Bushfire Assessment Report

Huntlee New Town – Stage 2

Prepared for
Huntlee Pty Ltd

Final V6 / June 2024

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DOCUMENT STATUS

Project Particulars			
Project Name	Bushfire Assessment Report: Stage 2 Huntlee New Town Development		
Job Number	16015		
Client	Huntlee Pty Ltd		
Status	Final		
Version	**Date**	**Prepared by**	**Details**
V1	8-09-2023	MD/SB/LP/SS	Draft for client review
V2	20-9-2023	MD/SS/LP	Draft with design amendments
V3	1-11-2023	MD/SS/LP	Draft with amendments for client review
V4	28-11-2023	MD/SS/LP	Draft with amendments for adequacy review
V5	4-12-2023	MD	Final for submission
V6	21-6-2024	MD	Final for submission – amended SSD number

Approval for use:

Matt Doherty - Director

21 June 2024

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Finally, the implementation of the measures and recommendations forwarded within this report would contribute to the amelioration of the potential impact of any bushfire upon the development site, but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

EXECUTIVE SUMMARY

This Bushfire Assessment Report supports an Environmental Impact Statement and State Significant Development Application (SSDA) that seeks consent for the Huntlee New Town Stage 2 development, comprising the concept development for the Stage 2 sites including Villages 2 and 3, land off Old North Road and the Town Centre North area, and the detailed development for the central and southern areas of Village 2. The proposal represents the next phase of an extensive planning, assessment and consultation process completed to date for the development of the Huntlee New Town site consistent with the Major Project Concept Approval (MP10_0137).

This assessment has considered and assessed the bushfire hazard and associated potential threats relevant to the proposal, and outlines the minimum mitigative measures which would be required in accordance with *Planning for Bush Fire Protection 2019* (PBP), as adopted through the *Environmental Planning & Assessment Amendment* (Planning for Bush Fire Protection) *Regulation 2020*. Reference is made to PPB Addendum (November 2022) where applicable.

In order to determine whether the proposed development is bushfire-prone, and if so, which setbacks and other relevant Bush Fire Protection Measures (BPM) will be appropriate, this assessment adhered to the methodology and procedures outlined in PBP (2019) via assessment of acceptable solutions as outlined in Chapter 5 of PBP (2019).

This assessment has been made based on the bushfire hazards in and around the site at the time of inspection and production (July and September 2023).

In summary, the following key recommendations have been generated to enable the proposal to comply with PBP (2019).

Asset Protection Zones

- A variable APZ of 10m to 45m is required from the Huntlee concept approval boundary for uses that trigger residential APZ setbacks. In the case of a Special Fire Protection Purpose (SFPP) development, increased setbacks in accordance with PBP (2019 and Addendum 2022) shall apply. It is noted that no SFPP developments are proposed as part of the subject SSDA, and this would therefore be a consideration as part of a future application process.

- The development of Stage 2 will occur in a staged fashion. A temporary APZ consistent with Appendix 4 PBP 2019 of 100m or to the Huntlee boundary is required between active or completed development stages and future development areas.

- All lands within the development area including open space outside the nominated riparian corridors will be managed as an APZ.

- Future dwellings within the site must have due regard to the specific considerations to required BAL as detailed in Chapter 3, Section 3.2 of this report.

Access

- Access for the subdivision design shall comply with the requirements of Table 5.3b and Appendix 3 of PBP (2019)
- All access within the subdivision is generally consistent with the Huntlee Concept Approval where the access to the subdivision will be as recommended within the Traffic Impact Assessment and will include upgrades to existing connections to Wine Country Drive and new connection points. The proposed public perimeter roads and internal roads comply with RFS requirements for access listed in terms of surface, vertical clearance, horizontal width, grades, and minimum curve radius.
- Temporary turning heads will be installed and maintained until future construction occurs in subsequent stages of the development. Temporary turning heads will be compliant with Types A-D outlined in Appendix 3 of PBP (2019).

Services – Water supply, Gas and Electricity

- Services for the subdivision design shall comply with the requirements of Table 5.3c the PBP (2019).
  - The Site will be connected to the reticulated water and recycled supply.
  - The site will be connected to power from the existing service available within Huntlee. This shall be extended and augmented within the site.
  - Any future gas connection will be installed in accordance with the provisions of PBP (2019).
- Fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005 or as updated by AS2419.1:2021 (per PBP Addendum Nov 2022).

Landscaping and Fuel Management

- Careful consideration of future site landscaping, fencing and ongoing fuel management must occur to minimise the potential impact of bushfire on the Site; and
- Ongoing fuel management across the Site as part of the maintenance regime should give due consideration to Appendix 4 Asset Protection Zone Requirements of PBP (2019) which provides guidance on maintenance activities to assist in achieving the landscape principles.

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GLOSSARY OF TERMS AND ABBREVIATIONS

Term/ Abbreviation	Meaning
APZ	Asset Protection Zone
AS2419-2005	Australian Standard – Fire Hydrant Installations
AS3959-2018	Australian Standard – Construction of Buildings in Bush Fire Prone Areas
BAR	Bushfire Assessment Report
BCA	Building Code of Australia
BC Act	Biodiversity Conservation Act 2016
BMP	Bush Fire Management Plan
BPA	Bush Fire Prone Area (Also Bushfire Prone Land)
BPL	Bush Fire Prone Land
BPLM	Bush Fire Prone Land Map
BPM	Bush Fire Protection Measures
DoE	Commonwealth Department of the Environment
DPI Water	NSW Department of Primary Industries – Water
EPA Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
FDI	Fire Danger Index
FMP	Fuel Management Plan
ha	hectare
IPA	Inner Protection Area
LGA	Local Government Area
LLS Act	Local Land Services Act 2013
OPA	Outer Protection Area
OEH	NSW Office of Environment and Heritage
PBP or PBP (2019)	Planning for Bushfire Protection 2019
RF Act	Rural Fires Act 1997
RF Regulation	Rural Fires Regulation
RFS	NSW Rural Fire Service
SFPP	Special Fire Protection Purpose
TSC Act	NSW Threatened Species Conservation Act 1995 (as repealed)

1 Introduction

This Bushfire Assessment Report supports an Environmental Impact Statement and State Significant Development Application (SSD-70748466 Issued 28-5-2024) that seeks consent for the Huntlee New Town Stage 2 development, comprising the concept development for the Stage 2 sites including Villages 2 and 3, land off Old North Road and the Town Centre North area, and the detailed development for the central and southern areas of Village 2, hereafter referred to as the 'site'.

The proposal represents the next phase of an extensive planning, assessment and consultation process completed to date for the development of the Huntlee New Town site consistent with the Major Project Concept Approval (MP10_0137).

The assessment aims to consider and assess the bushfire hazard and associated potential threats relevant to the proposal, and to outline the minimum mitigative measures which would be required in accordance with *Planning for Bush Fire Protection 2019* (PBP), as adopted through the *Environmental Planning & Assessment Amendment* (Planning for Bush Fire Protection) *Regulation 2020*. Reference is made to PPB Addendum (November 2022) where applicable.

In order to determine whether the proposed development is bushfire-prone, and if so, which setbacks and other relevant Bush Fire Protection Measures (BPM) will be appropriate, this assessment adhered to the methodology and procedures outlined in PBP (2019) via assessment of acceptable solutions as outlined in Chapter 5 of PBP (2019).

This assessment has been made based on the bushfire hazards in and around the site at the time of inspection and production (July and September 2023).

1.1 Aims & Objectives

This BAR addresses the aims and objectives of PBP 2019, being:

- Afford buildings and their occupants protection from exposure to a bushfire;
- Provide for a defendable space to be located around buildings;
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- Ensure that appropriate operational access and egress for emergency service personnel and occupants is available;
- Provide for ongoing management and maintenance of bushfire protection measures; and
- Ensure that utility services are adequate to meet the needs of firefighters.

1.2 Site Context

Huntlee, in its regional context is shown in **Figure 1** below and is located to the south of the town of Branxton in the Hunter Valley of NSW. It is located approximately 20km north of Cessnock, 23km south-east of Singleton, and 55km north-west of Newcastle. The Huntlee site straddles Wine Country Drive, which links Cessnock with the New England Highway and Hunter Expressway. Within the overall Huntlee site, the proposed urban area is bounded to the north and east by the Main North Railway and Hunter Expressway corridor, to the south by the village of North Rothbury and to the west by the Black Creek and floodplain. Other adjoining uses include vineyards, rural residential development and general agriculture.

