SHIRE OF MOORA
LOCAL PLANNING SCHEME NO.4

NOTICE OF PUBLIC ADVERTISEMENT OF PLANNING PROPOSAL

Planning and Development Act 2005
Shire of Moora

The local government has received an application to use and/or develop land for the following purpose and public comments are invited.

Land Details:

Lots 2342, 2054 & 3598 Namban West Road, Namban.

Proposal:

Development of a proposed tree plantation on the abovementioned properties for carbon sequestration purposes.

Details of the proposal are attached.

Comments on the proposal are now invited and can be emailed to shire@moora.wa.gov.au or posted to the Shire's Chief Executive Officer at PO Box 211 MOORA WA 6510 by no later than **Wednesday 15 January 2025**. All submissions must include the following information:

- Your name, address and contact telephone number;
- How your interests are affected; whether as a private citizen, on behalf of a company or other organisation, or as an owner or occupier of property;
- Address of property affected (if applicable); and
- Whether your submission is in support of, or objecting to the proposal and provide any arguments supporting your comments.

All submissions received may be made public at a Council meeting and included in a Council Agenda, which will be available on the Shire's website, unless a submission specifically requests otherwise.

Gavin Robins
Chief Executive Officer
Shire of Moora

6 December 2024

Please direct all responses/queries to:
Gareth Parry
T: +61 423 771 520
E: Gareth.Parry@woodside.com

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T: +61 8 9348 4000
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22nd of November 2024

Shire of Moora
34 Padbury Street MOORA WA 6510
PO Box 211, MOORA WA 6510

Submitted via email to: shire@moora.wa.gov.au

To Whom It May Concern,

WOODSIDE ENERGY CARBON (SERVICES) PTY LTD - CARBON FARMING DEVELOPMENT APPLICATION

Please find attached a development application by Woodside Energy Carbon (Services) Pty Ltd ("**WEC(S)**") in relation to three properties known as 'Managum', 'Towri' and 'Wards' (jointly, "**the Properties**") ("**Development Application**").

The Properties, which were purchased by WEC(S) in 2024, are situated in the Shires of Moora and Dandaragan. Towri and Wards are located in the Shire of Dandaragan on Lots 3600 (DP 206453) and 3596 (DP 26455) respectively. Managum is located in the Shire of Moora on Lots 2342 (DP89269), 2054 (DP143308), and 3598 (DP206455).

The Properties are located on the Dandaragan plateau which is characterised by deep sandy soils and high levels of wind erosion.

Subject to receiving all required approvals, WEC(S) intends to commence planting a mix of local tree species and a mix of local shrub species across the Properties for the purpose of potentially generating Australian Carbon Credit Units ("**ACCUs**") in approximately mid-2025.

WEC(S) has prepared the Development Application in accordance with:

- the Shire of Dandaragan's Local Planning Scheme No.7 ("**LPS 7**");
- the Shire of Moora's Local Planning Scheme No.4;
- the Shire of Moora's Local Planning Policy;
- the Shire Dandaragan's Local Planning Strategy;
- the Guidelines for Plantation Fire Protection; and
- the Natural Resource Management Plan for the Northern Agricultural Region.

WEC(S) currently has two existing carbon farming developments within the Shires of Moora and Dandaragan including the so-called 'Manalling' property which WEC(S) purchased in 2020 (TP/DA01/2021) and the property known as 'Linscott' which WEC(S) purchased in 2021 (TP/DA13/2022). The Development Application aims to combine the existing carbon farming developments on Manalling and Linscott with the proposed carbon developments on Managum, Towri and Wards (the "**Watheroo Aggregation**"). The Watheroo Aggregation is more fully discussed in the Development Application and the attached Plantation Management Plan. Please note that we have attached various documents (listed below) in support of the Development Application.

We would be pleased to meet and discuss the Development Application further if doing so would be helpful.

JR Greenwald
JASON GREENWALD (Nov 22, 2024 15:05 GMT+8)

Jason Greenwald
VP Carbon Solutions

Attached:

a) Duly completed development application form
b) Land titles for Lots 2342 (DP89269), 2054 (DP143308), and 3598 (DP206455).
c) Profit à prendre
d) Conservation Covenant (G126107)
e) Bushfire Management Plan
f) Plantation Management Plan

Watheroo Aggregation Development Application

Woodside Native Reforestation Project - Phase 7

TABLE OF CONTENTS

1. Overview

Woodside Energy Ltd established Woodside Energy Carbon (Services) Pty Ltd ("**WEC(S)**") in 2018 to develop a carbon credits portfolio that can be used to assist Woodside Energy Ltd in meeting its net equity Scope 1 and 2 greenhouse gas emissions reduction aspirations and regulatory obligations.

