

BUSHFIRE PROTECTION ASSESSMENT

FOR MOD 2

**LOT K (A CONSOLIDATION OF LOTS I & K)
KEMPS CREEK INDUSTRIAL ESTATE**

**No. 200 ALDINGTON ROAD,
KEMPS CREEK**

**FOR
STOCKLAND FIFE KEMPS CREEK PTY LIMITED**

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Report Number	Document	Preparation Date	Issue Date	Directors Approval
B234086 - 4	Final	02.12. 2023	19.12.2023	<i>G.L. Swain</i>

EXECUTIVE SUMMARY

A Concept Master Plan for the Kemps Creek Industrial Estate, 106-208 Aldington Road, Kemps Creek, formally described as Lot 200 DP 1285691, was approved on 5 May 2023 pursuant to State Significant Development (SSD) project approval SSD-10479.

Following further detailed design, the applicant, Stockland Fife Kemps Creek Pty Ltd (SFKC), being a joint venture between Stockland and Fife Capital, lodged a Modification Application Report to the Concept Master Plan SSD-10479 MOD 1 (**MOD 1**). MOD 1 better aligns to Lot specific Lessee preferences, maximises the use of the Estate developable area, reduces the number of retaining walls and considers and further aligns to updated Sydney Water requirements regarding the Stormwater Scheme plan. Specifically, MOD 1 sought to amend the Concept Master Plan and the approved Stage 1 works as follows:

Concept Master Plan

Amendments to the approved lots and boundaries, including:

- Boundary adjustments and increase in Lot A (and subsequent reduction in Lot B) to wholly contain the Transgrid easement;
- Boundary adjustments to Lots C, G, H, I, J, L and M to facilitate future lessee requirements;
- Associated reduction in overall GFA from 340,540 sqm to 326,213sqm of gross floor area and as a result, a reduction in the overall approved car parking requirements by 254 car parking spaces;
- Amendments to the RL levels to Lots B, C, E, F, G, H, U, J, K, and M to facilitate the lot boundary adjustments;
- Amendment to Lot B's building envelope from one building envelope to two to meet future lessee requirements; and
- Minor changes to the internal road layouts to tie into Aldington Road (detailed design).

Stage 1 Works

- Removal of the approved interim access road (connecting from Road 04 to Aldington Road) and temporary junction with Aldington Road.
- Amendments to the grading of Road 01, to facilitate better alignment with the proposed upgrades to Aldington Road (being undertaken under a separate approval pathway).
- Amendment to levels of Road 03 and 04 to support the change to pad levels.
- Retaining wall and bulk earthwork adjustments across the site to rationalise earthworks and reduce the extent of retaining walls, including the revised grading of Lot J.
- Proposed increase to the pad level and consequently building elevation of Warehouse W5 (within Lot F) by approximately 1 metre.
- Associated subdivision layout changes to support the abovementioned boundary adjustments.
- Revisions to the shape of stormwater detention basin A (located within Lot L) to facilitate to the proposed boundary adjustments to Lot L and M.

- Associated amendments to the stormwater layout to align to the proposed boundary adjustments and road layout.

The Applicant now seeks to further amend the SSD-10479 project approval, representing the second proposed modification including the Concept Master Plan, Stage 1 Works, as follows:

MOD 2 to Concept Master Plan

- To amend the proposed Subdivision Plan for Lot 200 DP 1285691:
 - Amalgamate Lots E, H and F to create **Lot H**
 - Amalgamate Lots I and K to create **Lot K**
- To provide revisions to the general arrangement for the future industrial facility on **Lot K**, including updates to the built form, vehicular access, parking, landscaping and hardstand for the site (**Stage 1**);
- To provide for revisions to the general arrangement of the future industrial facility on **Lot J**, including updates to the built form, vehicular access, parking, landscaping and hardstand for the site (**Stage 2**);
- To provide for revisions to the general arrangement of the future industrial facility on **Lot H**, including updates to the built form, vehicular access, parking, landscaping and hardstand for the site (**Stage 3**);
- To provide for revisions to the general arrangement of the future industrial facility on **Lot G**, including updates to the built form, vehicular access, parking, landscaping and hardstand for the site (**Stage 4**).

MOD 2 to Stage 1 Works:

- To provide for a minor amendment to the approved built form under SSD-10479, relocating the approved warehouse building on the previous Lot F to the amended **Lot K**;
- To accommodate a minor amendment to **Basin A** on proposed **Lot L**;
- To make minor amendments to stormwater layouts to improve design efficiency,
- To temporarily utilise the proposed **Lot M, N and O** as a component of the Estate stormwater management solution;
- To temporarily utilise the proposed **Lot A, B and C** as a component of the Estate stormwater management solution; and
- To accommodate minor amendments to the **Estate Road 1** grade to facilitate integration with the Aldington Road upgrade;
- To provide wetlands and ponds in **Lot D** as a component of the Estate stormwater management solution. In general accordance with the layout proposed in the Mamre Road Precinct Stormwater Scheme.

Australian Bushfire Protection Planners Pty Limited has been commissioned by *Stockland Fife Kemps Creek Pty Limited* to prepare a report to provide advice on the bushfire protection measures required for the construction of the Warehouse on Lot K (a consolidation of Lot I & K), Lot 200 in DP 1285691, Kemps Creek Industrial Estate, No. 200 Aldington Road, Kemps Creek, within the Penrith City Council Local Government Area (LGA).

