 14,100m²</p> <p>100mm THICK ASPHALT: 2,300m²</p> <p>50mm THICK ASPHALT: 3,450m²</p> <p>100mm THICK ASPHALT: 13,700m²</p>

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<p>DATE: 19/05/17</p> <p>BY: [Signature]</p> <p>FOR: [Signature]</p> <p>PROJECT: NETWORK STRATEGY</p> <p>REF: 2017-4-29-0070</p> <p>REV: A</p>	<p>INFRASTRUCTURE PLANNING</p> <p>FULL SITE DEVELOPMENT</p> <p>ADDITIONAL STORAGE</p> <p>ESTIMATING PLAN</p>
--	--

3. Proposal Compliance and Justification

3.1 Meeting the Objectives of SPP3.7

Objective 5.1

Avoid any increase in the threat of bushfire to people, property and infrastructure. The preservation of life and the management of bushfire impact are paramount.

Objective 5.1 is satisfied by addressing all of the 4 Elements in the Guidelines for Planning in Bushfire Prone Areas.

Objective 5.2

Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process.

Objective 5.2 is satisfied by identifying the bushfire risks present to this particular site and considering them in the attached Bushfire Attack Level Assessment.

Objective 5.3

Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development applications take into account bushfire protection requirements and include specified bushfire protection measures

Objective 5.3 is satisfied by the compliance with the 4 elements of the bushfire protection criteria listed in section 4 of this report.

Objective 5.4

Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change.

Objective 5.4 is satisfied by minimal clearing maintaining the amenity valued in the area.

3.2 Policy Measures Which Apply To This Proposal

<p>6.1 Higher order strategic planning documents in bushfire prone areas</p> <p>The subject site has been identified on the Map of Bushfire Prone Areas 2016 as being at risk. This Bushfire Management Plan demonstrates compliance with the requirements.</p>
<p>6.2 Strategic planning proposals, subdivision and development applications</p> <p>Site has been identified as being rated above BAL-LOW therefore Policy Measures 6.3, 6.4 and/or 6.5 are triggered.</p>
<p>6.3 Information to accompany strategic planning proposals</p> <p>Not applicable.</p>
<p>6.4 Information to accompany subdivision applications</p> <p>Not Applicable</p>
<p>6.5 Information to accompany development applications</p> <p>The preliminary BAL certificate from the initial site visit attached in the appendix of this document along with the included mapping demonstrate all hazards identified on site and the BAL rating prior to this BMP being implemented.</p>
<p>6.6 Vulnerable or high-risk land uses</p> <p>Not Applicable.</p>
<p>6.7 Strategic planning proposals, subdivision or development applications in areas where an extreme BHL and/or BAL-40 or BAL-FZ applies</p> <p>Not Applicable.</p>
<p>6.8 Advice of State/relevant authority/s for emergency services to be sought</p> <p>Not Applicable.</p>
<p>6.9 Advice of State/relevant agencies/authorities for environmental protection to be sought</p> <p>Not Applicable.</p>
<p>6.10 Bushfire conditions may be imposed</p> <p>Notice on title to be enforced by Local Government notifying future owners of Bushfire Management Plan and requirement to areas of property in low fuel conditions.</p>
<p>6.11 Precautionary principle</p> <p>The precautionary principle is a fundamental part of bushfire planning and has been incorporated in all aspects of this Bushfire Management Plan.</p>

3.3 How Does the Proposal Address the Bushfire Protection Criteria

The Bushfire Protection Criteria are addressed in Part 4 of this Bushfire Management Plan.

3.4 Statement Against Other Relevant Documents

This Bushfire Management Plan meets the intent of:

1. State Planning Policy 3.7,
2. Guidelines for Planning in Bushfire Prone Areas,
3. Local planning strategy references to bushfire risk management,
4. Local planning scheme provisions relating to bushfire risk management,
5. Applicable structure plans, special control area provisions, previous planning approvals or similar referencing bushfire risk management applicable to the subject site,
6. Standard fire break orders of the area; and
7. AS3959 Construction of Buildings in Bushfire-Prone Areas.

There is currently no Bushfire Management Plan prepared over the subject site, no existing Bushfire Hazard Level assessment or BAL assessment prepared over the site and no applicable landscaping plans. No noncomplying areas have been identified.