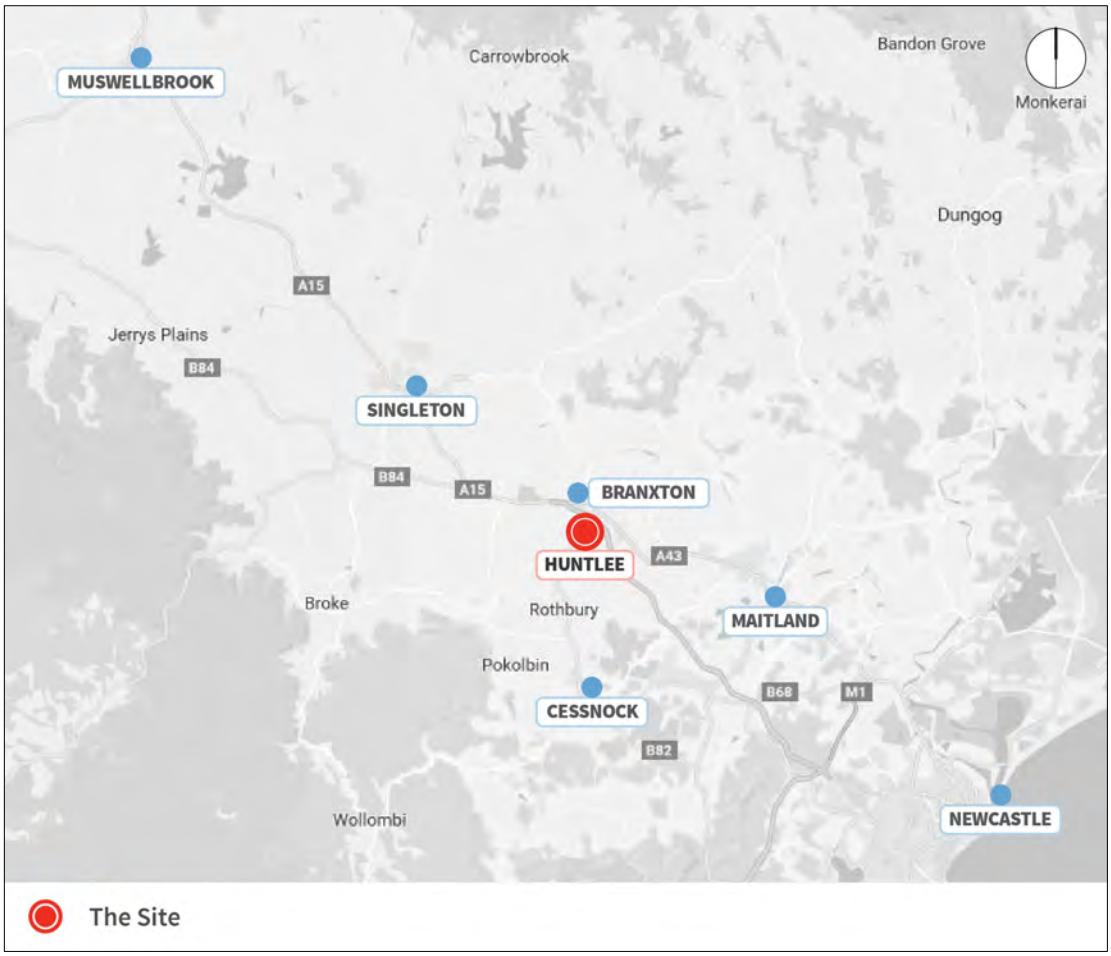
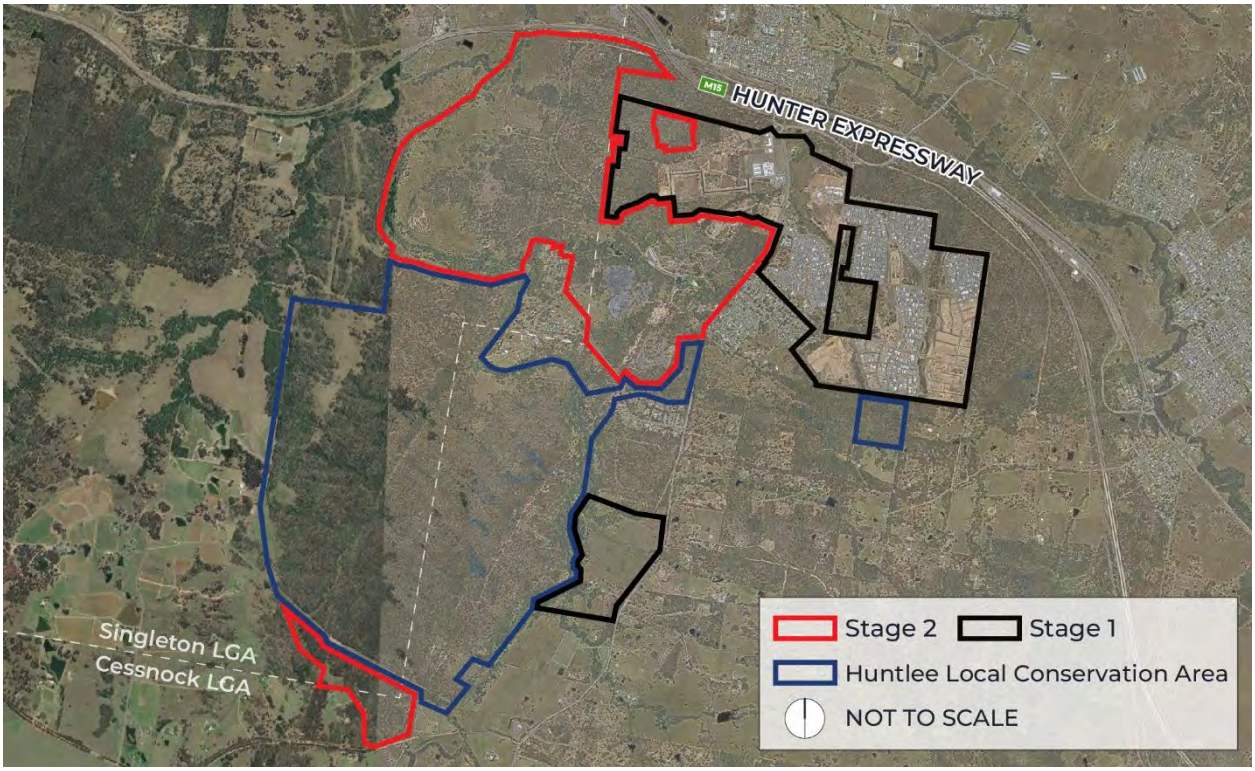


Figure 1 Huntlee Regional Context

The subject site forms a large component of the 1,622 hectare Huntlee New Town, situated to the south of Branxton in the Hunter Valley.

The subject Site comprises a number of allotments located in both Cessnock and Singleton Local Government Areas (LGAs). It has a combined area of approximately 541.71ha, is irregular in shape and is generally extended to the west and south of the approved Huntlee Town Centre. The site is bound to the west by the Black Creek and floodplain. An aerial photo of the site is provided at **Figure 2**.



(Source: Nearmap and Ethos Urban)

Figure 2 Site Aerial

1.3 Description of Proposal

This SSDA proposes the following works for the Huntlee New Town.

A Concept Master plan for the Stage 2 site, comprising:

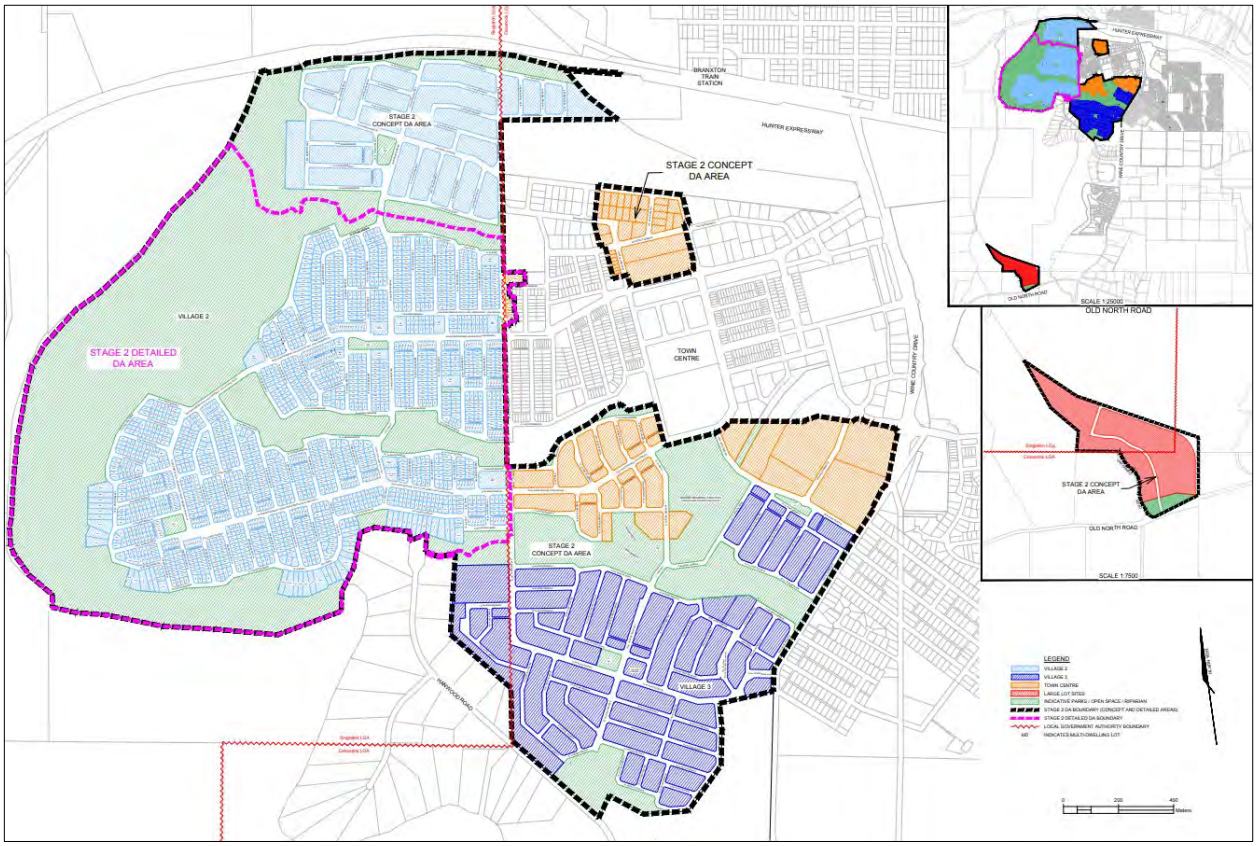
- Overall Stage 2 development footprint, including:
  - The remaining Town Centre North area,
  - Villages 2 and 3, and
  - A large lot residential area located to the south of the site on Old North Road;
- Proposed land use and development yield, including the provision for residential subdivision of approximately 5,000 lots;
- Associated new road network and required upgrades to existing network; and
- Site-wide open space and riparian areas;

Detailed development of Village 2 Central and South and eastern connection to the Town Centre, comprising:

- Demolition and clearing of existing built form structures;
- Clearing of existing vegetation within proposed development footprints;
- Open space, recreation, community and riparian areas;
- Construction of road and access infrastructure;
- Bulk earthworks;
- Stormwater and drainage works;

- Utilities and services, including
    - Sewer and potable water reticulation;
    - Electricity and communications infrastructure;
- Subdivision to facilitate approximately 1,750 lots across the Village 2 Central and South areas and Town Centre development lots, comprising approximately 1,730 residential lots, eight (8) medium density superlots, two (2) commercial/mixed use lots and open space areas; and
- Select clearing and grading to establish temporary Asset Protection Zones where development interfaces with the Concept Master plan area.

The location of Stage 2 Concept and Detailed areas is shown in **Figure 3**, in the context of the surrounding development. Refer to **Appendix 1** for higher resolution Plans of the Proposal.



(Source: Daly Smith 2023)

Figure 3 Proposed Concept and Detailed Area layout

The site lies within a geographical area with a Fire Danger Index (FDI) rating of 100. Extreme bushfire weather is therefore associated with long periods of drought, high temperatures, low humidity and gusty often north-westerly winds. The site is classified Vegetation Category 1 on the Bushfire Prone Land Map (DPE 2023). Refer to **Figure 4** below.