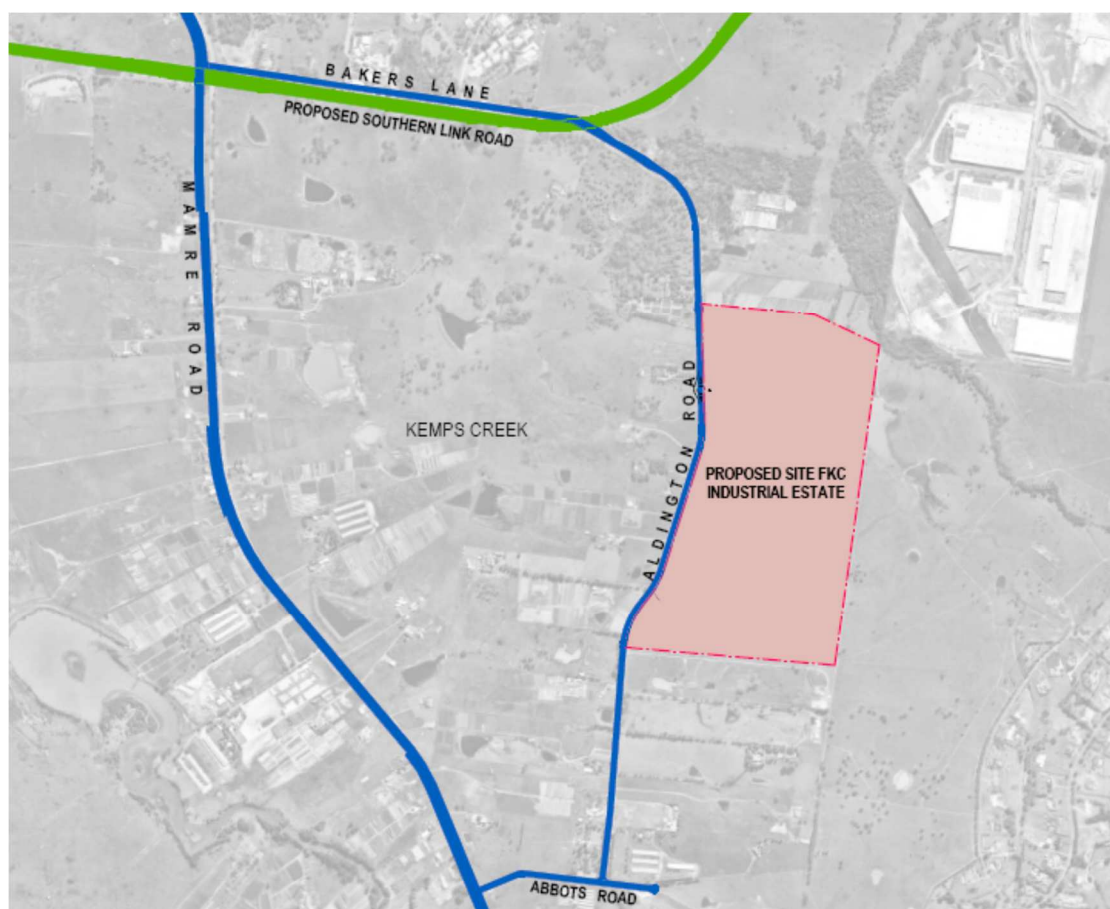
The site is zoned for IN1 – Industrial uses and is adjoined by vacant IN1 zoned land.

A small area of RE2 zoned land occupies the northeast corner of the site, extending to the east across the adjoining land.

The Site has approximately 1250m of direct frontage to Aldington Road with a proposed signalised intersection providing vehicular access via Aldington Road to the proposed Southern Link Road.

The Site is located approximately 4km north-east from the future Western Sydney Nancy-Bird Walton Airport, 13km south-east of the Penrith CBD and 40km west of the Sydney CBD.

Figure 1 – Location of the Kemps Creek Industrial Estate.



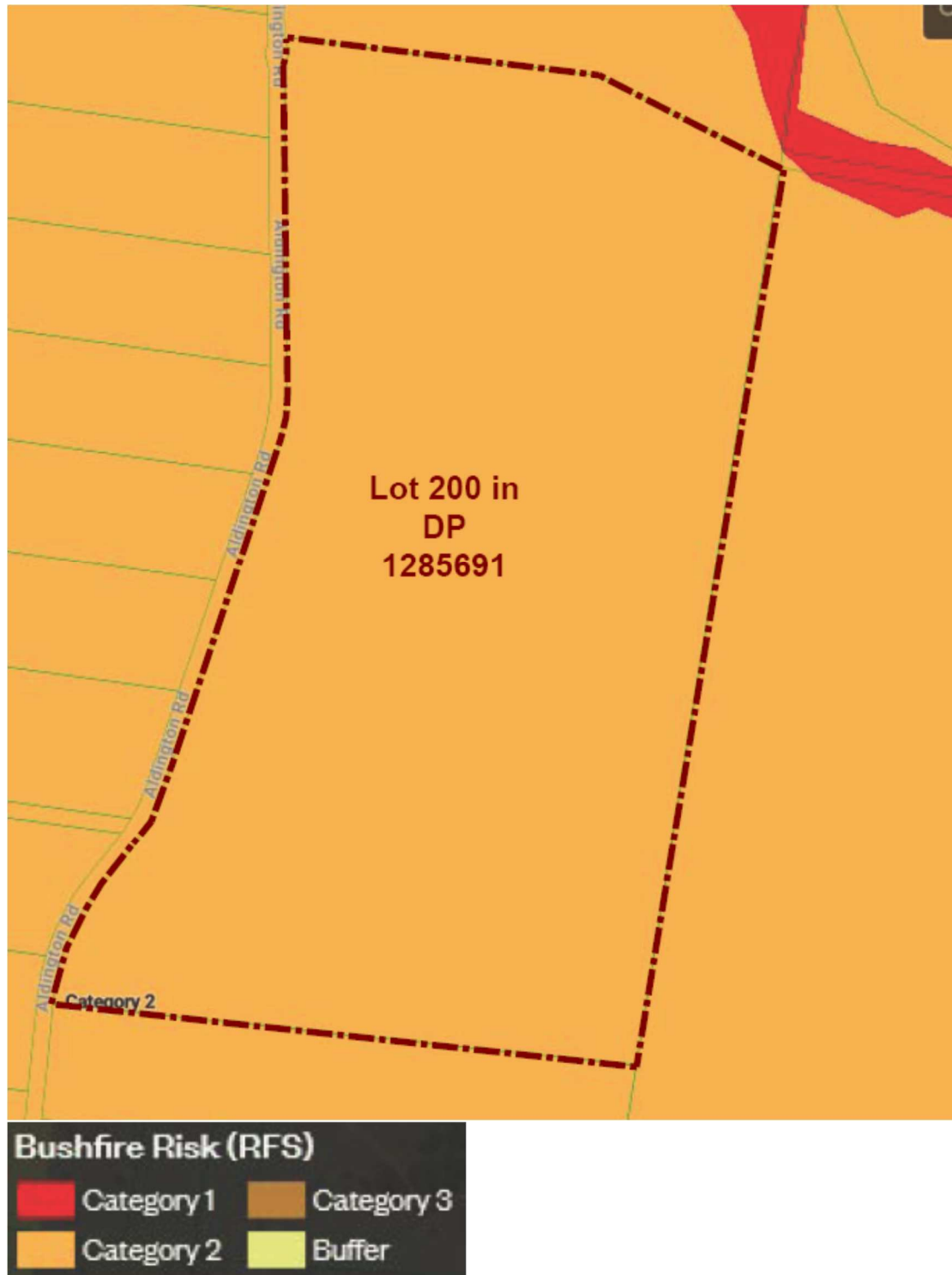
The site forms part of the Mamre Road Precinct and is zoned for IN1 – General Industrial uses as defined within the State Environmental Planning Policy (Western Sydney Employment Area) 2018 (SEPP WSEA).

Figure 2 – Landuse Zoning Map.