4. Bushfire Risk Management Measures

The 4 elements of bushfire protection criteria to follow have been provided to assist in the design and development of strategic planning proposals, subdivision applications and development applications in bushfire prone areas.

4.1 Element 1: Location

Intent: To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.

Performance Principle P1: The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL-29 or below, and the risk can be managed.

Acceptable Solution A1.1 Development location: The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.

Response: The purpose of this bushfire management plan is to reduce the risk of bushfire attack to this proposed development. After implementation of this Bushfire Management Plan the indicative Bushfire Attack Level on site will not exceed BAL-29.

4.2 Element 2: Siting

Intent: To ensure that the siting and design of development minimises the level of bushfire impact.

Performance Principle P2: The siting and design of the strategic planning proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of bushfire threat that applies to the site. That it minimises the bushfire risk to people, property and infrastructure, including compliance with AS 3959.

Acceptable Solution A2.1 Asset Protection Zone (APZ): Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:

1. **Width:** Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m^2 (BAL-29) in all circumstances.

Figure 14: A reduced separation distance may necessitate increased construction standards

It may be possible to reduce the minimum distances, for example by increasing the construction standard of the building – in this example the building would need to be constructed to BAL-29



Figure 2.1.1: Diagram of Asset Protection Zone achieving a maximum BAL-29

2. **Location:** the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity.
3. **Management:** the APZ is managed in accordance with the requirements of 'Schedule 1: Standards for Asset Protection Zones':
 - i) **Fences:** within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
 - ii) **Objects:** within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.
 - iii) **Fine Fuel load:** combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
 - iv) **Trees (> 5 metres in height):** trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.

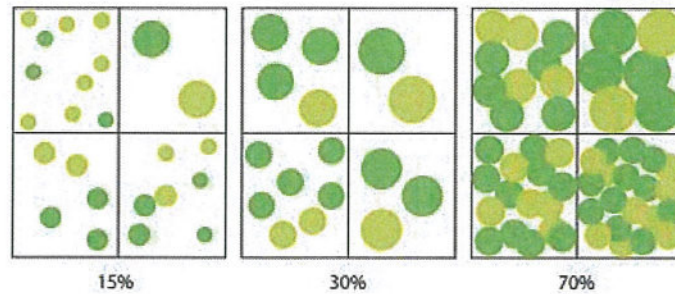
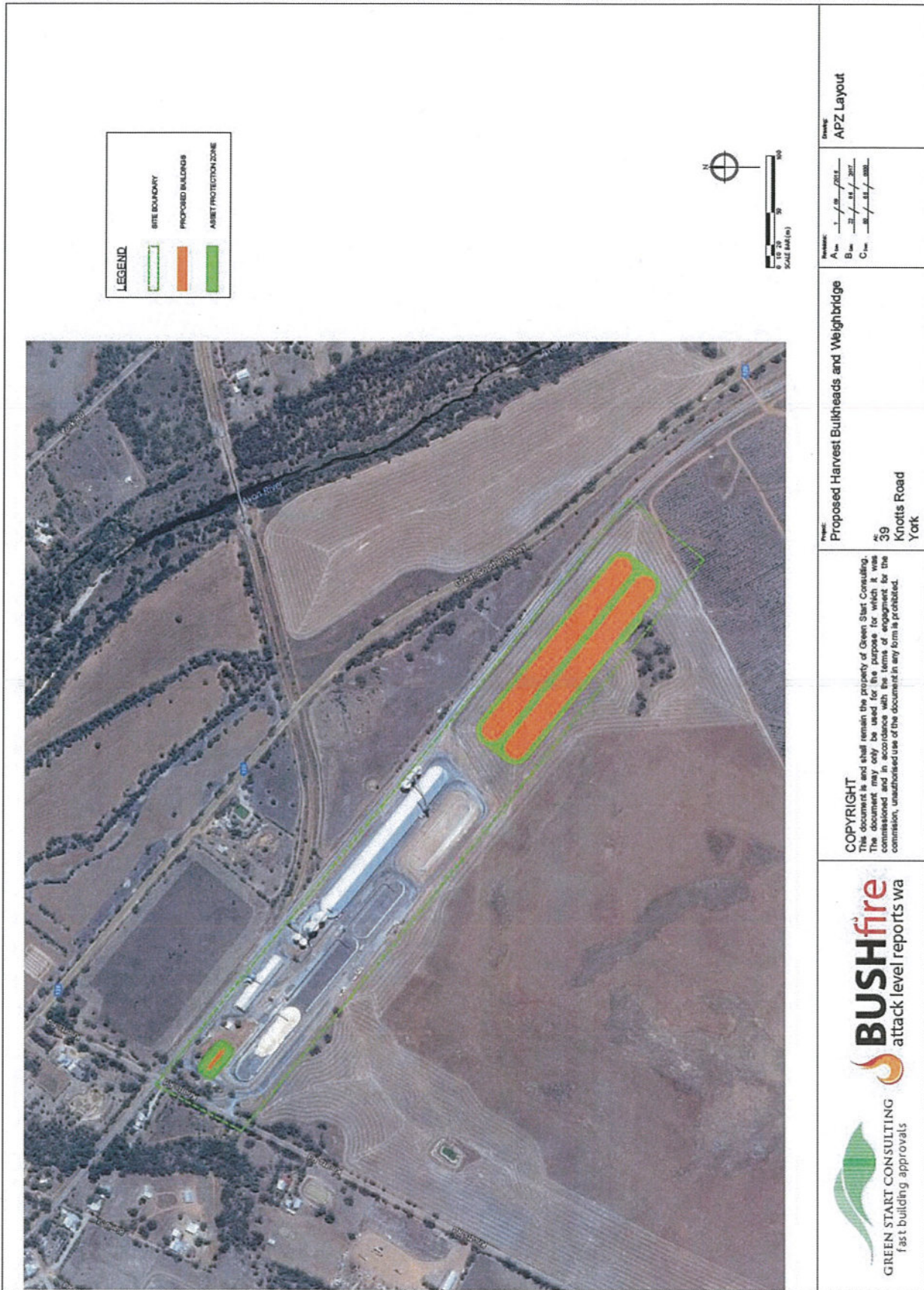