HUNTLEE NEW TOWN – STAGE 2

FIGURE 4: BUSHFIRE PRONE LAND MAP

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)

0 0.4 0.8 1.2 1.6

Kilometres

1:20000

N W E S

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023), NSW Rural Fire Service (2022 | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimension.

2 Bushfire Hazard Analysis

2.1 Vegetation Assessment

Methodology

The vegetation in and around the Site, to a distance of 140m, has been assessed in accordance with PBP 2019. This assessment has been made via a combination of:

- aerial photo interpretation;
- on-site vegetation classification; and
- reference to regional community vegetation mapping.

These vegetation communities have been classified for bushfire purposes into structure and formation using the system adopted by Keith (2004) and using Figure A1.2 of PBP (2019) with due regard to Appendix 1 of PBP (2019).

Vegetation Classification

Vegetation classification has been presented in **Table 1** below and **Figure 5** to **Figure 11**.

Note:

1) Detention basins that are online will be grassy, however have been treated as riparian and acknowledging the riparian connection and taking a conservative approach, assessed as *rainforest* on a 0-5° Downslope site slope.
2) Detention basins that are off line will be grassy and have been treated as *grassland* on a flat site slope.
3) Notwithstanding current site conditions, for the purposes of APZ and BAL all vegetation to the north and west of the development area has been assessed as *forest*. This is acknowledged as being a conservative approach, however allows for future regeneration of some or all of those lands and mitigates the worst case scenario up front thus ensuring protection of future residential areas in accordance with PBP 2019 acceptable solution setbacks.

Table 1 Vegetation Classification

Transect	Description	Classification
T01	▪ Main Northern Railway ▪ Forest Vegetation ▪ Managed Land	Forest
T02	▪ Main Northern Railway ▪ Managed Land	Forest
T03	▪ Main Northern Railway ▪ Forest Vegetation	Forest
T04	▪ Main Northern Railway ▪ Managed Land	Forest
T05	▪ Managed Land ▪ Grassland	Forest
T06	▪ Managed Land ▪ Grassland	Forest
T07	▪ 1st order watercourse ▪ Riparian Vegetation	Rainforest
T08	▪ 1st order watercourse ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T09	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest

Transect	Description	Classification
T10	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T11	▪ Online Detention Basin	Rainforest
T12	▪ 1st order watercourse ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T13	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T14	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T15	▪ 1st order watercourse ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T16	▪ Online Detention Basin	Rainforest
T17	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T18	▪ Online Detention Basin	Rainforest
T19	▪ Online Detention Basin	Rainforest
T20	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T21	▪ Managed Land ▪ Grassland	Forest
T22	▪ Forest	Forest
T23	▪ Forest ▪ 1st order watercourse ▪ Riparian vegetation	Forest
T24	▪ Online Detention Basin	Rainforest
T25	▪ Online Detention Basin	Rainforest
T26	▪ Online Detention Basin	Rainforest
T27	▪ 1st order watercourse ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T28	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T29	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T30	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T31	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T32	▪ 1st order watercourse ▪ Riparian vegetation	Rainforest
T33	▪ Online Detention Basin	Rainforest
T34	▪ Online Detention Basin	Rainforest
T35	▪ 1st order watercourse ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T36	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T37	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T38	▪ 1st order stream ▪ Riparian vegetation	Rainforest

Transect	Description	Classification
T39	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T40	▪ 1st order watercourse ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T41	▪ Online Detention Basin	Rainforest
T42	▪ Online Detention Basin	Rainforest
T43	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T44	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T45	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T46	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T47	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T48	▪ 1st order stream ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T49	▪ 1st order stream ▪ Riparian vegetation ▪ Online Detention Basin	Rainforest
T50	▪ Online Detention Basin	Rainforest
T51	▪ Online Detention Basin	Rainforest
T52	▪ Remnant vegetation ▪ Grassland ▪ Managed Land	Forest
T53	▪ Remnant vegetation ▪ Grassland ▪ Managed Land	Forest
T54	▪ Grassland ▪ Managed Land	Forest
T55	▪ Remnant vegetation ▪ Grassland ▪ Managed Land	Forest
T56	▪ Remnant vegetation ▪ Grassland ▪ Managed Land	Forest
T57	▪ Grassland ▪ Managed Land	Forest
T58	▪ Offline Detention Basin	Grassland
T59	▪ Watercourse ▪ Riparian vegetation ▪ Forest	Forest
T60	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Forest
T61	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Forest
T62	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Forest

Transect	Description	Classification
T63	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Forest
T64	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Forest
T65	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Forest
T66	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Forest
T67	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Rainforest
T68	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Rainforest
T69	▪ Watercourse ▪ Riparian vegetation ▪ Remnant vegetation	Rainforest
T70	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T71	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T72	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T73	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T74	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T75	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T76	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T77	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T78	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T79	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T80	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T81	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T82	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T83	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T84	▪ Online Detention Basin	Rainforest
T85	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T86	▪ 1st order stream ▪ Riparian vegetation	Rainforest
T87	▪ Forest	Forest

Transect	Description	Classification
T88	▪ Managed Land around existing homes	No Hazard
T89	▪ Managed Land ▪ Forest	Forest
T90	▪ Managed Land around existing homes	No Hazard
T91	▪ Unmanaged vegetated land within NPWS Estate	Forest
T92	▪ Unmanaged vegetated land within NPWS Estate ▪ 1st order stream ▪ Riparian vegetation	Forest
T93	▪ Unmanaged vegetated land within NPWS Estate ▪ 1st order stream ▪ Riparian vegetation	Forest
T94	▪ Unmanaged vegetated land within NPWS Estate	Forest
T95	▪ Unmanaged vegetated land within NPWS Estate	Forest
T96	▪ Huntlee Stage 1 development area, currently tree'd ▪ Temporary APZ to 100m until clearing for development occurs	No Hazard
T97	▪ Huntlee Stage 1 development area, currently tree'd ▪ Temporary APZ to 100m until clearing for development occurs	No Hazard
T98	▪ Huntlee Stage 1 development area, currently tree'd ▪ Temporary APZ to 100m until clearing for development occurs ▪ 1st order stream ▪ Riparian vegetation	Rainforest / No Hazard
T99	▪ Huntlee Stage 1 development area, currently tree'd ▪ Temporary APZ to 100m until clearing for development occurs ▪ 1st order stream ▪ Riparian vegetation	Rainforest / No Hazard
T100	▪ Online Detention Basin	Rainforest
T101	▪ Huntlee Stage 1 development area, currently tree'd ▪ Temporary APZ to 100m until clearing for development occurs ▪ 1st order stream ▪ Riparian vegetation	Rainforest
T102	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T103	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T104	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T105	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
Southwest - Old North Road		
T106	▪ Unmanaged vegetated land within NPWS Estate	Forest

Transect	Description	Classification
T107	▪ Unmanaged vegetated land within NPWS Estate	Forest
T108	▪ Unmanaged vegetated land within NPWS Estate	Forest
T109	▪ Unmanaged vegetated land within Huntlee owned or controlled lands	Forest
T110	▪ Pasture and Vineyard	Grassland
T111	▪ Rural Lands containing paddocks with Pasture	Grassland
T112	▪ Rural Lands containing paddocks with Pasture	Grassland
T113	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T114	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T115	▪ Pasture and Vineyard ▪ Narrow corridor of unmanaged vegetation	Forest
T116	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T117	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T118	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest
T119	▪ Unmanaged vegetated land outside Huntlee owned or controlled lands	Forest

2.2 Slope Assessment

Methodology

In accordance with PBP (2019), an assessment of the slope throughout the site (where a hazard is to remain) and for a distance of 100m around the site in the hazard direction. Both the average slope and maximum slopes were considered to determine the level of gradient which will most significantly influence fire behaviour on the site. The slope transect was categorised within the slope classification under PBP (2019) Appendix A1.4.

Slope assessment was assisted by:

- Preparation of elevation model based on Digital Elevation Model data; and
- Preparation of slope assessment based on NSW 1m contours.

Effective Slope

The slope class under the bushfire hazards identified in **Section 2.1** is presented in **Table 2** below and **Figure 5** to **Figure 11**.

Table 2 Slope Class

Transect	Vegetation Classification	Height (m) Start	Height (m) Finish	Transect Length (m)	Slope (°)	Slope Class
T001	Forest	46.32	45.48	14.54	-3.2	0-5° Downslope
T002	Forest	48.08	47.33	15.35	-3	0-5° Downslope
T003	Forest	48.88	48.06	19.96	-2.3	0-5° Downslope
T004	Forest	40.42	37.52	28.21	-5.9	5-10° Downslope
T005	Forest	34.99	27.66	99.91	-4.2	0-5° Downslope
T006	Forest	32.27	27.94	99.75	-2.5	0-5° Downslope
T007	Rainforest	32.09	30.57	22.51	-3.8	0-5° Downslope
T008	Rainforest	34.54	34.58	57.43	0.1	Upslope
T009	Rainforest	36.57	35.44	26.26	-2.6	0-5° Downslope
T010	Rainforest	38.12	36.42	22.77	-4.3	0-5° Downslope
T011	Rainforest	39.74	38.42	22.99	-3.2	0-5° Downslope
T012	Rainforest	40.14	39.68	22.78	-1	0-5° Downslope
T013	Rainforest	43.99	43.37	22.54	-1.5	0-5° Downslope
T014	Rainforest	44.66	43.37	29.37	-2.5	0-5° Downslope
T015	Rainforest	40.59	39.68	22.63	-2.3	0-5° Downslope
T016	Rainforest	40.27	38.42	46.00	-2.4	0-5° Downslope
T017	Rainforest	36.41	36.42	22.63	0	Upslope
T018	Rainforest	35.08	35.44	39.35	0.4	Upslope
T019	Rainforest	34.99	34.58	62.64	-0.4	0-5° Downslope
T020	Rainforest	33.84	30.57	22.50	-8.1	5-10° Downslope
T021	Forest	34.10	32.17	100.06	-1.1	0-5° Downslope
T022	Forest	34.03	33.31	100.20	-0.4	0-5° Downslope
T023	Forest	34.12	30.87	48.47	-3.8	0-5° Downslope
T024	Rainforest	35.02	33.08	56.62	-1.9	0-5° Downslope
T025	Rainforest	34.41	33.38	28.83	-2	0-5° Downslope
T026	Rainforest	35.35	34.49	11.27	-4.6	0-5° Downslope
T027	Rainforest	35.53	34.55	16.60	-3.4	0-5° Downslope
T028	Rainforest	35.76	35.47	12.63	-1.4	0-5° Downslope
T029	Rainforest	36.72	35.68	12.50	-4.6	0-5° Downslope
T030	Rainforest	37.57	36.46	13.13	-4.8	0-5° Downslope
T031	Rainforest	38.68	37.94	12.71	-3.6	0-5° Downslope
T032	Rainforest	39.28	39.33	12.74	0	Upslope
T033	Rainforest	42.96	40.65	36.72	-3.7	0-5° Downslope
T034	Rainforest	43.35	41.87	21.85	-3.9	0-5° Downslope
T035	Rainforest	43.75	42.87	12.73	-4.1	0-5° Downslope
T036	Rainforest	44.71	44.30	12.52	-1.8	0-5° Downslope
T037	Rainforest	48.02	44.87	13.26	-13.1	10-15° Downslope
T038	Rainforest	46.61	44.87	13.15	-7.3	5-10° Downslope
T039	Rainforest	44.97	44.30	14.68	-2.7	0-5° Downslope
T040	Rainforest	43.92	42.87	12.83	-4.5	0-5° Downslope
T041	Rainforest	43.42	41.87	26.15	-3.3	0-5° Downslope
T042	Rainforest	43.90	40.65	68.54	-2.8	0-5° Downslope
T043	Rainforest	39.69	39.33	12.76	-1.8	0-5° Downslope
T044	Rainforest	38.48	37.94	12.57	-2.7	0-5° Downslope
T045	Rainforest	36.73	36.46	18.94	-0.6	0-5° Downslope