WEC(S) has prepared this Development Application in compliance with;

- the Shire of Dandaragan's Local Planning Scheme No.7 ("**Dandaragan LPS 7**")[1]; and
- the Shire of Moora's Local Planning Scheme No.4 ("**Moora LPS 4**").[2]

The intent behind this Development Application is to repurpose three of WEC(S)'s properties into carbon farms, the relevant properties being 'Managum', 'Towri' and 'Wards' (jointly, the "**Properties**"). The proposed development is in line with both Dandaragan LPS 7 and Moora LPS 4.

As part of developing its carbon credits portfolio, in 2020, WEC(S) commenced the multi-phase Woodside Native Reforestation Project (the "**Project**") which aims to create biodiverse carbon farms in Australia.

The carbon sequestered from the Project may be claimed as Australian Carbon Credit Units ("**ACCUs**") under the Carbon Farming Initiative ("**CFI**") Act – Reforestation by Environmental or Mallee Plantings- FullCAM 2020 Method ("**FullCAM 2020 Method**").[3]

The FullCAM 2020 Method involves block planting across a property and seeding and/or planting using local native species with the objective of establishing a native forest. ACCUs generated may then be used to reduce Woodside Energy Ltd's net equity Scope 1 and 2 greenhouse gas emissions.

WEC(S)'s approach to carbon farming has evolved over time with the first phase ("**Phase 1**") of the Project starting in May 2020 as a pilot project that was located in the so-called "Great Southern" region of Western Australia.

Phases 2 and 3 of the Project included the development of carbon farms in low productivity sandy land located in the Shire of Moora and Dandaragan.

Phase 2 is comprised of the 'Manalling' property, located at 2947 Prices Road, Namban WA and was approved as a carbon farm in 2021 (development approval: TP/DA01/2021).

Phase 3 features the 'Linscott' property, which is located at 4369 Watheroo Rd, Watheroo and was approved as carbon farm in 2022 (development approval: TP/DA13/2022).

This Development Application expands on Phases 2 and 3 to incorporate the Properties as Phase 7. Together these phases of the project are referred to as the "**Watheroo Aggregation**".

[1] SHIRE OF DANDARAGAN (www.wa.gov.au)

[2] Shire of Moora Local Planning Scheme No.4

[3] Federal Register of Legislation - Carbon Credits (Carbon Farming Initiative—CFI Mapping Tool and Minor Corrections) Methodology Determination Variation 2018

2. Existing Land Use

The Properties know as 'Managum', 'Towri' and 'Wards' together, comprise "Woodside Native Reforestation Project - Phase 7" ("**Phase 7 of the Project**"). Two of the Properties ('Towri' and 'Wards') are located in the Shire of Dandargan, while the other ('Managum') is located in the Shire of Moora. The Properties consist of the following lots:

Managum:

- Lot 2342 on Deposited Plan 89269, Volume 2162, Folio 640
- Lot 2054 on Deposited Plan 143308, Volume 2162, Folio 640
- Lot 3598 on Deposited Plan 206455, Volume 192, Folio 172A

Towri:

- Lot 3600 on Deposited Plan 206453, Volume 1794, Folio 673

Wards:

- Lot 3596 on Deposited Plan 206455, Volume 1914, Folio 130

WEC(S) purchased the Properties (totalling approximately 4,566ha) in February 2024 with the intention of repurposing them to a carbon farm aggregation. As per Appendix A, the Properties adjoin existing carbon farms known as 'Manalling', located at 2947 Prices Road, Namban WA (development approval: TP/DA01/2021), and 'Linscott' which is located at 4369 Watheroo Rd, Watheroo (development approval: TP/DA13/2022).

2.1 Managum

The ~1,579ha 'Managum' property located at Namban West Rd, Badgingarra, WA ("**Managum**") is in the Shire of Moora and borders the Shire of Dandaragan. Prior to its acquisition by WEC(S), Managum was operating as a part-time grazing enterprise.

Managum contains two legacy plantations, one of *Acacia* (~100ha of *Acacia saligna*) and another of an unspecified variety of pine. It is understood that the *Acacia* was planted to stabilise soil and it remains in various levels of decomposing dead biomass. There is ~40 hectares of pine which it is understood features an initial stocking rate of 1,111 spha and which was planted as part of a profit à prendre with the Forest Products Commission ("**FPC**"). As can be seen from Appendix H (Managum Property), the majority of this pine plantation has perished and, in the circumstances, WEC(S) is in the process of initiating a request to FPC to have the trees removed.

2.2 Towri

The ~1359ha 'Towri' property is located at 2248 Agaton Rd, Badgingarra, WA in the Shire of Dandaragan ("**Towri**"). Prior to its acquisition by WEC(S), Towri was used for grazing under a long-term lease with a local sheep grazier, this lease was maintained by WEC(S) post purchase.