Figure 2.1.1: Tree canopy cover – ranging from 15 to 70 percent at maturity

- v) **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.
- vi) **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- vii) **Grass:** should be managed to maintain a height of 100 millimetres or less

Response:

1. An APZ is to be created by the builder at construction stage. It is the responsibility of landowners to reestablish the APZ before use of the proposed structure and maintain the APZ throughout the life of the building.
2. For the proposed weighbridge hut, an APZ width of 14m is required to achieve acceptable separation from classified woodland to the west of the proposed development site so that the highest determined Bushfire Attack Level on site does not exceed BAL-29. This APZ can be maintained within the site boundaries and currently already exceed the management conditions required for an APZ.
3. For the proposed bulkheads, the APZ proposed is to be a width of 8m surrounding the majority of the developments and 14m on site directly opposite the classified woodland so that the highest determined Bushfire Attack Level on site does not exceed BAL-29.
4. Each APZ is to be maintained as per Schedule 1 to reduce the fuel load and the potential bushfire risk to the property in perpetuity.



4.2.1 APZ Layout

4.3 Element 3: Vehicular Access

Intent: To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.

Performance Principle P3: The internal layout, design and construction of public and private vehicular access and egress in the subdivision/ development allow emergency and other vehicles to move through it easily and safely at all times.

Acceptable Solution A3.1 Two access routes: Two different vehicular access routes are provided, both of which connect to the public road network, provide safe access and egress to two different destinations and are available to all occupants/the public at all times and under all weather conditions

E3.2 Public road

Trafficable surface

Widths quoted for access routes refer to the width of the trafficable surface. A six metre trafficable surface does not necessarily mean paving width. It could, for example, include four metre wide paving one metre wide constructed road shoulders.

In special circumstances, where eight lots or less are being serviced, a public road with a minimum trafficable surface of four metres for a maximum distance of 90 metres may be provided subject to the approval of both the local government and Department of Fire and Emergency Services.

Public road design

All roads should allow for two-way traffic to allow conventional two-wheel drive vehicles and fire appliances to travel safely on them.

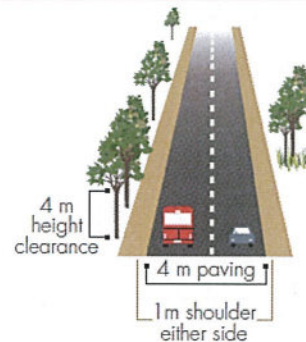


Figure 17: Minimum design requirements for a public road

Response: Access will primarily be provided to Knotts Road from the site giving a choice of two safe egress destinations to the north-east and south-west, which are available to all people at all times. A second driveway to the site is proposed which provides a separate egress to Knotts Road.