Transect	Vegetation Classification	Height (m) Start	Height (m) Finish	Transect Length (m)	Slope (°)	Slope Class
T046	Rainforest	36.14	35.68	12.50	-1.8	0-5° Downslope
T047	Rainforest	35.92	35.47	12.55	-1.8	0-5° Downslope
T048	Rainforest	35.98	34.55	12.51	-6.8	5-10° Downslope
T049	Rainforest	35.83	34.49	12.59	-5.9	5-10° Downslope
T050	Rainforest	35.28	33.27	34.51	-3.3	0-5° Downslope
T051	Rainforest	34.71	32.67	66.44	-1.7	0-5° Downslope
T052	Forest	34.15	33.20	100.01	-0.5	0-5° Downslope
T053	Forest	34.03	33.52	100.01	-0.3	0-5° Downslope
T054	Forest	34.08	33.56	100.05	-0.3	0-5° Downslope
T055	Forest	33.46	31.36	100.04	-1.2	0-5° Downslope
T056	Forest	34.85	30.46	99.89	-2.5	0-5° Downslope
T057	Forest	33.54	31.26	97.73	-1.3	0-5° Downslope
T058	Grassland	33.40	34.23	55.16	0.8	Upslope
T059	Forest	30.23	22.70	45.01	-9.5	5-10° Downslope
T060	Forest	31.49	22.64	45.46	-11.1	10-15° Downslope
T061	Forest	30.39	22.77	45.04	-9.6	5-10° Downslope
T062	Forest	31.31	23.05	45.17	-10.4	10-15° Downslope
T063	Forest	30.73	22.87	47.54	-9.3	5-10° Downslope
T064	Forest	31.06	23.43	45.02	-9.7	5-10° Downslope
T065	Forest	32.05	23.24	47.59	-10.6	10-15° Downslope
T066	Forest	37.35	23.88	50.77	-14.8	10-15° Downslope
T067	Rainforest	38.89	28.49	39.08	-14.9	10-15° Downslope
T068	Rainforest	33.97	30.39	35.76	-5.7	5-10° Downslope
T069	Rainforest	36.49	31.92	36.67	-7.1	5-10° Downslope
T070	Rainforest	36.28	33.52	22.68	-7	5-10° Downslope
T071	Rainforest	36.54	35.88	15.99	-2.1	0-5° Downslope
T072	Rainforest	40.19	38.78	12.54	-6.4	5-10° Downslope
T073	Rainforest	45.44	45.34	40.81	-0.1	0-5° Downslope
T074	Rainforest	51.11	48.97	12.52	-9.5	5-10° Downslope
T075	Rainforest	57.15	53.82	12.50	-15.2	15-20° Downslope
T076	Rainforest	58.76	58.68	12.86	-0.4	0-5° Downslope
T077	Rainforest	60.32	59.81	12.51	-2.3	0-5° Downslope
T078	Rainforest	62.01	61.75	12.50	-1.4	0-5° Downslope
T079	Rainforest	62.37	61.75	12.50	-3.2	0-5° Downslope
T080	Rainforest	60.16	59.81	12.51	-1.8	0-5° Downslope
T081	Rainforest	58.92	58.68	12.85	-0.9	0-5° Downslope
T082	Rainforest	54.23	53.82	12.50	-1.8	0-5° Downslope
T083	Rainforest	50.55	48.97	12.44	-6.9	5-10° Downslope
T084	Rainforest	46.56	45.34	72.18	-1	0-5° Downslope
T085	Rainforest	39.26	38.78	12.51	-2.3	0-5° Downslope
T086	Rainforest	37.01	35.88	12.52	-5	0-5° Downslope
T087	Forest	46.71	49.66	100.01	1.7	Upslope
T088	No Hazard	58.59	54.04	100.02	-2.6	0-5° Downslope
T089	Forest	53.31	52.85	99.91	-0.2	0-5° Downslope
T090	No Hazard	41.27	38.86	84.62	-1.6	0-5° Downslope
T091	Forest	42.90	39.76	100.12	-1.8	0-5° Downslope
T092	Forest	43.04	37.61	120.90	-2.6	0-5° Downslope
T093	Forest	42.82	39.92	94.56	-1.8	0-5° Downslope
T094	Forest	55.11	52.96	100.17	-1.2	0-5° Downslope
T095	Forest	73.50	65.88	101.18	-4.3	0-5° Downslope
T096	No Hazard	71.99	65.10	100.01	-3.9	0-5° Downslope
T097	No Hazard	60.04	64.05	100.08	2.3	Upslope

Transect	Vegetation Classification	Height (m) Start	Height (m) Finish	Transect Length (m)	Slope (°)	Slope Class
T098	Rainforest / No Hazard	52.34	51.35	12.93	-4.4	0-5° Downslope
T099	Rainforest / No Hazard	50.13	49.25	12.53	-4.1	0-5° Downslope
T100	Rainforest	50.44	47.45	53.29	-3.1	0-5° Downslope
T101	Rainforest	46.36	45.76	12.50	-2.7	0-5° Downslope
T102	Forest	63.95	54.88	100.19	-5.2	5-10° Downslope
T103	Forest	57.31	59.80	100.03	1.4	Upslope
T104	Forest	53.07	60.61	100.06	4.3	Upslope
T105	Forest	49.38	46.27	67.33	-2.6	0-5° Downslope
Southwest – Old North Road						
T106	Forest	75.52	66.21	113.92	-4.7	0-5° Downslope
T107	Forest	66.38	65.01	100.12	-0.8	0-5° Downslope
T108	Forest	58.87	50.12	112.43	-4.5	0-5° Downslope
T109	Forest	47.14	39.03	101.31	-4.6	0-5° Downslope
T110	Grassland	49.53	43.32	108.03	-3.3	0-5° Downslope
T111	Grassland	43.25	41.03	100.45	-1.3	0-5° Downslope
T112	Grassland	49.31	53.39	100.78	2.3	Upslope
T113	Forest	54.94	59.98	100.01	2.9	Upslope
T114	Forest	58.38	70.03	148.48	4.5	Upslope
T115	Forest	92.09	81.37	100.01	-6.1	5-10° Downslope
T116	Forest	92.61	83.18	100.01	-5.4	5-10° Downslope
T117	Forest	102.62	88.64	100.37	-7.9	5-10° Downslope
T118	Forest	84.58	84.85	100.31	0.1	Upslope
T119	Forest	74.54	81.94	100.02	4.2	Upslope

HUNTLEE NEW TOWN – STAGE 2

FIGURE 5: VEGETATION & SLOPE CLASSIFICATION (SHEET 1 - OVERALL / KEY PLAN)

0 0.4 0.8 1.2 1.6

Kilometres

1:20000

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)
- Transects

Vegetation (*Keith 2004*)

- Forest
- Grassland
- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)
- Managed Land

N W E S

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimension.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 6: VEGETATION & SLOPE CLASSIFICATION (SHEET 2)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Contours (5 m)
- Riparian Corridor
- Watercourse
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)
- Transects

Vegetation (*Keith 2004*)

- Forest
- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)
- Managed Land

0 60 120 180 240

Metres
1:4500

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 7: VEGETATION & SLOPE CLASSIFICATION (SHEET 3)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Contours (5 m)
- Riparian Corridor
- Watercourse
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)
- Transects

Vegetation (*Keith 2004*)

- Forest
- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)
- Managed Land

0 60 120 180 240

Metres
1:4500

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 8: VEGETATION & SLOPE CLASSIFICATION (SHEET 4)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Contours (5 m)
- Riparian Corridor
- Watercourse
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)
- Transects

Vegetation (*Keith 2004*)

- Forest
- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)
- Managed Land

0 60 120 180 240

Metres
1:4500

MJD Environmental

HUNTLEE NEW TOWN - STAGE 2

FIGURE 9: VEGETATION & SLOPE CLASSIFICATION (SHEET 5)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Contours (5 m)
- Riparian Corridor
- Watercourse
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)
- Transects

Vegetation (*Keith 2004*)