The Penrith Council Bushfire Prone Land Map indicates that the site and adjacent lands contains Category 2 Bushfire Prone Vegetation.

Figure 3 – Extract from Penrith Bushfire Prone Land Map showing Category 2 Bushfire Prone Vegetation within the Kemps Creek Industrial Estate.



A review of the Bushfire Prone Land Map against the actual vegetation on the development site and adjoining land confirms that the mapped Category 2 Bushfire Prone Vegetation consists of grassland vegetation which will be removed by the construction of the future industrial development.



However, due to the development site being located within a bushfire prone area, as defined by the Penrith Bushfire Prone Land Map, the development is triggered by the Bushfire Prone Land Map and Section 4.14 of the *Environmental Planning & Assessment Act 1979* applies to the construction of the warehouse building.

Section 4.14 of the *Environmental Planning and Assessment Act* requires a Consent Authority, when considering development within a bushfire prone area, to be satisfied that the development conforms with the specifications and requirements of *Planning for Bushfire Protection 2019*.

Planning for Bushfire Protection 2019 provides specific deemed-to-satisfy provisions on the bushfire protection measures necessary for rural & residential subdivisions, the construction of “*Special Fire Protection Purpose Developments*” and the construction of Class 1, 2, 3 & 4 buildings in Bushfire Prone areas.

The document does not identify specific deemed-to-satisfy protection measures for buildings of Class 5 to 10 of the Building Code of Australia. The document does provide the following advice for these classes of buildings:

“The NCC does not provide for any bushfire specific performance requirements for these particular classes of buildings. As such A.S. 3959 and the NASH Standard are not considered as a set of Deemed to Satisfy provisions, however compliance with A.S. 3959 and NASH must be considered when meeting the aim and objectives of Planning for Bushfire Protection 2019

The objectives of *Planning for Bushfire Protection 2019* are:

- (i) Afford occupants of any building adequate protection from exposure to a bushfire;
- (ii) Provide for a defensible space to be located around buildings;
- (iii) Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- (iv) Ensure that safe operational access and egress for emergency service personnel and residents is available;
- (v) Provide for ongoing management and maintenance of bushfire protection measures; and
- (vi) Ensure that utility services are adequate to meet the needs of firefighters.

This Bushfire Protection Assessment undertakes an assessment of the bushfire protection measures required to address bushfire risk to the Warehouse building, consistent with the provisions of Section 4.14 of the *Environmental Planning and Assessment Act 1979* and examines the adequacy of the setbacks [defensible spaces] to the building; fire-fighting access and provision of fire-fighting water supplies, fuel management protocols and other matters considered necessary to mitigate any potential bushfire threat to persons, property and the environment.



A handwritten signature in black ink, which appears to read 'Graham Swain', is positioned above the printed name.

Graham Swain
Managing Director,
Australian Bushfire Protection Planners Pty Limited.



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SECTION 1

INTRODUCTION

1.1 Aim of this Assessment.

The aim of this Bushfire Protection Assessment is to address the aim & objectives of *Planning for Bushfire Protection 2019* including:

- Determine the formation of the vegetation within 140 metres of the development site, in accordance with the vegetation classification system contained in Appendix 1 of *Planning for Bushfire Protection 2019*;
- Undertake an assessment to determine the effective slope of the land on and surrounding the development site;
- Determine the Fire Danger Index [FDI] for the site;
- Undertake an assessment to determine bushfire protection strategies for the proposed development, including the bushfire protection measures required to be implemented in the design and construction of the Canopies and the requisite bushfire protection measures required to address the safety of the staff and shoppers.
- Prepare a report that addresses the following matters:
 - (i) The provision of building setbacks (Asset Protection Zones) from vegetated areas and the siting of buildings to minimize the impact of radiant heat and direct flame contact;
 - (ii) Fire-fighting water supplies;
 - (iii) Access requirements for emergency service vehicles;
 - (iv) Construction standards to be used for the future buildings within the proposed development to minimize the vulnerability of buildings to ignition from radiation and ember attack;
 - (v) Land management responsibilities; and
 - (vi) Evacuation management.

1.2 Statutory Requirements.

This assessment has been prepared having regard to the following legislative and planning requirements:

1.2.1 Legislation.

(a) Environmental Planning and Assessment Act - 1979 (EPA Act)

Planning and development within NSW is regulated by the *Environmental Planning & Assessment Act, 1997* (EPA Act). In relation to bushfire protection planning for retail/commercial development in bushfire prone areas in NSW, Section 4.1.4 of the EPA Act applies and requires a consent authority to be satisfied that the proposed development conforms to the specifications and requirements of *Planning for Bushfire Protection 2019*.

(b) Rural Fires Act 1997

The objectives of the *Rural Fires Act* are to provide:

- The prevention, mitigation and suppression of fires;
- Coordination of bushfire fighting and prevention;
- Protection of people and property from fires; and
- Protection of the environment.

Sections 63(1) and 63(2) require public authorities and owners / occupiers of land to take all practicable steps to prevent the occurrence of bushfires on, and to minimize the danger of the spread of bushfires.

1.2.2 Planning Policies.

Planning for Bushfire Protection – 2019 (NSW Rural Fire Service)

This document provides guidance on the planning and development control processes in relation to bushfire protection measures for rural residential and residential subdivision, “*Special Fire Protection*” and Class 5 – 8 and 10 buildings in bushfire prone areas [Industrial buildings are Class 7 as defined by the Building Code of Australia].

These measures include the provision of defensible space requirements and access/water supply provisions to Class 5 – 8 & 10 developments in bushfire prone areas.

Provision for the assessment of construction standards to buildings and management / maintenance of the Asset Protection Zones/defensible space to buildings is also provided.

1.3 Development Proposal.

This Bushfire Protection Assessment has been prepared for the construction of the Warehouse building within Lot K (a consolidation of Lot I & K) created in the subdivision of Lot 200 in DP 1285691, Kemps Creek Industrial Estate No. 200 Aldington Road, Kemps Creek.



Figure 4 – Master Plan of the proposed Kemps Creek Industrial Estate.