Acceptable Solution A3.5 Private Driveway longer than 50 metres: A private driveway is to meet all of the following requirements:

- Requirements in Table 4, Column 3;
- Required where a building site is more than 50 metres from a public road;
- Passing bays: every 200 metres with a minimum length of 20 metres and a minimum width of two metres (i.e. the combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres) and within 50 metres of a house; and
- Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes.
- All-weather surface (i.e. compacted gravel, limestone or sealed).

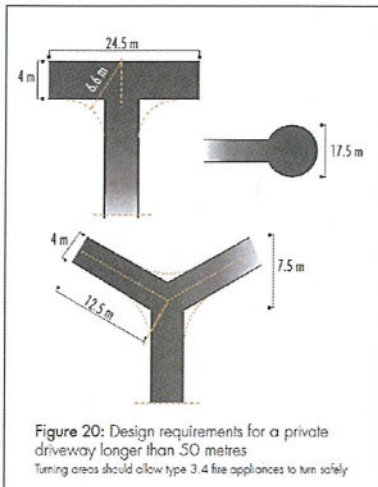


Table 4: Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire service access routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5

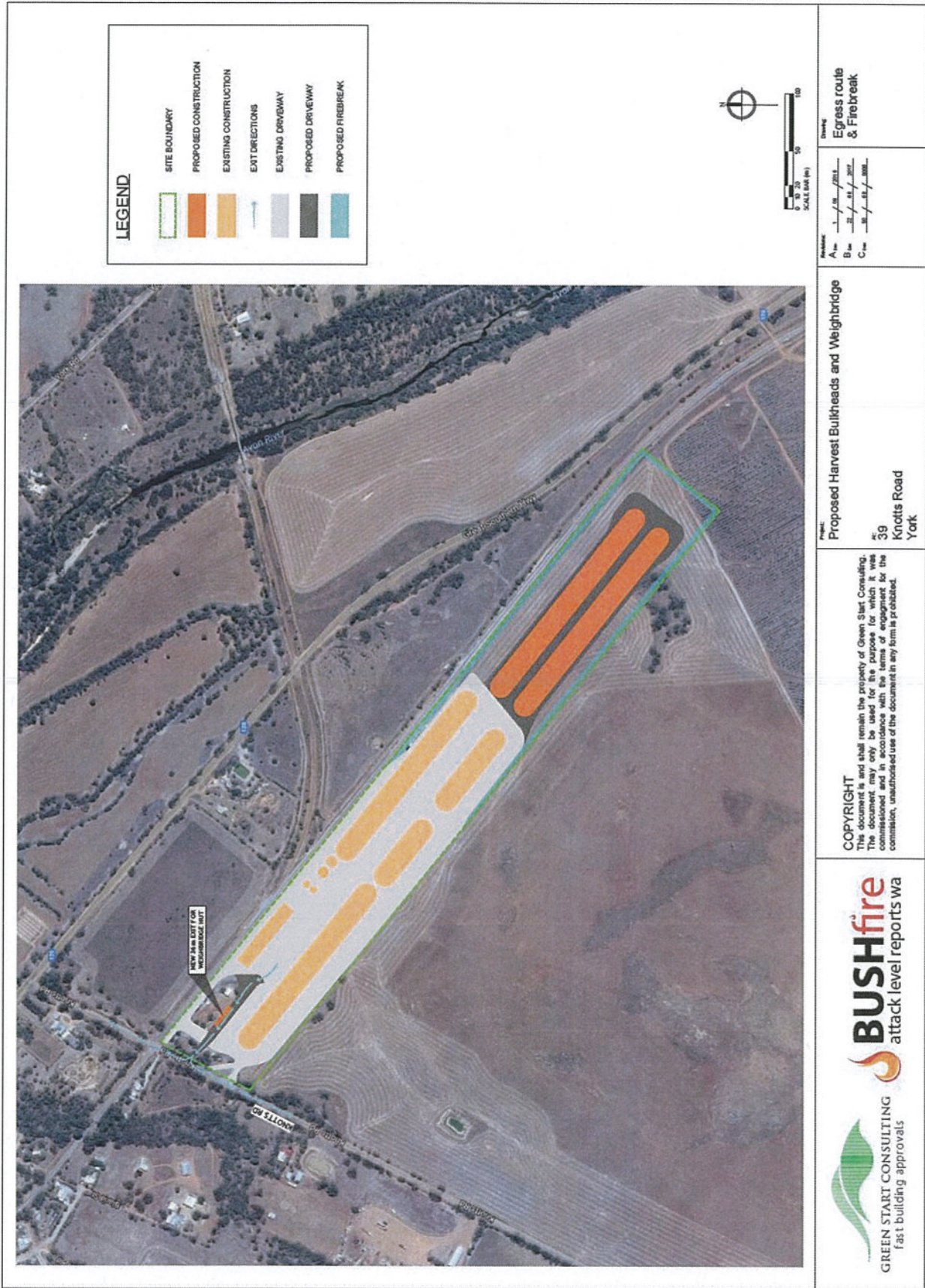
*Refer to E3.2 Public roads: Trafficable surface