- Forest
- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)
- Managed Land

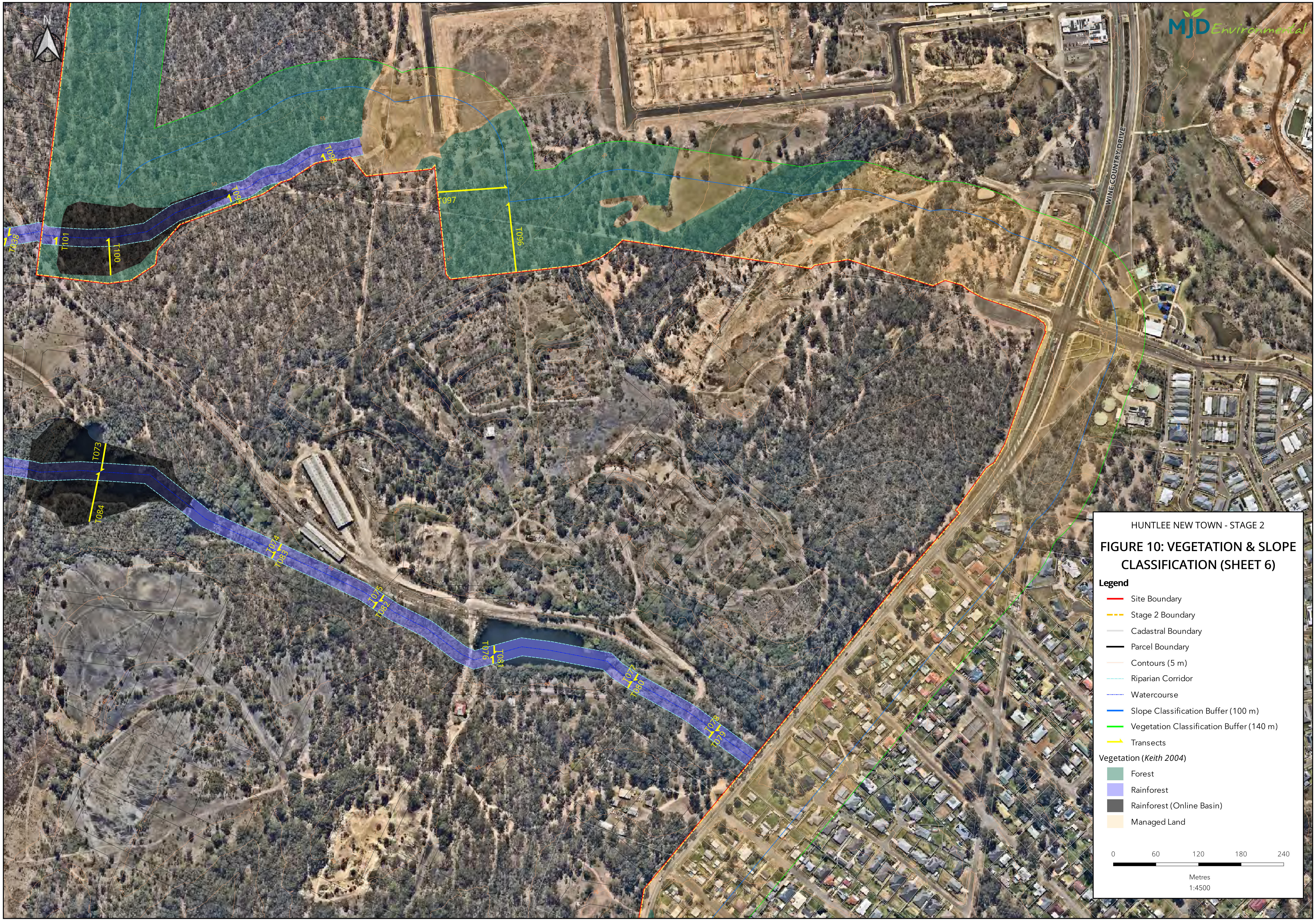
0 60 120 180 240

Metres
1:4500

T069 T070 T071 T086 T072 T085 T073 T084 T074 T083 T075 T082 T076 T081 T077 T080 T087 T088 T089 T090 T091 T092 T093 T094 T095 WINE COUNTRY DRIVE

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.



N
MJD Environmental
WINE COUNTRY DRIVE
T097
T096
T098
T099
T100
T101
T073
T084
T074
T083
T075
T082
T076
T081
T077
T080
T078
T079
HUNTLEE NEW TOWN - STAGE 2
FIGURE 10: VEGETATION & SLOPE CLASSIFICATION (SHEET 6)
Legend
Site Boundary
Stage 2 Boundary
Cadastral Boundary
Parcel Boundary
Contours (5 m)
Riparian Corridor
Watercourse
Slope Classification Buffer (100 m)
Vegetation Classification Buffer (140 m)
Transects
Vegetation (Keith 2004)
Forest
Rainforest
Rainforest (Online Basin)
Managed Land
0 60 120 180 240
Metres
1:4500

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 11: VEGETATION & SLOPE CLASSIFICATION (SHEET 7)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Contours (5 m)
- Riparian Corridor
- Watercourse
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)
- Transects

Vegetation (*Keith 2004*)

- Forest
- Grassland
- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)
- Managed Land

0 80 160 240 320

Metres
1:5500

T119 T106 T118 T107 T117 T108 T116 T115 T109 T114 T110 T113 T111 T112

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

3 Bushfire Protection Measures

PBP sets out a suite of BPMs and criteria that require consideration and assessment for applicable proposals on bushfire prone land in order to provide an adequate level of protection to new developments.

The measures required to be assessed are listed below and discussed throughout this chapter:

- Asset Protection Zones (APZ)
- Bushfire Attack Levels (BAL)
- Access
- Services – Water supply, Gas and Electricity
- Landscaping and Fuel Management
- Emergency Management

3.1 Asset Protection Zone

An APZ is a buffer zone between the hazard and buildings that is progressively managed to minimise bushfire hazard (fuel loads and reduce potential radiant heat levels, flame, ember and smoke attack) PBP (2019), in order to mitigate risk to life and asset.

An APZ can include the following:

- Lawns;
- discontinuous gardens;
- swimming pools;
- driveways;
- detached garages;
- open space / parkland;
- car parking; and
- cycleway and formed walkways.

The site sits across both the Cessnock and Singleton LGAs and therefore is assessed under an FFDI (Forest Fire Danger Index) rating of 100. As per Table A1.12.2 within PBP (2019), the acceptable solution setbacks have been calculated based on the bushfire hazard analysis presented in Chapter 2. Refer to **Table 3** detailing the acceptable solution residential development APZ setbacks. Acceptable solution APZ for residential development is detailed in **Figure 12** to **Figure 18**.

Note:

4) If a development type that triggers SFPP provisions set out within Chapter 6 of PBP 2019 is proposed in the Stage 2 area, independent assessment will be required and APZ is to meet the acceptable solution setbacks detailed in Table A1.12.1 of PBP (2019) and address the provisions of PPB Addendum (November 2022).
5) Detention basins that are online will be grassy, however have been treated as riparian and acknowledging the riparian connection and taking a conservative approach, assessed as *rainforest* on a 0-5° Downslope site slope.
6) Detention basins that are off line will be grassy and have been treated as *grassland* on a flat site slope.
7) Notwithstanding current site conditions, for the purposes of APZ and BAL all vegetation to the north and west of the development area has been assessed as *forest*. This is acknowledged as being a conservative approach, however allows for future regeneration of some or all of those lands and mitigates the worst case scenario up front thus ensuring protection of future residential areas in accordance with PBP 2019 acceptable solution setbacks.

Table 3 Required APZ (PBP 2019)

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)
T001	Forest	0-5° Downslope	29m
T002	Forest	0-5° Downslope	29m
T003	Forest	0-5° Downslope	29m
T004	Forest	5-10° Downslope	36m
T005	Forest	0-5° Downslope	29m
T006	Forest	0-5° Downslope	29m
T007	Rainforest	0-5° Downslope	14m
T008	Rainforest	Upslope	11m
T009	Rainforest	0-5° Downslope	14m
T010	Rainforest	0-5° Downslope	14m
T011	Rainforest	0-5° Downslope	14m
T012	Rainforest	0-5° Downslope	14m
T013	Rainforest	0-5° Downslope	14m
T014	Rainforest	0-5° Downslope	14m
T015	Rainforest	0-5° Downslope	14m
T016	Rainforest	0-5° Downslope	14m
T017	Rainforest	Upslope	11m
T018	Rainforest	Upslope	11m
T019	Rainforest	0-5° Downslope	14m
T020	Rainforest	5-10° Downslope	18m
T021	Forest	0-5° Downslope	29m
T022	Forest	0-5° Downslope	29m
T023	Forest	0-5° Downslope	29m
T024	Rainforest	0-5° Downslope	14m
T025	Rainforest	0-5° Downslope	14m
T026	Rainforest	0-5° Downslope	14m
T027	Rainforest	0-5° Downslope	14m
T028	Rainforest	0-5° Downslope	14m
T029	Rainforest	0-5° Downslope	14m
T030	Rainforest	0-5° Downslope	14m
T031	Rainforest	0-5° Downslope	14m
T032	Rainforest	Upslope	11m
T033	Rainforest	0-5° Downslope	14m
T034	Rainforest	0-5° Downslope	14m
T035	Rainforest	0-5° Downslope	14m
T036	Rainforest	0-5° Downslope	14m
T037	Rainforest	10-15° Downslope	23m
T038	Rainforest	5-10° Downslope	18m
T039	Rainforest	0-5° Downslope	14m
T040	Rainforest	0-5° Downslope	14m
T041	Rainforest	0-5° Downslope	14m
T042	Rainforest	0-5° Downslope	14m
T043	Rainforest	0-5° Downslope	14m
T044	Rainforest	0-5° Downslope	14m
T045	Rainforest	0-5° Downslope	14m
T046	Rainforest	0-5° Downslope	14m
T047	Rainforest	0-5° Downslope	14m
T048	Rainforest	5-10° Downslope	18m