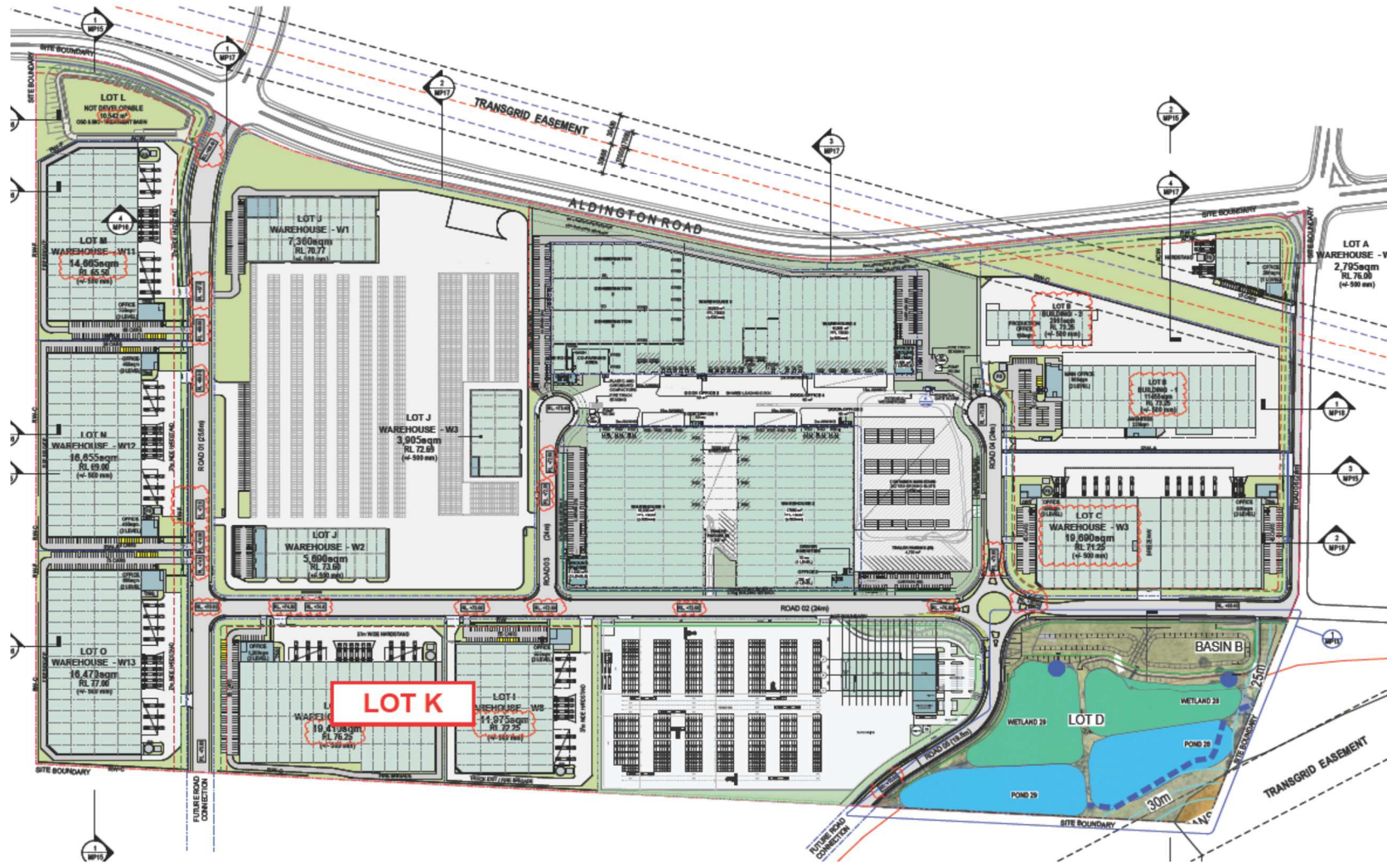




Figure 5 – Enlarged copy of Master Plan of the proposed Kemps Creek Industrial Estate showing Lot K.

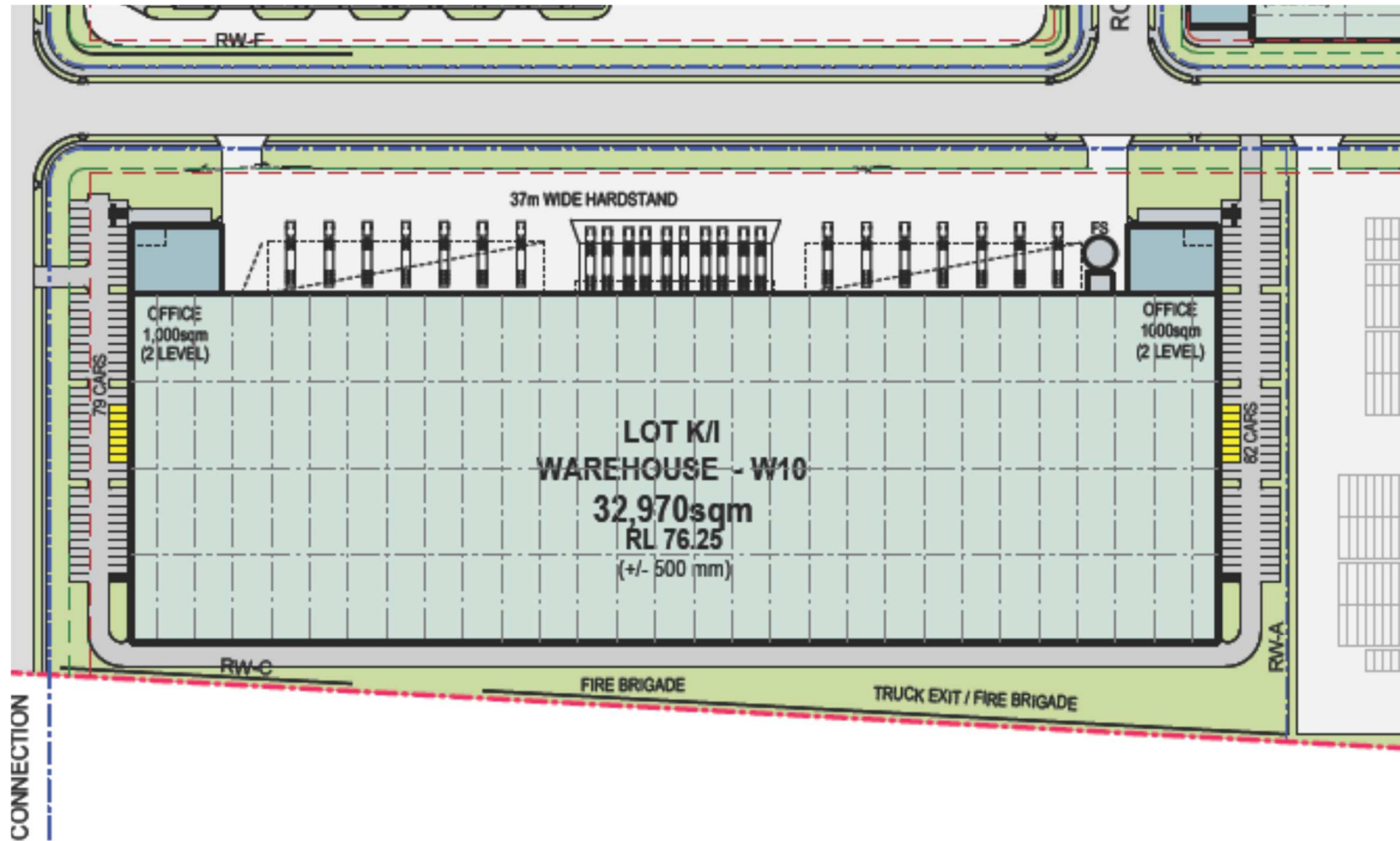




Figure 6 – Site Plan of Warehouse Building on Lot K.