2.3 Wards

The ~815ha 'Wards' property is located at Lot 3596 Watheroo Rd, Badgingarra, WA in the Shire of Dandaragan ("**Wards**"). Prior to its acquisition by WEC(S), Wards was used for grazing (sheep and goats). Wards includes a 5ha pine plantation situated in the centre of the property. Lot 1984 was not purchased by WEC(S) and remains a habitable property with a homestead and sheds located on it. WEC(S) permitted the previous owner's livestock to lightly graze the property throughout winter and spring of 2024.

3. Proposed Land Use

It is proposed that ~2,535ha out of the ~4,566ha making up the Properties will be repurposed into a carbon farms forming Phase 7 of the Project.

A proposed preliminary design is provided in Appendix A (Proposed Preliminary Reforestation Plan). This design may be subject to minor refinements should contracts be awarded for site preparation and planting.

Carbon farming is proposed to be conducted by WEC(S) across the relevant area using the FullCAM 2020 Method, which involves block planting across a property and seeding and/ or planting using local native species with the objective of establishing a native forest.

The key target characteristics are for the planted native forest to achieve 2m height with 20% canopy cover. A mix of local tree species (e.g. Eucalypt, Banksia, Casuarina) will be supplemented with a mix of local shrub species (e.g. Melaleuca, Hakea). It is intended that the planted species will grow into a forest broadly consistent with that of the local remnant vegetation.

In accordance with the Carbon Credits (Carbon Farming Initiative) Rule 2015[4], a permanence period of 100 years has been nominated for the proposed Phase 7 of the Project, which may help to ensure that, if established, the relevant carbon stock may be maintained in situ for that period.

4. Land Use Compatibility

4.1 Shire of Moora

The Moora LPS 4[5] classifies Managum as "General agriculture", adjoining lands are classified as "Recreation and open space" and refers to the Watheroo National Park.

The proposed land use is best classified as "Plantation" which is defined in the Shire of Moora's Local Planning Policy ("**Moora LPP**")[6] as "…the same meaning as in the Code of Practice for Timber Plantations[7] in Western Australia (1997) published by the Department of Conservation and Land Management and the Australian Forest Growers."[8]

The Shire of Moora Policy Manual outlines that planning approval is required for any proposed plantations:

- "To actively encourage the integration of agroforestry and plantations with existing agricultural uses over the Shire as a complementary and ancillary use.
- To facilitate retention of traditional agriculture as the predominant use on the land.
- To support applications that actively integrates agroforestry or plantations with farms in recognition of the economic, environmental and social benefits.
- To encourage planting areas with linkages to existing remnant vegetation on the same lot or adjacent lots. Where appropriate encourage linkages with vegetation on adjacent reserves however consult with the relevant reserve authority or manager.

[4] Federal Register of Legislation - Carbon Credits (Carbon Farming Initiative) Rule 2015
[5] Shire of Moora Local Planning Scheme No.4
[6] Shire of Moora Planning Policy
[7] Code of Practice for Timber Plantations in Western Australia (fao.org)
[8] Shire of Moora Planning Policy

- To protect and enhance native vegetation, wetlands and water courses and assist in the reduction of salinity, waterlogging and erosion.
- To support continuing broad acre agriculture and production as the primary and priority landuse in the Agriculture zone.
- To generally discourage the use of whole farms for plantations (particularly where it contains a dwelling) unless the applicant has clearly demonstrated extenuating circumstances or provided significant justification warranting support for a variation to any aspect of the Policy.
- To achieve agroforestry and plantation designs which do not compromise the fire safety of the local community or of biodiversity conservation and management of reserves.
- To minimise the potential for any loss of population or agricultural land through the use of whole farms for plantations and encourage agroforestry or plantations that provide a supplementary income to farmers.
- To achieve agroforestry and plantation designs which do not compromise the fire safety of the local community or of biodiversity conservation and management of reserves.
- To achieve high quality fire management plans which are independent and self sufficient [*sic*] unless the relevant authority managing land outside of the application has endorsed a FMP which relies on external fire management methods (such as major protective burning of adjacent reserves).
- To encourage the selection of tree species that are complimentary to native remnant vegetation."[9]

4.2 Shire of Dandaragan

Dandaragan LPS 7 classifies both Towri and Wards as "Rural", while adjoining lands are classified as "Conservation, Rural and Public purpose" (see Appendix B).