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)
T049	Rainforest	5-10° Downslope	18m
T050	Rainforest	0-5° Downslope	14m
T051	Rainforest	0-5° Downslope	14m
T052	Forest	0-5° Downslope	29m
T053	Forest	0-5° Downslope	29m
T054	Forest	0-5° Downslope	29m
T055	Forest	0-5° Downslope	29m
T056	Forest	0-5° Downslope	29m
T057	Forest	0-5° Downslope	29m
T058	Grassland	Upslope	10m
T059	Forest	5-10° Downslope	36m
T060	Forest	10-15° Downslope	45m
T061	Forest	5-10° Downslope	36m
T062	Forest	10-15° Downslope	45m
T063	Forest	5-10° Downslope	36m
T064	Forest	5-10° Downslope	36m
T065	Forest	10-15° Downslope	45m
T066	Forest	10-15° Downslope	45m
T067	Rainforest	10-15° Downslope	23m
T068	Rainforest	5-10° Downslope	18m
T069	Rainforest	5-10° Downslope	18m
T070	Rainforest	5-10° Downslope	18m
T071	Rainforest	0-5° Downslope	14m
T072	Rainforest	5-10° Downslope	18m
T073	Rainforest	0-5° Downslope	14m
T074	Rainforest	5-10° Downslope	18m
T075	Rainforest	15-20° Downslope	30m
T076	Rainforest	0-5° Downslope	14m
T077	Rainforest	0-5° Downslope	14m
T078	Rainforest	0-5° Downslope	14m
T079	Rainforest	0-5° Downslope	14m
T080	Rainforest	0-5° Downslope	14m
T081	Rainforest	0-5° Downslope	14m
T082	Rainforest	0-5° Downslope	14m
T083	Rainforest	5-10° Downslope	18m
T084	Rainforest	0-5° Downslope	14m
T085	Rainforest	0-5° Downslope	14m
T086	Rainforest	0-5° Downslope	14m
T087	Forest	Upslope	24m
T088	No Hazard	0-5° Downslope	-
T089	Forest	0-5° Downslope	29m
T090	No Hazard	0-5° Downslope	-
T091	Forest	0-5° Downslope	29m
T092	Forest	0-5° Downslope	29m
T093	Forest	0-5° Downslope	29m
T094	Forest	0-5° Downslope	29m
T095	Forest	0-5° Downslope	29m
T096	No Hazard	0-5° Downslope	Temporary APZ 100m
T097	No Hazard	Upslope	Temporary APZ 100m

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)
T098	Rainforest / No Hazard	0-5° Downslope	14m
T099	Rainforest / No Hazard	0-5° Downslope	14m
T100	Rainforest	0-5° Downslope	14m
T101	Rainforest	0-5° Downslope	14m
T102	Forest	5-10° Downslope	36m
T103	Forest	Upslope	24m
T104	Forest	Upslope	24m
T105	Forest	0-5° Downslope	29m
Southwest – Old North Road			
T106	Forest	0-5° Downslope	29m
T107	Forest	0-5° Downslope	29m
T108	Forest	0-5° Downslope	29m
T109	Forest	0-5° Downslope	29m
T110	Grassland	0-5° Downslope	12m
T111	Grassland	0-5° Downslope	12m
T112	Grassland	Upslope	10m
T113	Forest	Upslope	24m
T114	Forest	Upslope	24m
T115	Forest	5-10° Downslope	36m
T116	Forest	5-10° Downslope	36m
T117	Forest	5-10° Downslope	36m
T118	Forest	Upslope	24m
T119	Forest	Upslope	24m

A variable APZ of 10m to 45m is required from the Huntlee concept approval boundary for uses that trigger residential APZ setbacks. In the case of a SFPP increased setbacks in accordance with PBP (2019) shall apply.

The development of Stage 2 will occur in a staged fashion. As such a temporary APZ of 100m or to the Huntlee boundary will be established between active or completed development stages and future development areas.

HUNTLEE NEW TOWN – STAGE 2

FIGURE 12: APZ MAP (SHEET 1 – OVERALL / KEY PLAN)

0 0.4 0.8 1.2 1.6

Kilometres

1:20000

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

Asset Protection Zones (*PBP 2019*)

- Forest 24 m (Up slope and flat)
- Forest 29 m (>0° - 5°)
- Forest 36 m (>5° - 10°)
- Forest 45 m (>10° - 15°)
- Grassland 10 m (Up slope and flat)
- Grassland 12 m (>0° - 5°)
- Rainforest 11 m (Up slope and flat)
- Rainforest 14 m (>0° - 5°)
- Rainforest 18 m (>5° - 10°)
- Rainforest 23 m (>10° - 15°)
- Temporary APZ (100 m)

N W E S

MJD Environmental

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HUNTLEE NEW TOWN - STAGE 2

FIGURE 13: APZ MAP (SHEET 2)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

Asset Protection Zones (*PBP 2019*)

- Forest 24 m (Up slope and flat)
- Forest 29 m (>0° - 5°)
- Forest 36 m (>5° - 10°)
- Grassland 10 m (Up slope and flat)
- Rainforest 11 m (Up slope and flat)
- Rainforest 14 m (>0° - 5°)

0 60 120 180 240

Metres

1:4500

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 14: APZ MAP (SHEET 3)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

Asset Protection Zones (*PBP 2019*)

- Forest 24 m (Up slope and flat)
- Forest 29 m (>0° - 5°)
- Forest 36 m (>5° - 10°)
- Rainforest 11 m (Up slope and flat)
- Rainforest 14 m (>0° - 5°)
- Rainforest 18 m (>5° - 10°)
- Rainforest 23 m (>10° - 15°)
- Temporary APZ (100 m)

0 60 120 180 240

Metres
1:4500

MJD Environmental

HUNTLEE NEW TOWN - STAGE 2

FIGURE 15: APZ MAP (SHEET 4)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

Asset Protection Zones (*PBP 2019*)

- Forest 24 m (Up slope and flat)
- Forest 29 m (>0° - 5°)
- Forest 36 m (>5° - 10°)
- Forest 45 m (>10° - 15°)
- Grassland 10 m (Up slope and flat)
- Rainforest 14 m (>0° - 5°)
- Rainforest 18 m (>5° - 10°)
- Rainforest 23 m (>10° - 15°)

0 60 120 180 240

Metres
1:4500

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 16: APZ MAP (SHEET 5)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

Asset Protection Zones (*PBP 2019*)

- Forest 24 m (Up slope and flat)
- Forest 29 m (>0° - 5°)
- Grassland 10 m (Up slope and flat)
- Rainforest 14 m (>0° - 5°)
- Rainforest 18 m (>5° - 10°)

0 60 120 180 240

Metres

1:4500

WINE COUNTRY DRIVE

MJD Environmental

HUNTLEE NEW TOWN - STAGE 2

FIGURE 17: APZ MAP (SHEET 6)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse

Vegetation (*Keith 2004*)

- Rainforest
- Rainforest (Online Basin)

Asset Protection Zones (*PBP 2019*)

- Forest 29 m (>0° - 5°)
- Rainforest 14 m (>0° - 5°)
- Rainforest 18 m (>5° - 10°)
- Rainforest 23 m (>10° - 15°)
- Temporary APZ (100 m)

0 60 120 180 240

Metres

1:4500

WINE COUNTRY DRIVE

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 18: APZ MAP (SHEET 7)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary

Asset Protection Zones (*PBP 2019*)

- Forest 24 m (Up slope and flat)
- Forest 29 m (>0° - 5°)
- Forest 36 m (>5° - 10°)
- Grassland 12 m (>0° - 5°)

0 70 140 210 280

Metres

1:5000

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

3.2 Determining BAL

By considering the bushfire hazard analysis outcomes presented in Chapter 2, Table A1.12.5 of Appendix 1 of PBP (2019) was applied to the vegetation classification and slope analysis to calculate BAL for residential development based on separation from the hazard for the site. Refer to **Table 4** and **Figure 19** to **Figure 25**.

Table 4 Required BAL (PBP 2019)

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T001	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T002	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T003	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T004	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T005	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T006	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T007	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T008	Rainforest	Upslope	11m	<8m 8-<11m 11-<16m 16-<23m 23-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T009	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T010	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T011	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T012	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T013	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T014	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T015	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T016	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T017	Rainforest	Upslope	11m	<8m 8-<11m 11-<16m 16-<23m 23-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T018	Rainforest	Upslope	11m	<8m 8-<11m 11-<16m 16-<23m 23-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T019	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T020	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T021	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T022	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T023	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T024	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T025	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T026	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T027	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T028	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T029	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T030	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T031	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T032	Rainforest	Upslope	11m	<8m 8-<11m 11-<16m 16-<23m 23-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T033	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T034	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T035	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T036	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T037	Rainforest	10-15° Downslope	23m	<17m 17-<23m 23-<34m 34-<46m 46-<100m >100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T038	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T039	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T040	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T041	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T042	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T043	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T044	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T045	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T046	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T047	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T048	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T049	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T050	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T051	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T052	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T053	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T054	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T055	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T056	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T057	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T058	Grassland	Upslope	10m	<8m 8-<10m 10-<15m 15-<22m 22-<50m >50m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T059	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T060	Forest	10-15° Downslope	45m	<36m 36-<45m 45-<60m 60-<77m 77-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T061	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T062	Forest	10-15° Downslope	45m	<36m 36-<45m 45-<60m 60-<77m 77-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T063	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T064	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T065	Forest	10-15° Downslope	45m	<36m 36-<45m 45-<60m 60-<77m 77-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T066	Forest	10-15° Downslope	45m	<36m 36-<45m 45-<60m 60-<77m 77-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T067	Rainforest	10-15° Downslope	23m	<17m 17-<23m 23-<34m 34-<46m 46-<100m >100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T068	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T069	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T070	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T071	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T072	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T073	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T074	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T075	Rainforest	15-20° Downslope	30m	<23m 23-<30m 30-<42m 42-<56m 56-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T076	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T077	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T078	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T079	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T080	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T081	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T082	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T083	Rainforest	5-10° Downslope	18m	<14m 14-<18m 18-<26m 26-<37m 37-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T084	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T085	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T086	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T087	Forest	Upslope	24m	<18m 18-<24m 24-<33m 33-<45m 45-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T088	No Hazard	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T089	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T090	No Hazard	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T091	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T092	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T093	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T094	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T095	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T096	No Hazard	0-5° Downslope	Temporary 100m APZ		
T097	No Hazard	Upslope	Temporary 100m APZ		
T098	Rainforest / No Hazard	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T099	Rainforest / No Hazard	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T100	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T101	Rainforest	0-5° Downslope	14m	<11m 11-<14m 14-<21m 21-<29m 29-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T102	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T103	Forest	Upslope	24m	<18m 18-<24m 24-<33m 33-<45m 45-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T104	Forest	Upslope	24m	<18m 18-<24m 24-<33m 33-<45m 45-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T105	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
Southwest – Old North Road					
T106	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T107	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T108	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T109	Forest	0-5° Downslope	29m	<22m 22-<29m 29-<40m 40-<54m 54-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T110	Grassland	0-5° Downslope	12m	<9m 9-<12m 12-<17m 17-<25m 25-<50m >50m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T111	Grassland	0-5° Downslope	12m	<9m 9-<12m 12-<17m 17-<25m 25-<50m >50m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T112	Grassland	Upslope	10m	<8m 8-<10m 10-<15m 15-<22m 22-<50m >50m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T113	Forest	Upslope	24m	<18m 18-<24m 24-<33m 33-<45m 45-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T114	Forest	Upslope	24m	<18m 18-<24m 24-<33m 33-<45m 45-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T115	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T116	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T117	Forest	5-10° Downslope	36m	<28m 28-<36m 36-<49m 49-<65m 65-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low
T118	Forest	Upslope	24m	<18m 18-<24m 24-<33m 33-<45m 45-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