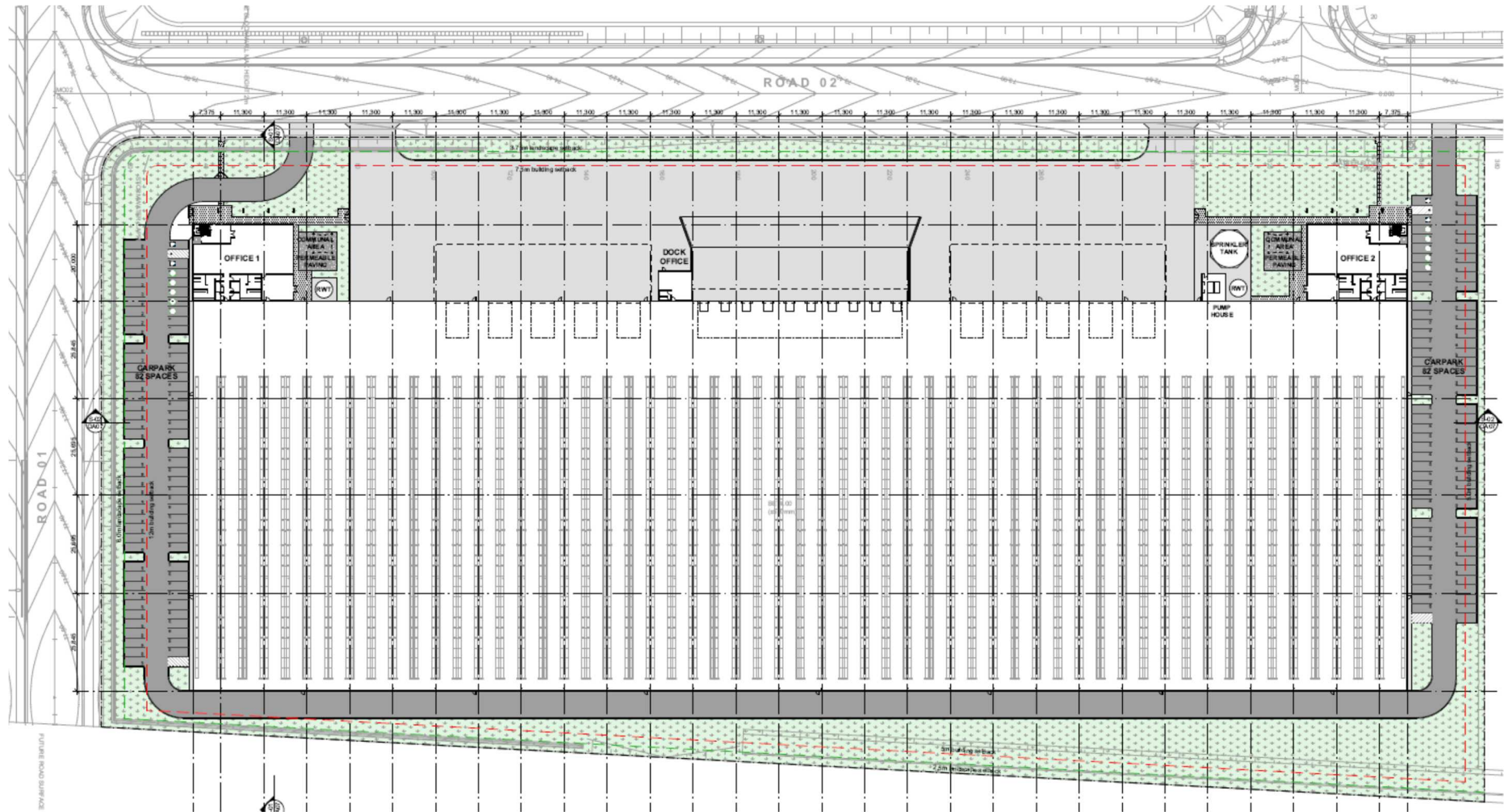
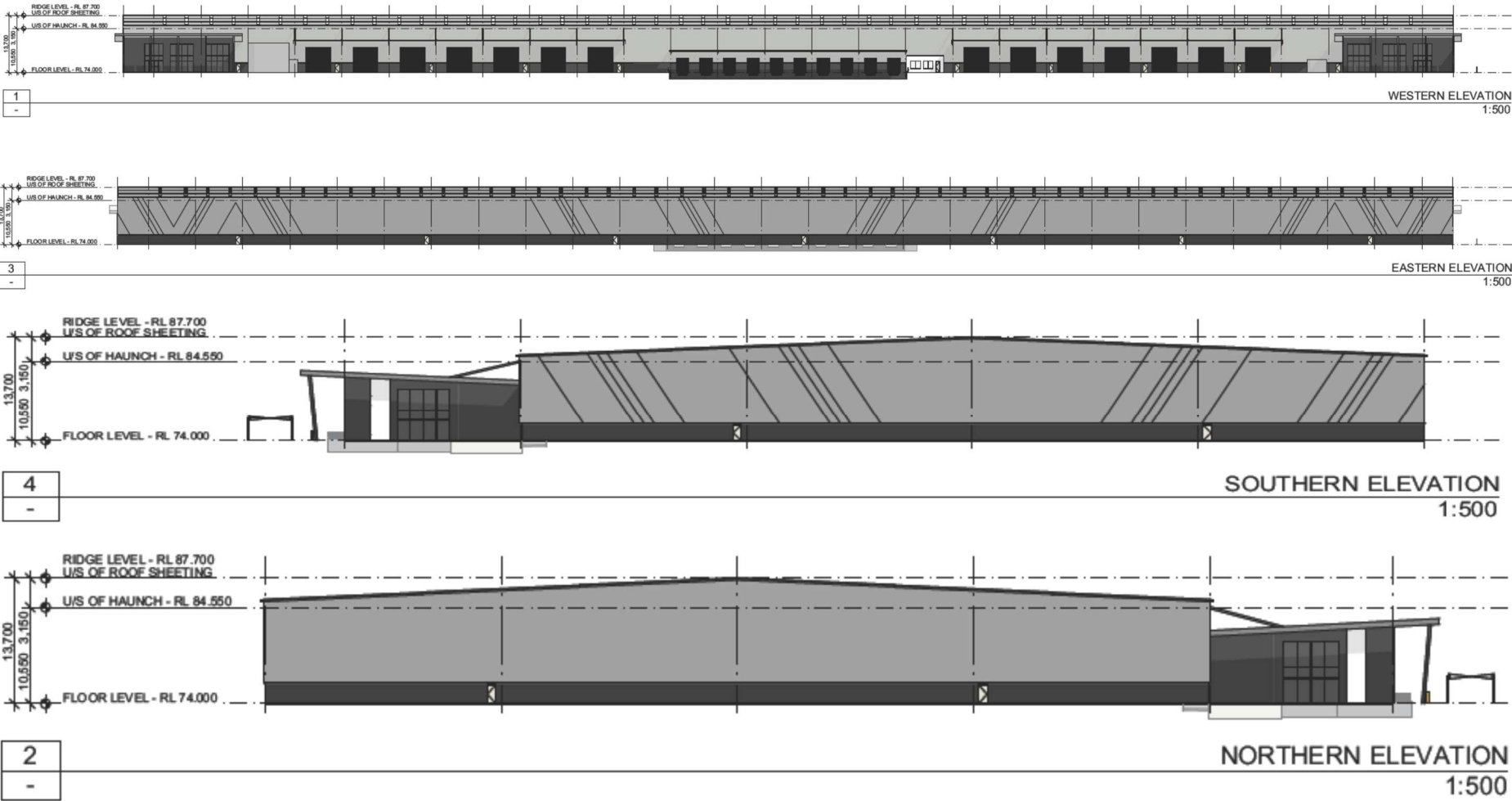