The proposed land use is best classified as "Agroforestry" which is considered a "D" land use in the "Rural" zone and is defined as "land used commercially for tree production and agriculture where trees are planted in blocks of more than one hectare."[10]

The Dandaragan Local Planning Strategy[11] outlines the Shire of Dandaragan's support for establishing tree farms on rural land as a means of diversifying rural economies. In this regard, section 6.8.8 of the Dandaragan Local Planning Strategy states that the relevant objectives of the strategy are as follows:

- "tree farming should generally not occur on priority agricultural land;
- tree farming should generally be a permitted use on rural land, except where development of a tree farm would create an extreme or unacceptable bushfire risk or when responding to specific local circumstances as identified in a strategy or scheme;
- local governments should manage the location, extent and application requirements for tree farming in their communities through local planning strategies, schemes and/or local planning policies;
- in planning for tree farming, local government considerations should include but are not limited to, potential bushfire risk, environmental and economic factors, water availability and recharge, visual landscape impacts, transport impacts of tree farming (where harvesting is proposed), planting thresholds,

[9] Shire of Moora Planning Policy (2016) pg 86-89

[10] SHIRE OF DANDARAGAN (www.wa.gov.au)

[11] Shire of Dandaragan local planning strategy (www.wa.gov.au)

appropriate buffers, and location relative to conservation estates and sensitive land uses;

- where tree farm proposals are integrated for natural resource management and occupy no more than 10 per cent of the farm, the proposal should not require local government development approval; and
- the establishment of tree farms does not warrant the creation of new or smaller rural lots."[12]

4.3 Compatibility Assessment

Through carbon farming, Phase 7 of the Project aims to meet the abovementioned objectives of the Shire of Moora and the Shire of Dandaragan.

In their current state, the Properties are not reliably profitable based on traditional agricultural practices, which is suggested by:

- the high to extreme hazard for wind erosion risk classification from the Department of Primary Industries and Regional Development ("**DPIRD**") soil landscape mapping data[13] presented in Appendix E;
- the low grazing capability classification from DPIRD's 'Soil Land Capabilities'[14] mapping data presented in Appendix F; and
- the salinity incursions present on Managum, which incursions are located adjacent to the salt lakes featured in Namban Nature Reserve (see Appendix H).

Carbon farming enables the diversification of traditional farming practices that may provide benefits, including linking reserves and remnant vegetation, reducing wind erosion and promoting biodiversity. Reasonable efforts have been made to not purchase areas of the Properties that are suitable for continued agricultural use or habitable homesteads in addition to keeping stock on the Properties prior to planting activities.

WEC(S) intends to investigate potentially complementary land uses such as beekeeping and the harvesting of bush foods (where these are acceptable to the Clean Energy Regulator ("**CER"**)). Furthermore, WEC(S) has previously leased areas of purchase properties that are more likely to be sustainable for traditional agriculture. For instance, a section of the previously mentioned Linscott property is currently leased to a tenant farmer (see Appendix F).

For each of the carbon farms on the Properties, it is proposed that a mixture of native trees and some shrub species are planted in 'cells' of up to 100ha for the purpose of achieving potential environmental benefits. This includes carbon sequestration which may have the benefit of re-linking of remnant vegetation.

A substantial proportion of the pine plantations on both Managum and Wards have been reduced to standing dead wood. WEC(S) is considering options for removal and potential re-planting of these areas. WEC(S) intends to submit a further development application ("**Stage 2 Development Application**") if these works are confirmed.

The development of the relevant carbon farms will be guided by the Guidelines for Plantation Fire Management (2011)[15] and the Code of Practice for Timber Plantations in Western Australia[16] to help ensure protection of the plantation, the environment, and the surrounding community.

[12] Page 89 of Shire of Dandaragan local planning strategy

[13] https://catalogue.data.wa.gov.au/org/department-of-primary-industries-and-regional-development

[14] https://catalogue.data.wa.gov.au/dataset/soil-landscape-mapping-best-available/resource/9c30e17d-dadb-40e6-bcb6-73d11e616fa3

[15] Guidelines Plantation Fire Prctn 2011_P.indd (website-files.com)

[16] Code of Practice for Timber Plantations in Western Australia (fao.org)

A *Plantation Management Plan* ("**PMP**") and a *Bushfire Management Plan* have been submitted in conjunction with this Development Application to cover all five WEC(S) owned properties in the Watheroo Aggregation. These documents detail the fire management activities that will be regularly performed in addition to the installation of water tanks (minimum 50,000L) for each property and construction of firebreaks which will, at minimum, meet the applicable regulatory requirements. The said firebreaks will include the required 'mineral earth' firebreaks, as well as low-fuel setbacks.

It is intended that planting will not encroach on structure-related setbacks, with a 50-metre distance between a planted area and any structure, and a further 50 metre pruned area, as well as reduced ground fuel levels for 100 metres from any structure. These setbacks will be maintained through mechanical and chemical weed suppression. For more information regarding fire management and managing bushfire risk, please refer to section 9 of this Development Application.

Wherever practicable, WEC(S) aims to provide community opportunities through possible economic benefits such as local purchasing of goods and services.

WEC(S)'s approach to the development of carbon farms strives to be consistent with the Northern Agricultural Region Natural Resource Management Plan[17] which outlines habitat loss and soil health specifically dryland salinity caused by land degradation.