Response:

- The requirements of Table 4, Column 3 have been met. This site’s driveway is currently used by heavy vehicles.
- A second 36m driveway is proposed on site which meets the requirements of Table 4, Column 3.
- No house is proposed on site.
- The combined width of the existing road is currently approximately 8m, satisfying this requirement.
- The combined width of the proposed second driveway is a minimum of 8m, also satisfying this requirement.
- Current road network satisfies this requirement.
- No bridges or culverts on site. All weather surface currently provided.

Acceptable Solution A3.8 Firebreak width: Lots greater than 0.5 hectares must have an internal perimeter firebreak of a minimum width of three metres or to the level as prescribed in the local firebreak notice issued by the local government.

Response: The landowner of the lot must comply with the requirements of the local government’s firebreak notice, as published annually. As per the Shire of York Firebreak notice, all land within a townsite and above 4000 square metres is to install a legally required trafficable fire break of a minimum width of 2.1 m around the inside of the lot boundary and any buildings. This BMP proposes a 3m firebreak around the site lot boundary as per A3.8. The proposed APZ and current site plan indicates that A3.8 will be achieved in relation to the buildings. The landowner is to undertake the ongoing maintenance of the firebreaks whilst the management of vegetation for the rest of the plot is to be carried out as per the notice.



4.3.1 Egress Route, Proposed Driveway and Firebreak layout

4.4 Element 4: Water

Intent: To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.

Performance Principle P4: The subdivision, development or land use is provided with a permanent and secure water supply that is sufficient for firefighting purposes.

A4.1 Reticulated areas

The subdivision, development or land use is provided with a reticulated water supply in accordance with the specifications of the relevant water supply authority and Department of Fire and Emergency Services.

Response: The site has access to a reticulated water supply.

5. Construction Requirements as per AS3959.

In order to improve the ability of the building in designated bushfire-prone areas to better withstand attack from bushfire and thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself. Improving the design and construction of buildings to minimize damage from the effects of bushfire is but one of several measures available to property owners and occupiers to address damage during bushfire.

Therefore, the proposed development must abide with Section 3 Construction General and Section 7 Construction for Bushfire Attack Level 29 from the AS3959 in order to lessen the risk of damage to the building as well as to protect the occupants of the property from harm.

6. Implementation and Enforcement

Task	Upfront tasks needing to be completed		Individuals and/or organisations	
	Responsible Party	Time Frame	Responsible Party	Time Frame
Asset Protection Zone	Landowner	Prior to construction commencement	Land owner	Ongoing
Construction requirements	Builder and Building Surveyor	Prior to construction commencement	Land owner	Ongoing
Road network	Builder	Prior to construction commencement	Land owner	Ongoing
Water Hydrants	DFES and Local Government	Prior to construction commencement	DFES and Local Government	Ongoing
Firefighting Response	DFES and Local Volunteer Brigade	Ongoing	DFES and Local Volunteer Brigade	Ongoing
Fuel reduction and Fire Break Notice	Landowner	Ongoing	Local Government	Annually
Inspection and Enforcement			Local Government	Ongoing

** Responsible for ongoing fire management and works proposed in the Bushfire Management Plan (e.g. local government for land vested in it and private property owners for freehold land)*

The individuals/organisations stated in the table are to be notified of their responsibilities by the proponent so that they are able to comply with the Bushfire Management Plan. A copy of the endorsed Bushfire Management Plan is to be provided to each entity for a thorough understanding of the roles and responsibilities involved.