Transect	Vegetation Classification	Slope Class	Required APZ (Table A1.12.2 PBP 2019)	Separation Distance	BAL (Table A1.12.5 PBP 2019)
T119	Forest	Upslope	24m	<18m 18-<24m 24-<33m 33-<45m 45-<100m >100m	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5 BAL-Low

HUNTLEE NEW TOWN – STAGE 2

FIGURE 19: BAL MAP (SHEET 1 – OVERALL / KEY PLAN)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse
- Asset Protection Zones (*PBP 2019*)
- Temporary APZ (100 m)

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

Bushfire Attack Levels (*PBP 2019*)

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

0 0.4 0.8 1.2 1.6

Kilometres

1:20000

N W E S

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimension.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 20: BAL MAP (SHEET 2)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse
- Asset Protection Zones (*PBP 2019*)

Bushfire Attack Levels (*PBP 2019*)

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

0 60 120 180 240

Metres
1:4500

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 21: BAL MAP (SHEET 3)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse
- Asset Protection Zones (*PBP 2019*)
- Temporary APZ (100 m)

Bushfire Attack Levels (*PBP 2019*)

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

0 60 120 180 240

Metres

1:4500

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 22: BAL MAP (SHEET 4)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse
- Asset Protection Zones (*PBP 2019*)

Bushfire Attack Levels (*PBP 2019*)

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

0 60 120 180 240

Metres

1:4500

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

N

WINE COUNTRY DRIVE

HUNTLEE NEW TOWN - STAGE 2

FIGURE 23: BAL MAP (SHEET 5)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse
- Asset Protection Zones (*PBP 2019*)

Bushfire Attack Levels (*PBP 2019*)

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

Vegetation (*Keith 2004*)

- Grassland (Offline Basin)
- Rainforest
- Rainforest (Online Basin)

0 60 120 180 240

Metres

1:4500

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

HUNTLEE NEW TOWN - STAGE 2

FIGURE 24: BAL MAP (SHEET 6)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Riparian Corridor
- Watercourse
- Asset Protection Zones (*PBP 2019*)
- Temporary APZ (100 m)

Bushfire Attack Levels (*PBP 2019*)

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

Vegetation (*Keith 2004*)

- Rainforest
- Rainforest (Online Basin)

0 60 120 180 240

Metres

1:4500

WINE COUNTRY DRIVE

MJD Environmental

HUNTLEE NEW TOWN - STAGE 2

FIGURE 25: BAL MAP (SHEET 7)

Legend

- Site Boundary
- Stage 2 Boundary
- Cadastral Boundary
- Parcel Boundary
- Asset Protection Zones (*PBP 2019*)

Bushfire Attack Levels (*PBP 2019*)

- BAL-12.5
- BAL-19
- BAL-29
- BAL-40
- BAL-FZ

0 70 140 210 280

Metres

1:5000

MJD Environmental

Aerial: Nearmap (2023) | Data: MJD Environmental, ADW Johnson, Daly Smith, Northrop, NSW Spatial Services (2023) | Datum/Projection: GDA94 / MGA zone 56 | Date: 01/12/2023 | Version: 3 | Z:\16015 - Huntlee, Branxton | This plan should not be relied upon for critical design dimensions.

3.3 Access

In the event of a serious bushfire threat to the proposed development, it will be essential to ensure that adequate ingress/ egress and the provision of defendable space are afforded in the subdivision design with due regard to the requirements of Table 5.3b and Appendix 3 of PBP (2019).

All access within the subdivision is generally consistent with the Huntlee Concept Approval where the access to the subdivision will be as recommended within the Traffic Impact Assessment and will include upgrades to existing connections to Wine Country Drive and new connection points. The proposed public perimeter roads and internal roads comply with RFS requirements for access listed in terms of surface, vertical clearance, horizontal width, grades, and minimum curve radius.

Consistent with the staged development delivery for Huntlee, temporary turning heads will be installed and maintained until future construction occurs in subsequent stages of the development. Temporary turning heads will be compliant with Types A-D outlined in Appendix 3 of PBP (2019).

Refer to **Appendix A** for Site Plan showing access.

The following summarises the requirements of Table 5.3b, and Appendix 3 of PBP (2019). Deviations from the above acceptable solutions for access may be considered (depending on the situation) through a performance-based assessment.

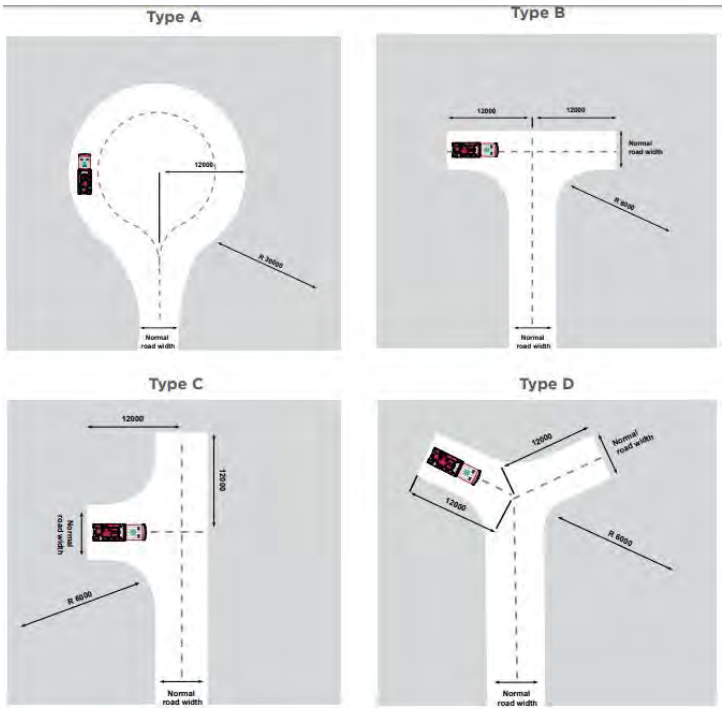
Table 5 Acceptable solutions for access (PBP 2019)

Performance Criteria	Acceptable Solutions
The intent may be achieved where:	
General Requirements ▪ Firefighting vehicles are provided with safe, all-weather access to structures.	▪ property access roads are two-wheel drive, all weather roads; ▪ perimeter roads are provided for residential subdivisions of three or more allotments; ▪ subdivisions of three or more allotments have more than one access in and out of the development; ▪ traffic management devices are constructed to not prohibit access by emergency services vehicles; ▪ maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient; ▪ all roads are through roads; ▪ dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end; ▪ where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road; ▪ where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system; and ▪ one way only public access roads are no less than 3.5 metres wide and have designated parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression.
▪ the capacity of access roads is adequate for firefighting vehicles.	▪ the capacity of perimeter and non-perimeter road surfaces and any bridges/ causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/ causeways are to clearly indicate load rating.

Performance Criteria	Acceptable Solutions
▪ there is appropriate access to water supply.	▪ hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression; ▪ hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005 or as updated by AS2419.1:2021 (per PBP Addendum Nov 2022); and ▪ there is suitable access for a Category 1 fire appliances to within 4m of the static water supply where no reticulated supply is available.
Perimeter access roads ▪ Access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.	▪ are two-way sealed roads; ▪ minimum 8m carriageway width kerb to kerb; ▪ parking is provided outside of the carriageway width; hydrants are located clear of parking areas; ▪ are through roads, and these are linked to the internal road system at an interval of no greater than 500m; ▪ curves of roads have a minimum inner radius of 6m; ▪ the maximum grade road is 15 degrees and average grade of not more than 10 degrees; ▪ the road crossfall does not exceed 3 degrees; and ▪ a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.
Non-perimeter access roads ▪ Access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating.	▪ minimum 5.5m carriageway width kerb to kerb; ▪ minimum 5.5m carriageway width kerb to kerb; ▪ parking is provided outside of the carriageway width; hydrants are located clear of parking areas; ▪ roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m; ▪ curves of roads have a minimum inner radius of 6m; ▪ the road crossfall does not exceed 3 degrees; and ▪ a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.
Property Access Firefighting vehicles can access the dwelling and exit the property safely.	▪ There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles. In circumstances where this cannot occur, the following requirements apply: ▪ minimum 4m carriageway width; ▪ in forest, woodland and heath situations, rural property access roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m at the passing bay; ▪ a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; ▪ provide a suitable turning area in accordance with Appendix 3;

Performance Criteria	Acceptable Solutions

Curve radius (inside edge in metres)	Swept path (metres width)
< 40	4.0
40 - 69	3.0
70 - 100	2.7
> 100	2.5



- curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;
- the minimum distance between inner and outer curves is 6m;
- the crossfall is not more than 10 degrees;
- maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and
- a development comprising more than three dwellings has access by dedication of a road and not by right of way.

Note: Some short constrictions in the access may be accepted where they are not less than 3.5m wide, extend for no more than 30m and where the obstruction cannot be reasonably avoided or removed. The gradients applicable to public roads also apply to community style development property access roads in addition to the above.

3.4 Services – Water, Electricity, Gas

The Site is to be developed in accordance with Table 5.3c the PBP (2019) acceptable solutions for services listed in **Table 6**.

The proposal is able to satisfy these requirements given:

- The Site will be connected to the reticulated water and recycled supply.
- The site will be connected to power from the existing service available within Huntlee. This shall be extended and augmented within the site.
- Any future gas connection will be installed in accordance with the provisions of PBP (2019).
- Fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005 or as updated by AS2419.1:2021 (per PBP Addendum Nov 2022).