5. Development Activities

The activities required for the development of the Properties for carbon farming purposes are described below.

Demolition

The Properties have minimal infrastructure and are void of dwellings. Plans to demolish structures are currently not being considered, other than the removal of internal farm fences to enable free movement between paddocks.

Controlled grazing

Leasing of specific paddocks may occur in order to help reduce standing fuel loads.

Pre-planting Burns

Mitigation burning will be used to reduce fuel loads in areas with high loads of annual or perennial grasses. Prior to the 2024/25 bushfire season, dense areas of dry paddock biomass were burnt. These mitigation burns will be used to help remove the bulk of the standing biomass which presents both a fire risk and obstruction to ground preparation.

Pre-planting weed and pest control

Weed and pest control would be consistent to that conducted for an agricultural enterprise with potential summer emergent knockdowns and a pre-planting broadacre knockdown spray using a tractor and boom sprayer, with potential for additional spot sprays. Pre-planting weed spraying is planned to occur in March-May 2025.

Vertebrate pest control is being conducted on the Properties and is expected to continue for a period of approximately three years. Additional weed control would be applied to declared weeds, including Skeleton weed.

Ground Preparation

[17] NARvis_RegionalNaturalResourceManagementStrategy_NorthernAgriculturalRegion_2021to2030-3.pdf

Ground preparation activities are expected to take 4 weeks and to commence in April-May 2025.

Proposed activities involve a tractor-pulled rip and small scalp attachment over most of the property. Furrows and rip lines are proposed to follow a majority N-S orientation in line with boundary fences, with approximately 6m spacing between each. These operations are in line with general farming activities as conducted with typical farming equipment. The aim is to provide the best conditions for seedlings to grow while minimising ground disturbance.

Planting of Native Trees

Native trees are planned to be planted by hand and/or via a machine planter at ~3m intervals within each furrow. It is estimated that planting will commence in mid-May 2025 following sufficient rainfall and continue for around 8 weeks. Direct seeding and watering are currently not proposed. A preliminary proposed project timeline is provided below.

Post-planting and Weed Control

Post-planting spraying is planned to be conducted using selective herbicides, shielded sprayers, and/or mechanical methods. It is expected that, within five years, native species will begin to outcompete weed species and, consequently, ongoing weed and pest spraying is likely to be minimal or not required.

Table 1. Watheroo Aggregation Proposed Planting Plan

Activity	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025
Weed Control Spray					
Crash Grazing					
Preplanting Burn					
Fence Removal					
Pest Control					
Mechanical Weed Control					
Ground Preperation			Weather Dependent		
Planting			Weather Dependent		
Mitgation Burn					

5.1.1 Planting Configuration

A “block planting” method is proposed to be used whereby portions of the Properties are subdivided by both soil and vegetation community types before being planted in furrows approximately 3m apart in rows spaced 6m apart.

WEC(S) proposes seedlings to be planted by a mix of manual and mechanical techniques.

In accordance with the *Guidelines for Plantation Bushfire Protection (2011)*[18], the planting configuration will resemble the Kyoto Compliant Plantings Carbon Farming Initiative (“**Kyoto Compliant Planting**”) which features a basal area>5m^2/ha or a canopy cover up to 40% at maturity over cadastral area.[19] The proposed planting of the Properties will differ to this configuration with:

- ~470 stems per hectare (“**spha**”) (opposed to 1500 spha for Kyoto Compliant Plantings);
- trees approximately 3m apart in rows spaced 6m apart (opposed to 2.2m by 2.2m for Kyoto Compliant Plantings); and
- a targeted canopy cover of no less than 20% (opposed to 40% for Kyoto Compliant Plantings).

[18] Guidelines Plantation Fire Prctn 2011_P.indd (website-files.com)
[19] Guidelines Plantation Fire Prctn 2011_P.indd (website-files.com)

Figure 1. Wilcocks Farm (Eganu)~570 stems per hectare, 2-years-old, 6m row spacing, mixed natives to help achieve an open banksia / eucalyptus woodland

6. Ongoing Activities

Once a carbon farm has been established, ongoing activities would consist of environmental monitoring and carbon-related audits, property maintenance, and infill planting (if required).

Monitoring and audit

Permanent monitoring stations/plots are proposed to be established by WEC(S) to evaluate planting success and the potential need for infill planting. Monitoring will use a combination of field techniques and remote sensing techniques (e.g. drones and satellite imagery). The CER is also expected to undertake periodic carbon-related audits of the Project.

Property Maintenance

WEC(S) owns property maintenance equipment and employs a full time Carbon Farm Manager, along with several farm assistants and contractors when necessary to ensure that critical property maintenance activities (e.g. firebreaks) can be undertaken in a timely and safe manner.

Water Resources

Water infrastructure will be maintained for the purposes of fire management and water is not intended to be used during planting.

