

17 October 2024

Ms. Susan Paul
Development Manager
Mirvac

Email: susan.paul@mirvac.com

Dear Ms. Paul,

Re: Bushfire Advice for Aspect Industrial Estate Warehouse 6, 7 and Cafe.

Blackash Bushfire Consulting has been engaged by Mirvac to assess the bushfire risk and requirements associated with the proposed Warehouse 6, 7 and Cafe at Aspect Industrial Estate (AIE), legally known as Lots 1, 2 & 5 DP1285305 and Lots 6 & 7 DP1291562.

Section 4.14 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) requires compliance with the RFS document *Planning for Bush Fire Protection 2019* (PBP 2019). The NSW Rural Fire Service (RFS) document PBP 2019 applies to all new development on bushfire prone land.

Planning for Bush Fire Protection 2019

PBP 2019 recognises that infill development proposals will be constrained by existing situations – pre-existing subdivision patterns and existing built forms surrounding the subject site. Consequently, each proposal must be considered on its merits and in accordance with the intent and performance criteria for infill development. Industrial development such as the proposed development is designated as “other” development in PBP 2019. As “other” development, the proposed development has considerable flexibility and the nature of the development often results in the structures providing a higher degree of bushfire resistance that required by the NSW Rural Fire Service (NSW RFS). As “other” development, a key issue for the proposal will be meeting the aim and objectives of *Planning for Bushfire Protection* and the performance requirements for commercial development.

The site is located within an existing agricultural area within the suburb of Kemps Creek that is subject to significant modification from development. There are patches of low-risk bushfire hazard surrounding the site which would be considered under PBP 2019 within the category of “Low threat vegetation – exclusions” (PBP page 88). The proposed development has been designed to provide compliance with the relevant specifications and requirements of *Planning for Bush Fire Protection 2019*.

Under s4.14 (1)(b) of the *Environmental Planning and Assessment Act 1979*, as the consent authority, Penrith Council can issue development consent if it has been provided with a certificate by a person who is recognised by the NSW RFS as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant specifications and requirements.

Having been provided with a certificate by a person who is recognised by the NSW RFS as a qualified consultant, council is legally satisfied that the development complies with PBP 2019 and therefore Council cannot refer to the NSW RFS under s4.14 (1A) of the Environmental Planning and Assessment Act 1979.

Bushfire Threat Assessment

The subject land is identified as being bushfire prone land on the Penrith Bushfire Prone Land Map. As infill development, the proposed development is to be assessed by Council under the provision of Section 4.14 of the EP&A Act, which includes the consideration of the PBP 2019. The following detailed assessment is based on the methodology and requirements of PBP 2019 and supporting RFS policy.

PBP 2019 recognises the unique attributes of infill development and promotes detailed site analysis and the application of a combination of bushfire protection measures (BPMs) to achieve an acceptable outcome.

The BPMs work in combination to provide a suite of measures that meet the aim and objective and Section 4.3 of PBP 2019. Appropriate combinations depend upon geographic location and site circumstances.

The types of protection measures include:

- Asset Protection Zones (APZ);
- Access;
- Landscaping;
- Water supply;
- Building design and construction; and
- Emergency management arrangements.

Vegetation Assessment

Predominant Vegetation is classified by structure or formation using the system adopted by Keith (2004) and by the general description using PBP 2019. Vegetation types give rise to radiant heat and fire behaviour characteristics.

The predominant vegetation is determined over a distance of at least 140 metres in all directions from the proposed site boundary or building footprint on the development site. Where a mix of vegetation types exist, the type providing the greater hazard is said to predominate.

The land directly around the site is all developed and managed, however there is an isolated area of River-flat Eucalypt Forest mapped on the northern property boundary and Grassland to the east (see Figure 4).

The Penrith Bushfire Prone Land Map has mapped the site as Vegetation Category 2 in recognition of the lower risk than Category 1 and 3, presented by the surrounding area. The Category 2 mapping is significant because the NSW RFS and Council have identified that the site and surrounding area comprises low risk

vegetation parcels. This is consistent with the identification of the surrounding area as Low threat vegetation which is excluded from the being considered for the purposes of bushfire in both PBP 2019 and Australian Standard AS 3959:2018 *Construction of buildings in bush fire-prone areas*.