Figure 7 – Elevations of Warehouse on Lots K.



1.4 Documentation Reviewed.

The following documents were reviewed in the preparation of this assessment:

- Lot K Architectural Plans prepared by DTA Architects;
- Secretary's Environmental Assessment Requirements (SEARs) – SDD-10479 – dated July 2020;
- The Biodiversity Report undertaken by Ecological Australia;
- *Planning for Bushfire Protection 2019* prepared by the NSW Rural Fire Service/Planning N.S.W;
- Australian Standard AS3959 - 2018 *Construction of Buildings in Bushfire Prone Areas*;
- *Rural Fires Regulation 2022*;
- Penrith City Council *Certified Bushfire Prone Land Map*;
- *Planning for Bushfire Protection 2019* prepared by the NSW Rural Fire Service.

1.5 Site Inspection.

Graham Swain of *Australian Bushfire Protection Planners Pty. Limited* inspected the development site and adjoining land on the 21st August 2022 to assess the topography, slopes, vegetation classification and land use within and adjoining the development site.

An assessment of the extent of bushfire prone vegetation and the accuracy of the Penrith Bushfire Prone Land Map was also undertaken.

A desk-top review of this information was undertaken prior to the preparation of this report.

SECTION 2

DESCRIPTION OF DEVELOPMENT SITE

2.1 Location & Description.

The site is known as Lot 200 in DP 1285691, No. 200 Aldington Road, Kemps Creek and contains existing rural residential land with existing landuse consisting of grazing, and market gardens. The adjoining properties to the north, west and east contain similar land-uses. A church development is under construction on the land to the south of the estate.

Figure 8 – Site Location Plan.



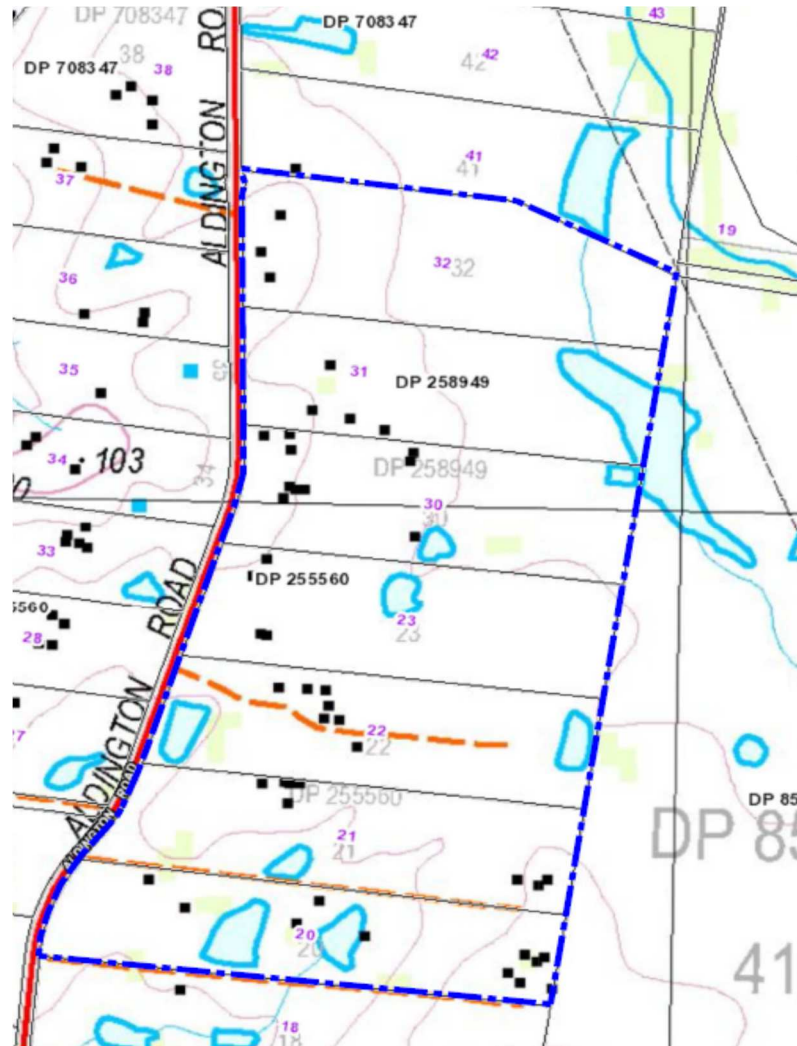
Figure 9 – Aerial Photograph of Lot 200 in DP 1285691 and adjoining landuse.



2.2 Topography.

The landform within the site is undulating, generally sloping to the northeast, falling towards Ropes Creek and contains a number of large water storage dams.

Figure 10 – Topographic Map showing the location of the Industrial Estate outlined in Blue.



2.3 Vegetation Communities.

Vegetation is classified using Figure A1.2 of *Planning for Bushfire Protection 2019*, which classifies vegetation types into the following groups:

- (a) Rainforest;
- (b) Wet Sclerophyll Forest;
- (c) Dry Sclerophyll Forest;
- (d) Woodland;
- (e) Tall Heath;
- (f) Short Heath; and
- (g) Grassland.



The mapped Category 2 Bushfire Prone Vegetation within Lot K will be removed as part of the earthworks for the construction of the proposed Warehouse building.