Infill Planting

Direct infill planting would only occur if a high mortality (~90%) event occurs on a cost/benefit basis, over a contiguous area greater than 0.2 ha.

7. Products and Services

The primary product that WEC(S) intends to generate via the proposed carbon farms on the Properties would be ACCUs issued by CER to WEC(S) under the Fullcam 2020 Method. ACCUs are summarised by the CER as “a tradable financial product … [which] incentivise carbon abatement activities through projects ranging from reforestation to energy efficiency One ACCU represents one tonne of carbon dioxide equivalent (tCO_2-e) that would have otherwise been released into the atmosphere.”[20]

[20] Australian carbon credit units | Clean Energy Regulator

8. Employment and Local Content

Wherever practicable WEC(S) intends to seek to engage local sub-contractors and to purchase goods and services from local suppliers. For example:

- over the course of approximately 3 years (2021 to October 2024), it is estimated that WEC(S) has spent roughly A$2 million in the Shire of Moora with local suppliers such as RedMac, Elders, and McIntosh & Son Moora; and
- On the 16th of October in 2024 in support of the local community in the Shire of Dandargan, WEC(S) provided the Shire of Dandaragan's Emergency Management Coordinator with mobile Starlink units for more effective internet coverage and communication.

Key local content opportunities in relation to the development and the operation of the proposed carbon farms may include:

- the supply of farm maintenance equipment;
- the execution of on-ground activities;
- the procurement and supply of chemicals and other goods; and
- the provision of local accommodation and meals for workers during key activity times.

9. Waste Management

The primary source of waste from the Project would likely be associated with demolition of condemned buildings, if demolition is required. If such demolition is required, a specialist demolition contractor would be engaged, with waste sent to a licensed facility for disposal and recycling. It is likely that demolition of any buildings would require asbestos management by specialised, licenced contractors.

Other potential waste types would be consistent with each of the Properties' existing agricultural uses, such spent herbicide and pesticide containers, which containers are planned to be sent to a licensed waste management facility or returned to the relevant suppliers.

10. Fire Management

A suitably accredited bushfire practitioner prepared a PMP for the Properties.

The relevant PMP, which has been submitted along with this Development Application, outlines how the planting design has been completed according to bushfire management requirements for the Shire of Moora and the Shire of Dandaragan, as well as in accordance with the Guidelines for Plantation Fire Protection (2011).[16]

The PMP provided with this Development Application has been prepared for consideration by the relevant Shires, and WEC(S) intends to update the PMP before the start of each subsequent bushfire season, as required.

Property-specific layout maps and emergency contact details are proposed to be stored at the main entrances of the Properties in red waterproof tubes.

WEC(S) owns four vehicle-mounted firefighting units, one water truck, and one firefighting trailer. A combination of these are proposed to be present during property maintenance activities in the summer months. Additionally, a minimum of 50,000L of water tanks are planned to be installed at each of the Properties.

In accordance with the Guidelines for Plantation Fire Protection (2011),[16] the following activities will be undertaken;

- firebreaks will be established around reforestation cells and remnant vegetation stands, as indicated in Appendix A; and
- firebreaks will be maintained to meet bare mineral earth requirements after year four of planting when the relevant fuel load reflects that of a plantation.

WEC(S) has made the DFES 0995 bushfire safety awareness training, or its equivalent, a priority for all members of the permanent WEC(S) carbon farming team, which members may be available to support local volunteer bush firefighting brigades.

For further details please refer to the PMP.

11. Environmental Considerations

The Department of Biodiversity, Conservation and Attractions ("**DBCA**") datasets[21] identify that within the boundaries and along the perimeters of the Properties there are:

- no threatened and priority fauna;
- no threatened and priority flora; and
- approximately 100 threatened ecological communities.

Mitigation measures are proposed to be taken to minimise possible impacts to surrounding areas including:

- the use of equipment used for standard farming activities;
- minimising any potentially significant noise or dust events;
- the use of fertiliser for a limited time during establishment of the relevant carbon farms; and
- the spraying of herbicide will likely deviate significantly from current farming activities.

A review of the DBCA's wetland-related dataset[22] relative to where the Properties are located, highlights existing salt lakes basins within the Moore River catchment. These areas contain peripheral vegetation and are located in existing remnant vegetation, as can been seen in Appendix G. In the process of attempting to restore the natural environment to pre-farming vegetation types, it is intended that natural surface water points on the Properties will not be modified or altered as part of the Project.

To quantify the potential positive benefits of this Project, WEC(S) is in the process of commissioning a baseline biodiversity survey that is intended to inform subsequent measures to protect the biodiversity ofthe Properties.