Table 6 Acceptable solutions for services (PBP 2019)

<table>
<tr><th>Performance Criteria</th><th>Acceptable Solutions</th></tr>
<tr><td colspan="2">The intent may be achieved where:</td></tr>
<tr><td>▪ adequate water supplies are provided for firefighting purposes</td><td>▪ reticulated water is to be provided to the development, where available
▪ a static water and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed; and
▪ static water supplies shall comply with Table 5.3d
<table>
<tr><th>Development Type</th><th>Water Requirements</th></tr>
<tr><td>Residential lots (<1000m²)</td><td>5,000L/lot</td></tr>
<tr><td>Rural-residential lots (1000-10,000m²)</td><td>10,000L/lot</td></tr>
<tr><td>Large rural/lifestyle lots (>10,000m²)</td><td>20,000L/lot</td></tr>
<tr><td>Multi-dwelling housing (including dual occupancies)</td><td>5,000L/dwelling</td></tr>
</table></td></tr>
<tr><td>▪ water supplies are located at regular intervals; and
▪ the water supply is accessible and reliable for firefighting operations.</td><td>▪ fire hydrant spacing, design and sizing complies with AS 2419.1 – 2005 or as updated by AS2419.1:2021 (per PBP Addendum Nov 2022)
▪ hydrants are not located within any road carriageway
▪ all above ground water and gas service pipes external to the building are metal, including and up to any taps</td></tr>
<tr><td>▪ flows and pressure are appropriate</td><td>▪ fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005 or as updated by AS2419.1:2021 (per PBP Addendum Nov 2022)</td></tr>
<tr><td>▪ the integrity of the water supply is maintained.</td><td>▪ all above-ground water service pipes are metal, including and up to any taps; and
▪ above-ground water storage tanks shall be of concrete or metal.</td></tr>
</table>

Performance Criteria	Acceptable Solutions
Electricity Services ▪ location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings	▪ where practicable, electrical transmission lines are underground. ▪ where overhead electrical transmission lines are proposed: o lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and o no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 *Guideline for Managing Vegetation Near Power Lines*.
Gas services ▪ location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings	▪ reticulated or bottled gas is installed and maintained in accordance with AS/NZ 1596:2014 – *The storage and handling of LP Gas*, and the requirements of relevant authorities. Metal piping is to be used. ▪ all fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side of the installation. ▪ Above-ground gas service pipes are metal, including and up to any outlets. ▪ Connections to and from gas cylinders are metal. ▪ polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not used.

3.5 Landscaping & Fuel Management

All future landscaping on the site should be designed and managed to minimise impact of bushfire based on the principles set out in PBP (2019) being:

- Prevent flame contact / direct ignition on the dwelling;
- Provide a defendable space for property protection;
- Reduce fire spread;
- Deflect and filter embers;
- Provide shelter from radiant head; and
- Reduce wind speed.

In this manner, consideration should be given to species selection, planting location, flammability and size at maturity to ensure discontinuous canopy/ structure both vertically and horizontally to ensure the above principles are met.

Ongoing fuel management across the site as part of the maintenance regime should comply with the NSW RFS '*Asset protection zone standards'* and *Appendix 4 - Asset Protection Zone Requirements* of PBP (2019) which provides guidance on maintenance activities to assist in achieving the landscape principles.

Fencing and gates are to be constructed in accordance with PBP (2019) section 7.6 as follows:

Fences and gates in bush fire prone areas may play a significant role in the vulnerability of structures during bush fires. In this regard, all fences in bush fire prone areas should be made of either hardwood or non-combustible material.

However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only.

3.6 Emergency Management

Any fire within the site would be attended in the first instance by the Cessnock branch of the NSW Fire Brigade and/or the Rothbury and North Rothbury Rural Fire Brigade.

To assist emergency response from the NSW RFS and/or NSW Fire and Rescue, site access is to comply with the provisions set out in PBP (2019) and all tanks including connection points be readily accessible and clearly marked. If pumps are to be made available, they must be regularly maintained and in good working order.

4 Conclusion & Recommendations

This Bushfire Assessment Report supports an Environmental Impact Statement and State Significant Development Application (SSDA) that seeks consent for the Huntlee New Town Stage 2 development, comprising the concept development for the Stage 2 sites including Villages 2 and 3, land off Old North Road and the Town Centre North area, and the detailed development for the central and southern areas of Village 2. The proposal represents the next phase of an extensive planning, assessment and consultation process completed to date for the development of the Huntlee New Town site consistent with the Major Project Concept Approval (MP10_0137).

This assessment has considered and assessed the bushfire hazard and associated potential threats relevant to the proposal, and outlines the minimum mitigative measures which would be required in accordance with *Planning for Bush Fire Protection 2019* (PBP), as adopted through the *Environmental Planning & Assessment Amendment* (Planning for Bush Fire Protection) *Regulation 2020*. Reference is made to PPB Addendum (November 2022) where applicable.

In order to determine whether the proposed development is bushfire-prone, and if so, which setbacks and other relevant Bush Fire Protection Measures (BPM) will be appropriate, this assessment adhered to the methodology and procedures outlined in PBP (2019) via assessment of acceptable solutions as outlined in Chapter 5 of PBP (2019).

This assessment has been made based on the bushfire hazards in and around the site at the time of inspection and production (July and September 2023).

In summary, the following key recommendations have been generated to enable the proposal to comply with PBP (2019).

Asset Protection Zones

- A variable APZ of 10m to 45m is required from the Huntlee concept approval boundary for uses that trigger residential APZ setbacks. In the case of a SFPP increased setbacks in accordance with PBP (2019 and Addendum 2022) shall apply.

- The development of Stage 2 will occur in a staged fashion. A temporary APZ consistent with Appendix 4 PBP 2019 of 100m or to the Huntlee boundary is required between active or completed development stages and future development areas.

- All lands within the development area including open space outside the nominated riparian corridors will be managed as an APZ.

  Future dwellings within the site must have due regard to the specific considerations to required BAL as detailed in Chapter 3, Section 3.2 of this report.

Access

- Access for the subdivision design shall comply with the requirements of Table 5.3b and Appendix 3 of PBP (2019)
- All access within the subdivision is generally consistent with the Huntlee Concept Approval where the access to the subdivision will be as recommended within the Traffic Impact Assessment and will include upgrades to existing connections to Wine Country Drive and new connection points. The proposed public perimeter roads and internal roads comply with RFS requirements for access listed in terms of surface, vertical clearance, horizontal width, grades, and minimum curve radius.
- Temporary turning heads will be installed and maintained until future construction occurs in subsequent stages of the development. Temporary turning heads will be compliant with Types A-D outlined in Appendix 3 of PBP (2019).

Services – Water supply, Gas and Electricity

- Services for the subdivision design shall comply with the requirements of Table 5.3c the PBP (2019).
  - The Site will be connected to the reticulated water and recycled supply.
  - The site will be connected to power from the existing service available within Huntlee. This shall be extended and augmented within the site.
  - Any future gas connection will be installed in accordance with the provisions of PBP (2019).
- Fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005 or as updated by AS2419.1:2021 (per PBP Addendum Nov 2022).

Landscaping and Fuel Management

- Careful consideration of future site landscaping, fencing and ongoing fuel management must occur to minimise the potential impact of bushfire on the Site; and
- Ongoing fuel management across the Site as part of the maintenance regime should give due consideration to Appendix 4 Asset Protection Zone Requirements of PBP (2019) which provides guidance on maintenance activities to assist in achieving the landscape principles.

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Appendix A Plan of Proposal

ISSUE	DATE	PURPOSE	ISSUE	DATE	PURPOSE	ISSUE	DATE	PURPOSE
(0)	24/01/2023	PRELIMINARY REVIEW BY CLIENT	(6)	24/07/2023	AMEND LAYOUT TO LATEST STG 1 MOD 21, V2-3 & ONR LARGE LOTS.	(12)	19/09/2023	LOT AMENDMENTS IN ONR.
(1)	30/01/2023	AMEND PER GS EMAIL TO ADD OLD NORTH ROAD, DETAILED/CONCEPT DA BDYS.	(7)	25/07/2023	AMEND LAYOUT TO LATEST TC. ADJUST STG 2 DA BDY NEAR HANWOOD ROAD.	(13)	17/10/2023	LOT AMENDMENTS VILLAGES TC, 2, 3.
(2)	31/01/2023	AMEND DA AREA TITLES PER GS EMAIL.	(8)	28/07/2023	REMOVE STG 1. AMEND STG 2 BDY. ADD ROAD WIDTHS, LOT AREAS, DESCRIPTIONS.	(14)	22/11/2023	LOT AMENDMENTS VILLAGE 2.
(3)	01/02/2023	ADD OVERALL STAGE 2 DA BOUNDARY.	(9)	31/07/2023	AMEND PER GS MARKUPS 28/07/2023.			
(4)	07/02/2023	AMEND PER GS EMAIL. ADD OLD NORTH ROAD DIAGRAM.	(10)	01/08/2023	AMEND TO INCREASE STG 2 TC PUBLIC OPEN SPACE INCLUSION CLARITY.			
(5)	07/06/2023	AMEND TO LATEST MOD 21 STAGE 1 BDYS. AMEND STAGE 2 DA BDY EXTENTS.	(11)	05/09/2023	LOT AMENDMENTS IN TOWN CENTRE, VILLAGES 2-3.			

DRAWING STATUS
PRELIMINARY REVIEW
ALL DRAWING OBJECTS, LEVELS, DIMENSIONS AND AREAS ARE SUBJECT TO SURVEY. THE PARTICULARS ON THIS PLAN AREA SUPPLIED FOR INFORMATION ONLY AND SHOULD NOT BE TAKEN AS A REPRESENTATION IN ANY RESPECT ON THE PART OF THE VENDOR OR ITS AGENT.

CLIENT
Huntlee
LWP bringing communities to life

SCALE 1:4000
SHEET SIZE A0
DRAWN BY RB
CHECKED BY ADM

DRAWING TITLE HUNTLEE STAGE 2 DA
PROJECT HUNTLEE STAGE 2 - DEVELOPMENT AREA WINE COUNTRY DRIVE, HUNTLEE
CLIENT HUNTLEE PTY.LTD.

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DALY.SMITH JOB NO: **20406**
SHEET NO: 1 OF 1

Filename: S:\WorkingData\Data\20000-HUNTLEE\20406\DRAWINGS\VILLAGE 2-3 DA\20406 VILLAGE 2-3 DA Plan
Save Date: 22/11/2023 1:17:44 PM Plot Date: 22/11/2023 1:18:17 PM