The vegetation on the land to the west and south of Lot K will also be removed as part of the Stage 1 Earthworks.

The land to the north, west and south of Lot K is zoned IN1 Industrial and forms part of the Kemps Creek Industrial Estate and will contain industrial development.

The land to the east of Lot K is zoned IN1 Industrial and contains vacant grazing land.

The land to the east of Lot K is zoned IN1 – Industrial and contains grassland vegetation which will remain a hazard to Lot K, pending development.

The timing of the industrial development on the land to the east of Lot K is unknown and therefore this report examines the bushfire risk to the proposed building based on the grassland vegetation on the land to the east.

2.4 Significant Environmental Features within Lot K.

The land within Lot K does not contain significant environmental features such as Koala Habitat; SEPP 14 Wetlands, SEPP 26 Littoral Rainforests; land slip areas or National Parks Estate; areas of geological interest or steep lands [>18 degrees].

2.5 Known Threatened Species, Populations, Endangered Ecological Communities or Critical Habitat on the land within Lot K.

There are no known threatened species, populations, endangered ecological communities or critical habitat within Lot K.

2.6 Details of Aboriginal/European Heritage within Lot K.

There are no known Aboriginal sites, relics or European heritage within Lot K.

SECTION 3

BUSHFIRE PROTECTION ASSESSMENT

3.1 Asset Protection Zones (Defendable Spaces).

The Penrith Bushfire Prone Land Map records Lot K and the broader development precinct as containing Category 2 Bushfire Prone Vegetation.

Defendable Spaces/Asset Protection Zones [APZs] have been assessed for the proposed Warehouse building in accordance with *Planning for Bushfire Protection 2019* and Australian Standard A.S. 3959 – 2018 (using effective slope and predominant vegetation communities).

The assessment is based on the predominant vegetation on the adjoining land to the east being grassland.

The NSW Rural Fire Service's requirement for industrial buildings is to provide a setback from the bushfire prone vegetation which will minimise flame contact on a building.

Table A1.12.5 of *Planning for Bushfire Protection 2019* identifies that to prevent flame contact on the proposed Warehouse building from the unmanaged grassland vegetation on the land to the east a minimum defendable space width of 9.0 metres is required.

The closest part of the proposed Warehouse building is greater than 10.00 metres from the grassland hazard on the land to the east.

Refer to Figure 11 – Plan of approved Defendable Spaces to the Master Plan on Page 21.

Figure 12 on Page 22 provides a copy of the Lot K Site Plan showing the width of the Defendable Space from the eastern boundary.



Figure 11 – Plan of approved Defendable Spaces to Master Plan.

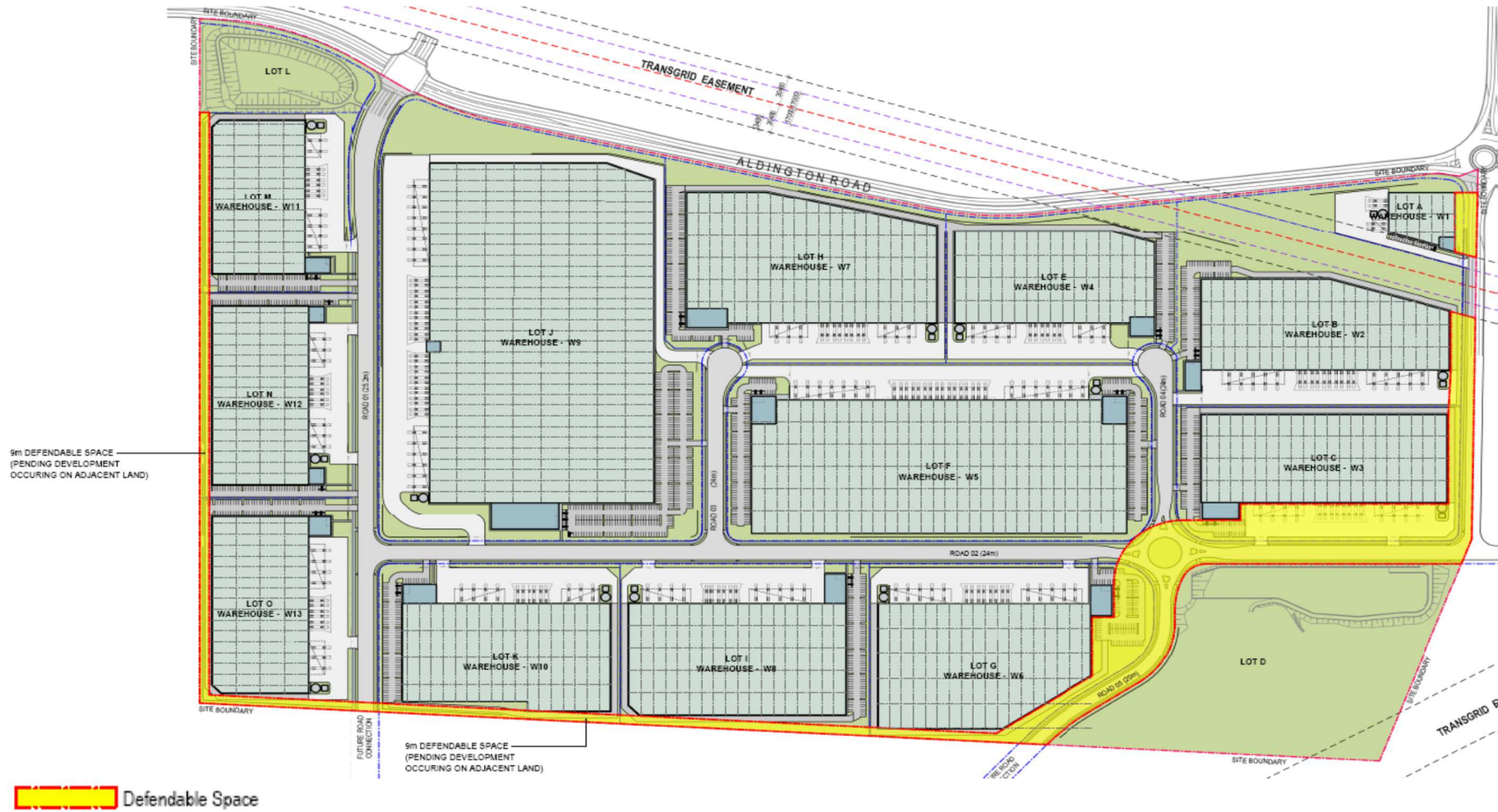
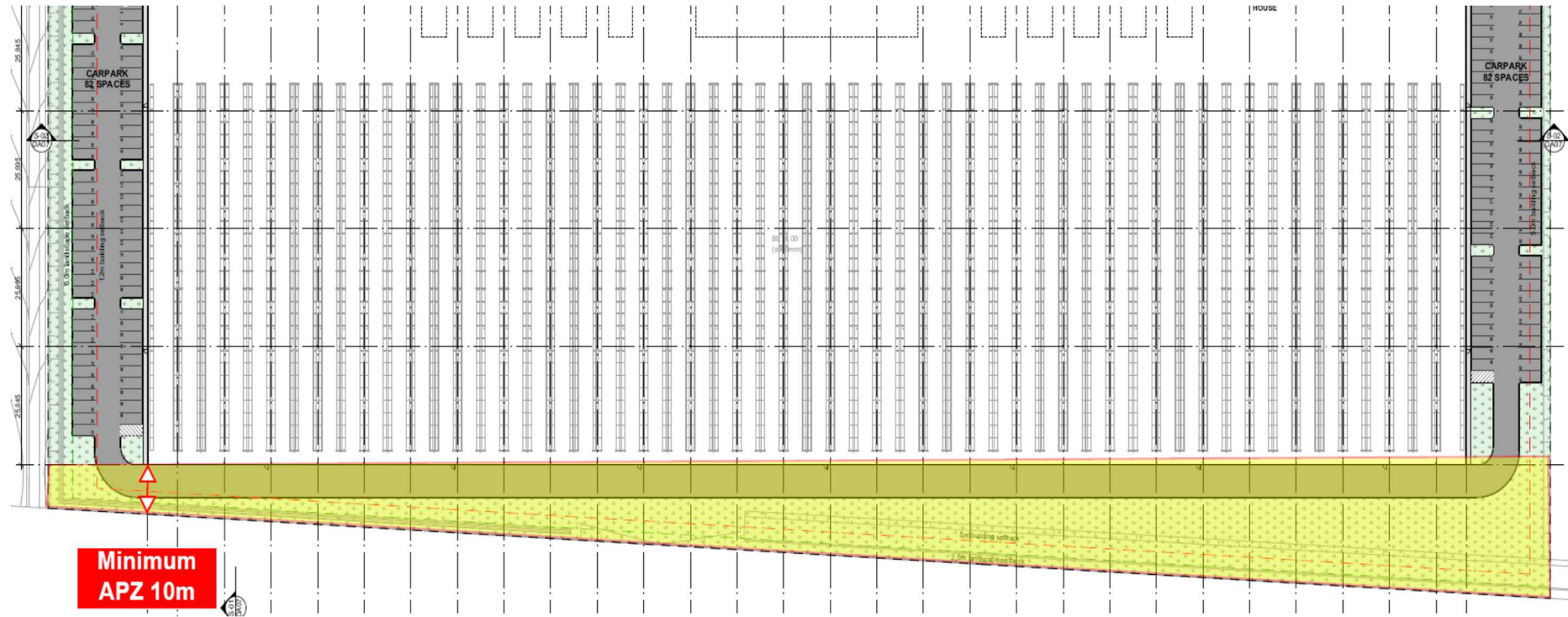