Slopes Influencing Bushfire Behaviour

The RF Reg requires an assessment of the slope of the land on and surrounding the property (out to 100 metres from the boundaries of the property or from the proposed development footprint).

The 'effective slope' influencing fire behaviour approaching the sites has been determined using a desktop analysis. This is conducted by measuring the worst-case scenario slope where the vegetation occurs over a 100 metre transect measured outwards from the development boundary or the existing/proposed buildings.

Figure 2 shows the slopes relevant to the site. The effective slopes are predominantly downslope in the 0 – 5 degree downslope range.

Asset Protection Zones

An Asset Protection Zone (APZ) is a buffer zone between a bushfire hazard and buildings. The APZ is managed progressively to minimise fuel loads and reduce potential radiant heat levels, flame, smoke and ember attack. The appropriate APZ distance is based on vegetation type, slope and the nature of the development.

The APZ can include roads or properties managed to be consistent with APZ standards set out in NSW RFS document Standards for Asset Protection Zones. The APZ provides a fuel-reduced, physical separation between buildings and bush fire hazards is a key element in the suite of bush fire measures and dictates the type of construction necessary to mitigate bushfire attack.

PBP 2019 requires APZs for commercial and industrial development to provide a defensible space and minimise material ignition. A larger than required APZ is provided onsite.

Bushfire Attack Levels

The Bushfire Attack Level (BAL) is a means of measuring the severity of a buildings or sites potential exposure to ember attack, radiant heat and direct flame contact. In the Building Code of Australia, the BAL is used as the basis for establishing the requirements for residential construction to improve protection of building elements.

The Bushfire Attack Levels to the site has been completed using the distances from the PBP 2019 Table A1.12.5 (Table 3). The BAL mapping for the site does not impact the proposed development as shown in Figure 3.

As “Other” development, the development must comply with objective 3 of PBP 2019 which requires that the development:

3. Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent the likely fire spread to buildings.

Asset Protection Zones will be provided around the development that include existing roads, hardstand areas, development, and managed land. The nearest bushfire hazard is greater than 100 metres from the building and therefore there are no relevant construction requirements of AS3959-2018 as identified in PBP 2019.

Water Supply and Utilities

PBP 2019 (p. 47) requires that adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.

Suitable water supply arrangements will be provided for firefighting that meet the NSW RFS requirements. A reticulated water supply for potable water supply and fire hydrants are provided to the site and this will not be impacted or altered by the proposed development.

The fire-fighting water supply to the proposed development is therefore considered compliant with PBP 2019.

Access

PBP 2019 requires that the design of access roads enables safe access and egress for people attempting to leave the area while emergency service personnel are arriving to undertake firefighting operations.

Vehicular access to the proposed industrial site will be provided via Mamre Road and the proposed internal access.

Mamre Road can support heavy rigid and articulated vehicle access to the facility. This road network provides suitable access for fire-fighting appliances like NSW RFS Category 1 Tankers.

Given the low bushfire risk, lack of adjoining bushfire prone vegetation and nature of the road design, access complies with the requirements of PBP 2019.

Recommendations

The following recommendation has been made within this report to ensure the proposed additions to the existing industrial development are compliant with Section 4.14 of the EPA Act and *Planning for Bush Fire Protection* 2019:

Recommendation 1: The entire site housing Warehouse 6, 7 and the Cafe is to be maintained as an Inner Protection Area (IPA) in accordance with Appendix 4 of PBP 2019 and the NSW RFS "Asset protection zone standards".

Conclusion

The proposed warehouses and café are located on bushfire prone land, however, based on the assessment of the plans and the site, the proposed design is considered adequate in the context of the low bushfire risk.

As a person recognized by the NSW RFS as a qualified consultant, this assessment constitutes a 'certificate' and confirms that the proposed development conforms to all the relevant legislative requirements. Given this, there is no further assessment or consideration required in the context of bushfire.

This assessment has been prepared by Mark Hawkins and reviewed by Corey Shackleton, Principal Bushfire and Resilience, Blackash Bushfire Consulting. Corey is a person who is recognised by the NSW RFS as a qualified consultant in bush fire risk assessment (FPAA BPAD-Level 3 Certified Practitioner No. BPD-PA-34603).