Although this Bushfire Management Plan relates to a specific planning approval, as a part of an ongoing fire mitigation strategy it should be referred to periodically. In case of changing circumstances and any items found to require review, they must be brought to the attention of the local government and the Bushfire Management Plan author.

7. Recommendations

1. A notice is to be placed on title for the lot by the local government alerting future landowners to this BMP.
2. An asset protection zone is to be created and maintained in accordance with siting requirements of element 2 of the Guidelines for Planning in Bushfire Prone Areas.
3. Road network to be maintained in accordance with element 3 of the Guidelines for Planning in Bushfire Prone Areas.
4. Installation and maintenance of the fire break is the responsibility of the landowner as per the Shire of York's Firebreak Notice.
5. The applicable construction requirements are to be implemented on the proposed development as per the AS3959.
6. All future landowners to thoroughly read this BMP. If there are any items which require clarification it is recommended that they contact the author of this report.
7. Implementation and enforcement schedule to be actively adhered to.
8. This BMP along with any relevant documents is to be referred the local government's planning department.

Address: Suite 12, 734 Albany Highway, East Victoria Park, WA 6101 Phone: (08) 6114 9356

Email: admin@greenstartconsulting.com.au, Web: www.greenstartconsulting.com.au

8. Appendix 1 – BAL Certificates Issued Prior to BMP



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2009

This certificate has been issued by a person by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme. The certificate details the conclusions of the full Bushfire Attack Level Assessment Report (full report) prepared by the Accredited Practitioner.

Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference	
		39		Knotts Road	
Local government area	Suburb			State	Postcode
	Balladong			WA	6302
Main BCA class of the building	Class 5	Use(s) of the building	Weighbridge Hut		
Description of the building or works	Proposed weighbridge hut				

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B Woodland	Flatland	26.72 m	BAL - 19

BPAD Accredited Practitioner Details

<p>Name James Terenciuk</p> <p>WA Bushfire Attack Level Report admin@wabalreport.com.au Phone: (08) 6114 9356</p> <p>Green Start Consulting admin@greenstartconsulting.com.au Phone: (08) 6114 9356</p> <p>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 Amendments 1,2 and 3).</p>	  <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>I hereby declare that I am a BPAD accredited bushfire practitioner.</p> <p>Accreditation No. BPAD36529</p> <p>Signature </p> <p>Date 22 June 2017</p> </div> <p style="text-align: right; font-size: small;">Authorised Practitioner Stamp</p>
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Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report issued.



Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2009

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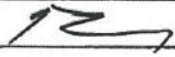
Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference		
		39		Knotts Road		
Local government area	Suburb			State	Postcode	
	Balladong			WA	6302	
Main BCA class of the building	N/A	Use(s) of the building	Grain Storage			
Description of the building or works	Proposed open bulkheads					

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	Flatland	<10 m	BAL – FZ

BPAD Accredited Practitioner Details

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Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report issued.

9. Appendix 2 - BAL Certificates Issued Based on BMP Recommendations

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2009

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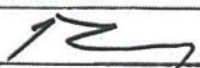
Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference		
		39		Knotts Road		
Local government area	Suburb		State	Postcode		
	Balladong		WA	6302		
Main BCA class of the building	Class 5	Use(s) of the building	Hut			
Description of the building or works	Proposed Weighbridge Hut					

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class B Woodland	Flatland	26.72 m	BAL - 29

BPAD Accredited Practitioner Details

<p>Name James Terenciuk</p> <p>WA Bushfire Attack Level Report admin@wabalreport.com.au Phone: (08) 6114 9356</p> <p>Green Start Consulting admin@greenstartconsulting.com.au Phone: (08) 6114 9356</p>	 	<div style="border: 1px solid black; padding: 5px;"> <p>I hereby declare that I am a BPAD accredited bushfire practitioner. </p> <p>Accreditation No. BPAD36529</p> <p>Signature </p> <p>Date 23 June 2017</p> </div> <p style="text-align: right;"><i>Authorised Practitioner Stamp</i></p>
<p>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 Amendments 1,2 and 3).</p>		

Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report issued.

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2009

This certificate has been issued by a person by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme. The certificate details the conclusions of the full Bushfire Attack Level Assessment Report (full report) prepared by the Accredited Practitioner.

Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference	
		39		Knotts Road	
Local government area	Suburb		State	Postcode	
	Balladong		WA	6302	
Main BCA class of the building	N/A	Use(s) of the building	Grain Storage		
Description of the building or works	Proposed open bulkheads				


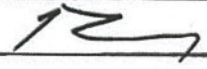
Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	Flatland	8 m	BAL - 29

BPAD Accredited Practitioner Details

Name James Terenciuk
WA Bushfire Attack Level Report admin@wabalreport.com.au Phone: (08) 6114 9356
Green Start Consulting admin@greenstartconsulting.com.au Phone: (08) 6114 9356
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 Amendments 1,2 and 3).



I hereby declare that I am a BPAD accredited bushfire practitioner.		
Accreditation No. BPAD36529		
Signature		
Date	23 June 2017	

Authorised Practitioner Stamp

Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report issued.

10. Appendix 3 – Shire of York Firebreak Notice

Firebreaks

A firebreak means a strip of land that has been cleared of all bushes, grasses and any other object or thing or flammable material leaving clear bare mineral earth 2.1 metres wide. This includes the trimming back of all overhanging trees, bushes, shrubs and any other object or thing over the firebreak area.



Non-Compliant Firebreak



Compliant Firebreak

On or before 25th October each year you MUST take firebreak precautions and these must be maintained up to and including 14th April of the following year.

(A \$250 Penalty Applies)

The purpose is to stop fires from spreading, to allow entry for fire fighting vehicles and to provide a break from which a control line can be lit.

If a firebreak is impractical along the boundary of a property for environmental or other reasons a resident may apply to the Shire of York by 1st September to obtain permission for firebreaks in alternate positions or of a different nature.

If a property within the town site is occupied and neatly landscaped to the extent that it does not present a fire hazard a resident may apply to the Shire of York for an exemption of the firebreak order.

The Shire Ranger will inspect all properties in relation to applications for variations or exemptions to firebreaks to determine the validity of the applications.

If a Notice of exemption is issued by the Shire it may include conditions for the landowner to follow regarding the exemption.

Fire Break & Hazard Reduction Guide

Land Within a Townsite - Up to 1,020m²

Must be hazard reduced and cleared of all flammable material.

Land Within a Townsite - 1,020m²— 4,000m²

Must have a firebreak 2.1m wide and be slashed and hazard reduced to ensure inflammable material is less than 150mm high.

Land Within a Townsite - Over 4,000m²

2.1m fire break around perimeter of property, all building, fuel, haystacks and drums.

Rural Land - Up to 300ha

2.1m firebreak around perimeter of property, all buildings, fuel, haystacks and drums and to be hazard reduced.

Rural Land - Over 300ha

2.1m firebreak around every 300ha block and all building, fuel, haystacks and drums.



Non-Compliant Hazard Reduction



Compliant Hazard Reduction

Firebreak Contractors

Please refer to the York Business Directory for information on Firebreak Contractors.

Contract Burning

(Firebreaks need to be installed before burning is carried out)

York Volunteer Fire & Rescue
York Volunteer Emergency Services

0417 836 503
0429 932 025

FIREBREAK MANAGEMENT



Do you need advice on planning and installing your firebreaks?

TIMEFRAME	FIREBREAK TYPE		HAZARD REDUCTION
	TILLAGE	CHEMICAL	
Opening rains + 4 weeks		Spray with Glyphosate (Roundup) + Atrazine with 1% Ammonia Sulphate.	Spray with Glyphosate (Roundup) + Atrazine with 1% Ammonia Sulphate.
First week of August	Plough / Scarify / Rotary Hoe firebreaks.	Check for weed type. Re-spray if needed.	Plough / Scarify / Rotary Hoe property.
End of August	Crash graze by introducing stock to control weed growth on property.	Check for weed type. Re-spray if needed.	Crash graze by introducing stock to control weed growth on property.
Mid September	Re-work the firebreaks.	Spray areas of re-vegetation.	Re – work Plough / Scarify / Rotary Hoe property if required.
25th OCTOBER	All firebreaks must be completed, no extensions given.	All firebreaks must be completed, no extensions given.	All hazard reduction must be completed, no extensions given.
15 th October	Restricted burning period (permits are required) – unless period has been extended.		
1 st December	Prohibited burning period begins (no burning at all) – unless period has been extended.		