Figure 12 – Plan of Asset Protection Zone/Defendable Space to the Lot K Warehouse Building.



3.2 Construction Standards to the Warehouse Building on Lot K.

The width of the Asset Protection Zone between the Lot K Warehouse Building and the grassland vegetation on the land to the east exceeds 10.0 metres.

Table A1.12.5 determines that for a 10.00 metre wide Asset Protection Zone to the grassland vegetation on a downslope gradient the construction standard to the roof and eastern elevation of the Warehouse building is BAL 40, in accordance with A.S 3959 – 2018 – ‘*Construction of Buildings in Bushfire Prone Areas*’.

Construction standard BAL 29 shall apply to the remaining elevations of the building.

Note:

Should the grassland vegetation on the land to the east of the site be removed prior to the construction of the Warehouse building on Lot K, the requirement to apply bushfire construction standards to the building will be removed.

3.3 Access Standards for Firefighting Operations.

The proposed internal roads to the complex will be constructed to provide access for heavy rigid and articulated vehicles.

This internal road network will therefore provide suitable access for fire-fighting appliances. A perimeter fire-fighting access road is provided between the bushfire hazard on the land to the east and the Warehouse building

3.4 Water Supplies for Firefighting Operations.

The fire-fighting water supply to the proposed Warehouse building shall comply with the Building Code of Australia [BCA] and Australian Standard A.S. 2419.1 – 2021.

3.5 Emergency Management for Fire Protection / Evacuation.

Due to the potential risk of a fire occurring in the grassland vegetation land to the east a Bushfire Emergency Evacuation Plan (BEEP) should be prepared for the Warehouse building.

Note:

Should the hazard on the land to the east be removed prior to the occupation of the Warehouse building, the need for the preparation of a BEEP will be removed.

SECTION 4

CONCLUSION

The Development Application seeks approval for the construction of a Warehouse building on Lot K, Kemps Creek Industrial Estate, No. 200 Aldington Road, Kemps Creek.

The Penrith Bushfire Prone Land Map records Category 2 Bushfire Prone Vegetation on the Lot K development precinct and on adjoining land.

The mapped Category 2 bushfire prone vegetation on the development site and adjoining lots within the Kemps Creek Industrial Estate will be removed as part of the Stage 1 earthworks.

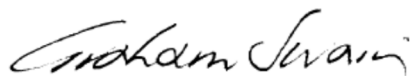
However, the grassland vegetation on the land to the east will remain – pending development of the adjoining land.

Therefore, the bushfire risk to the Warehouse building will remain.

This report examines the bushfire protection measures required to address the bushfire risk and identifies that the available width of Asset Protection Zone to the proposed Warehouse lowers the radiant heat load to less than 40kW/m².

Bushfire construction standard BAL 40 has been recommended to the roof and eastern elevation of the Warehouse building. The remaining elevations shall be constructed to comply with BAL 29 in accordance with 3959-2018 – *'Construction of Buildings in Bushfire Prone Areas'*.

Should the bushfire hazard on the land to the east be removed prior to the construction of the Warehouse on Lot K, the recommended bushfire protection measures will not be required.



Graham Swain, Managing Director,
Australian Bushfire Protection Planners Pty Limited.
Fire Protection Association Australia Member No 4878



REFERENCES:

- N.S.W Rural Fire Service – *Planning for Bushfire Protection 2019*;
- *Environmental Planning & Assessment Act – 1979*;
- *Rural Fires Act – 1997*;
- *Rural Fires Regulation 2022*;
- NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2015*;
- *Bushfire Environmental Assessment Code 2021*;
- Building Code of Australia;
- Australian Standard A.S. 3959-2018 “*Construction of Buildings in Bushfire Prone Areas*”;
- *Penrith Bushfire Prone Land Map*.