If there are any questions or concerns, please don't hesitate to give me a call on 0418 412 118.

Yours sincerely



Corey Shackleton | Principal Bushfire & Resilience
Blackash Bushfire Consulting
B.Sc., Grad. Dip. (Design for Bushfire Prone Areas)
Fire Protection Association of Australia BPAD Level 3 – 34603



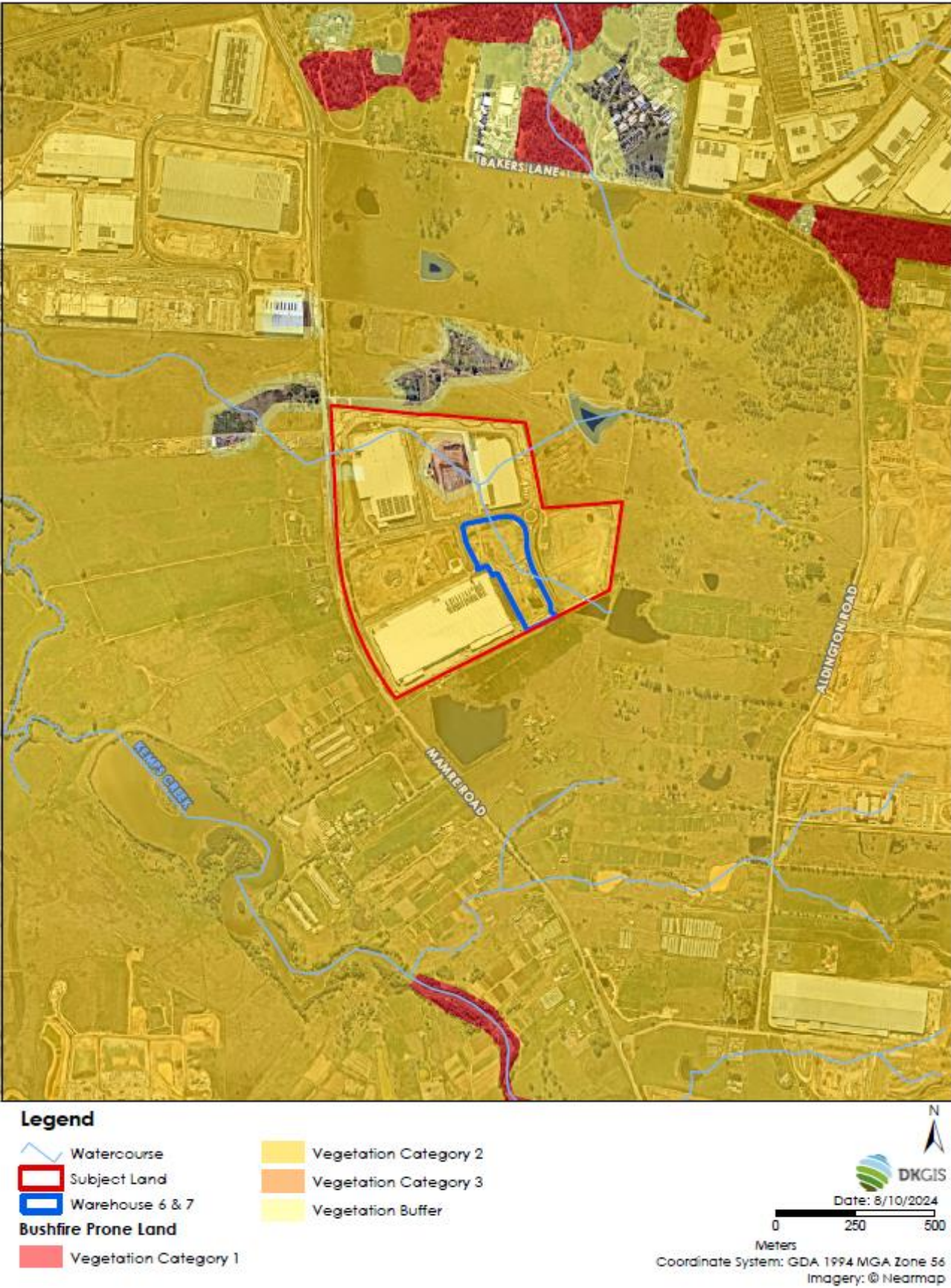
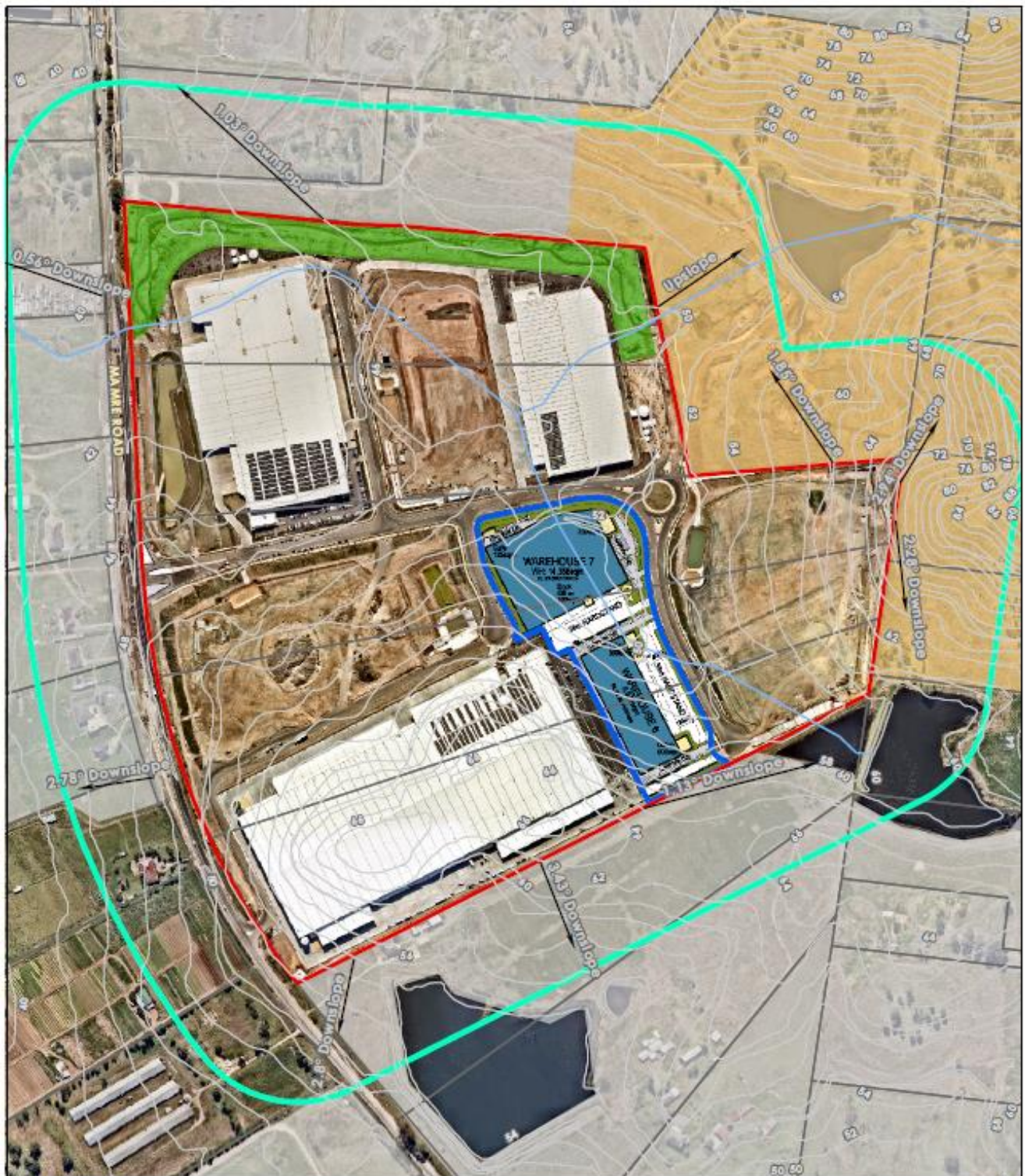



Figure 1. Bush Fire Prone Land



- Legend**
- Watercourse
 - Contour - 2m
 - Subject Land
 - Warehouse 6 & 7
 - Cadastre
 - Vegetation Assessment Buffer
 - Isolated River-flat Eucalypt Forest
 - Grassland
 - Managed Land