It is intended for the Principles of Environmental Care outlined in the Code of Practice for Timber Plantations in Western Australia[23] to be upheld by planting locally native species to potentially:

- create a functional hydrological mimic of the original vegetation; and
- reduce recharge rates of the aquifer back to levels that existed prior to agricultural development (with potential improvement to minimising dryland salinity).

WEC(S) plans for the existing reserve and conservation covenant on Wards to be upheld in accordance with Section 30 of *Soil and Land Conservation Act 1945* (WA)[24] by protecting areas of remnant vegetation under the covenant.

A review of the Department of Defence's Unexploded Ordinance Map (UXO)[25] indicates that the Southern section of the Properties overlaps with the "*Moora Artillery Armoured Range Areas WWII*." WEC(S) has previously engaged an UXO consultant to assess the risk of carbon farming activities on the Manalling property, specifically, the risks of ripping, scalping, spraying,

[21] https://www.dbca.wa.gov.au/management/threatened-species-and-communities
[22] Wetland mapping | Department of Biodiversity, Conservation and Attractions
[23] Code of Practice for Timber Plantations in Western Australia
[24] WALW - Soil and Land Conservation Act 1945 - Home Page
[25] UXO Map (defence.gov.au)

planting, walking and driving on paddocks and roads. The findings of this report highlight that there is a low-level risk present.

12. Heritage Considerations

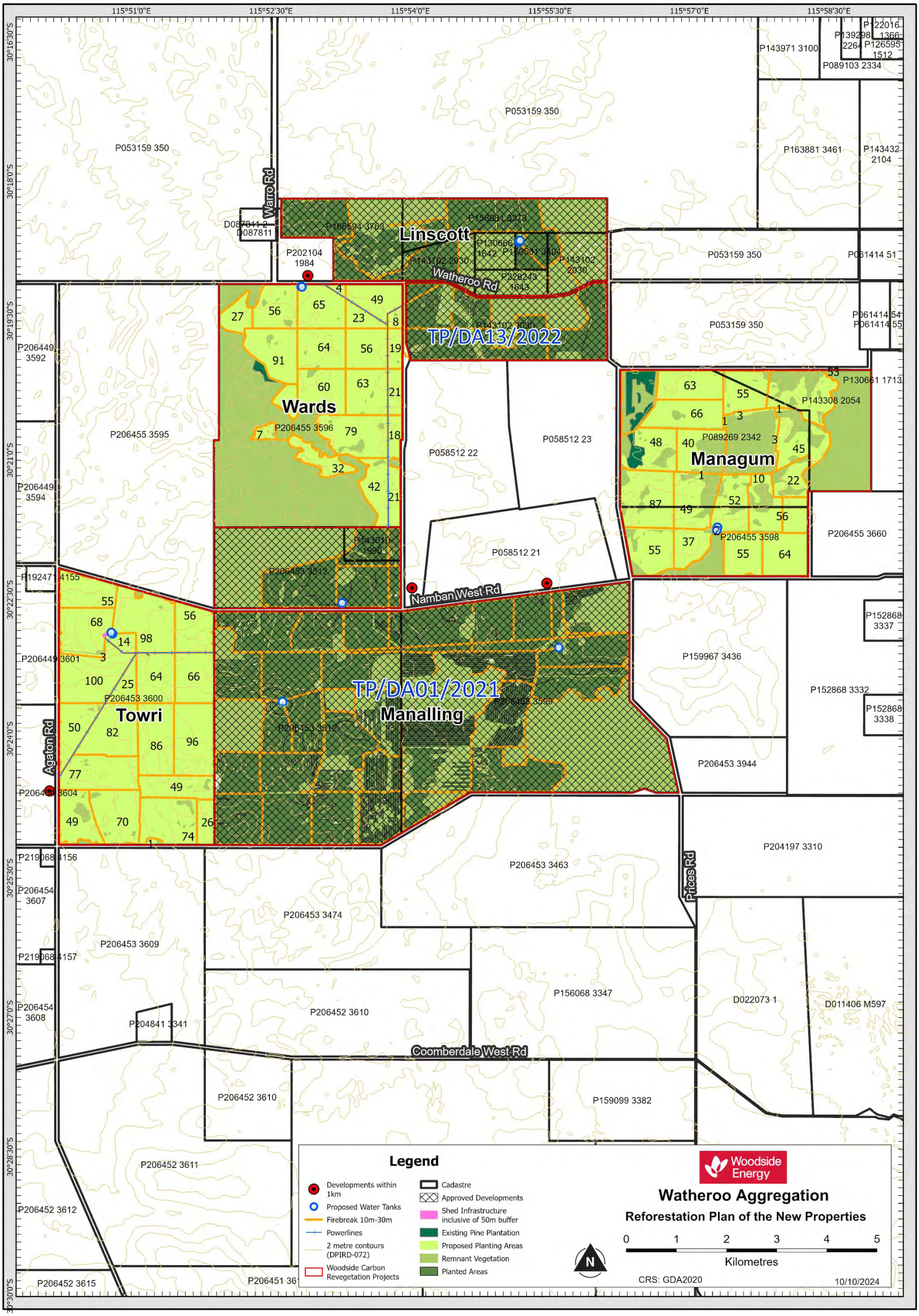
A review of the Department of Planning, Lands and Heritage Aboriginal Cultural Heritage Information System[26] indicates that there are no current registered Native Title Determination areas or Aboriginal Heritage Sites located on the Properties.