N

 **DKGIS**

Date: 8/10/2024

0 100 200

Meters

Coordinate System: GDA 1994 MGA Zone 56

Imagery: © Nearmap

Figure 2. Vegetation and Slope

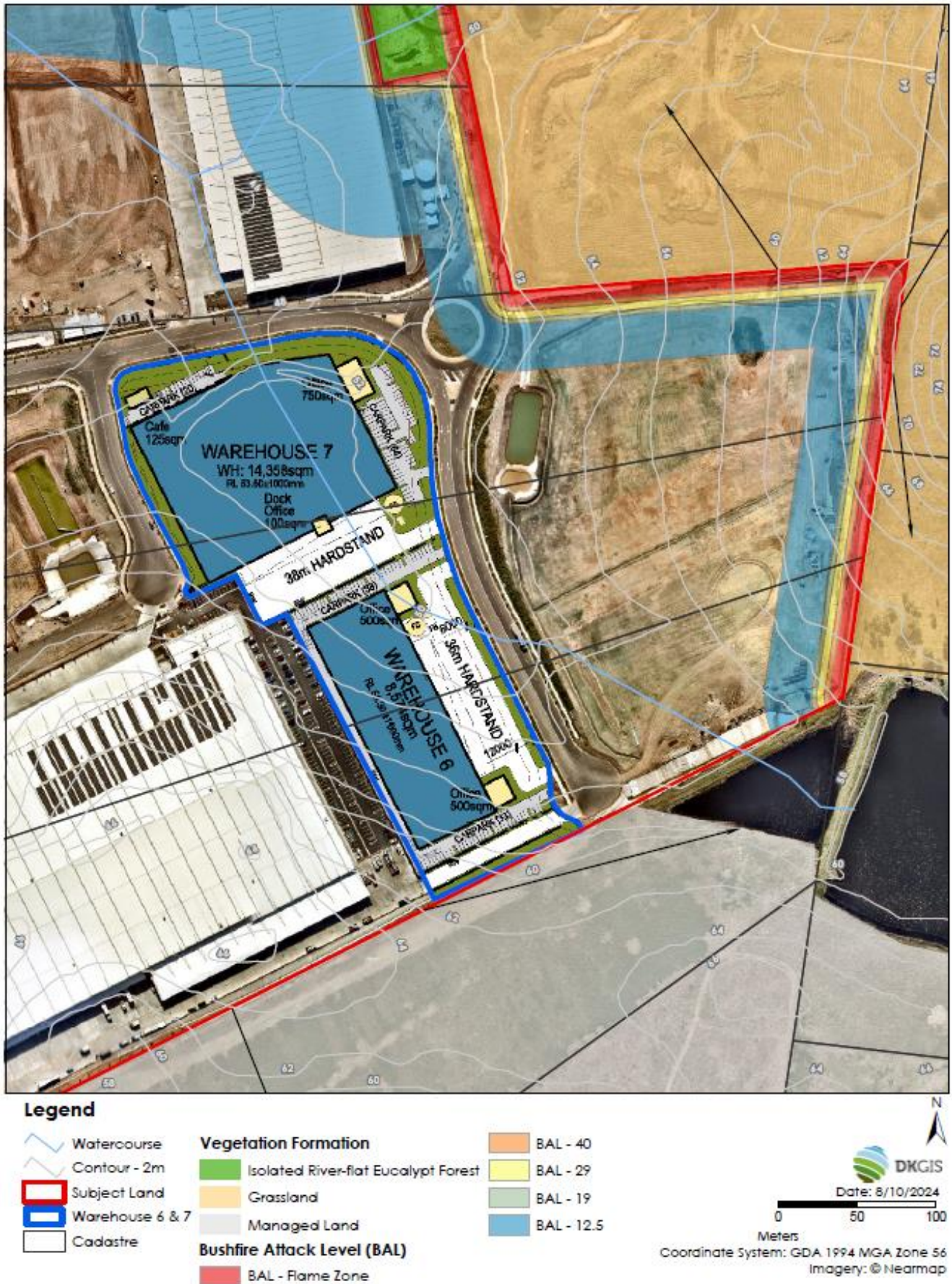


Figure 3. Bushfire Attack Levels