13. Traffic Management

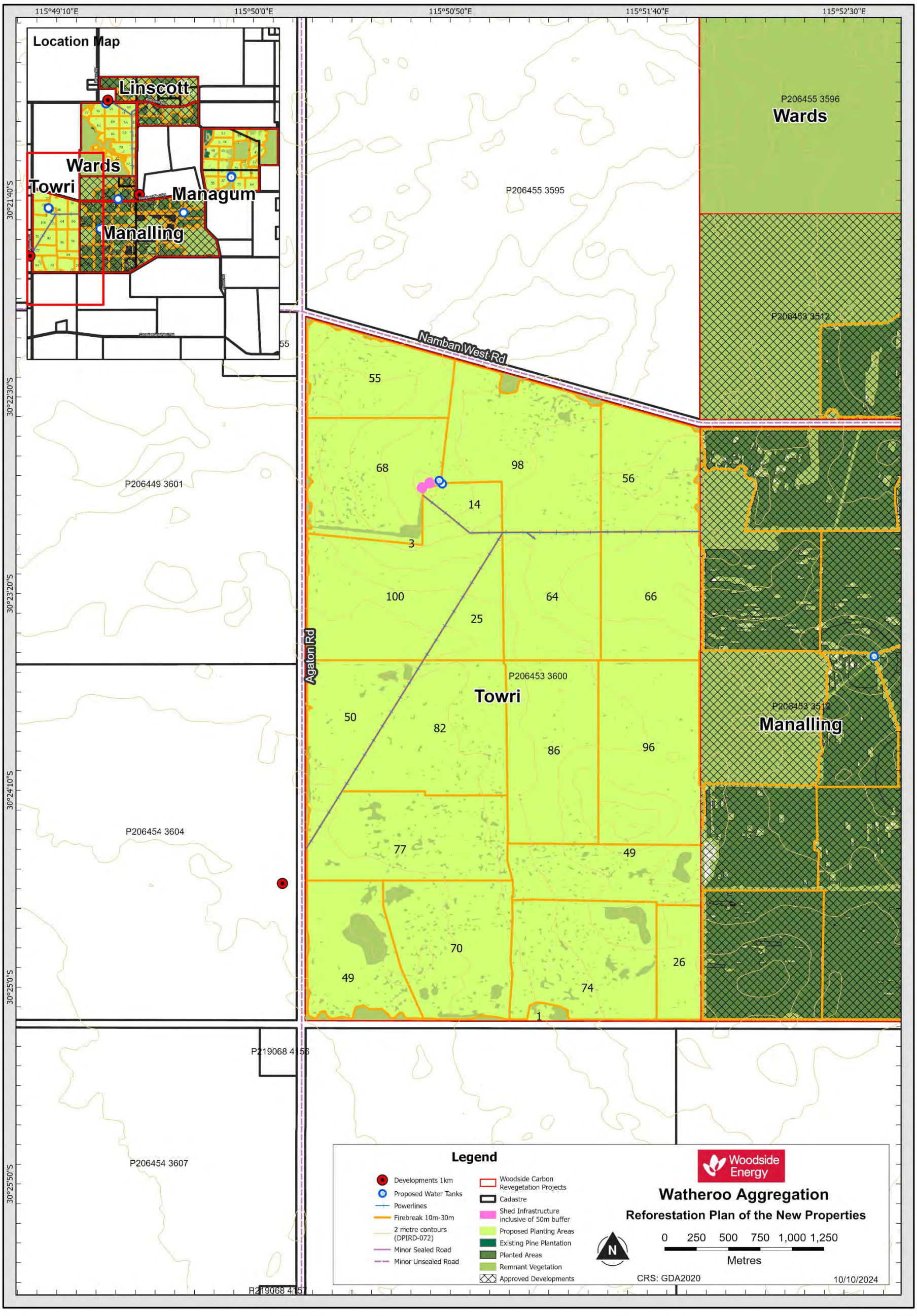
Traffic associated with the initial two years of the development of the proposed carbon farms is expected to be similar to other agricultural activities in the region (e.g. tractor movements on public roads). It is understood that the current road systems are suitable to manage the relevant traffic. It is anticipated that there will only be negligible levels of traffic beyond the development phase, which traffic will be associated with the operation of the proposed carbon farms.

[26] Department of Planning, Lands and Heritage

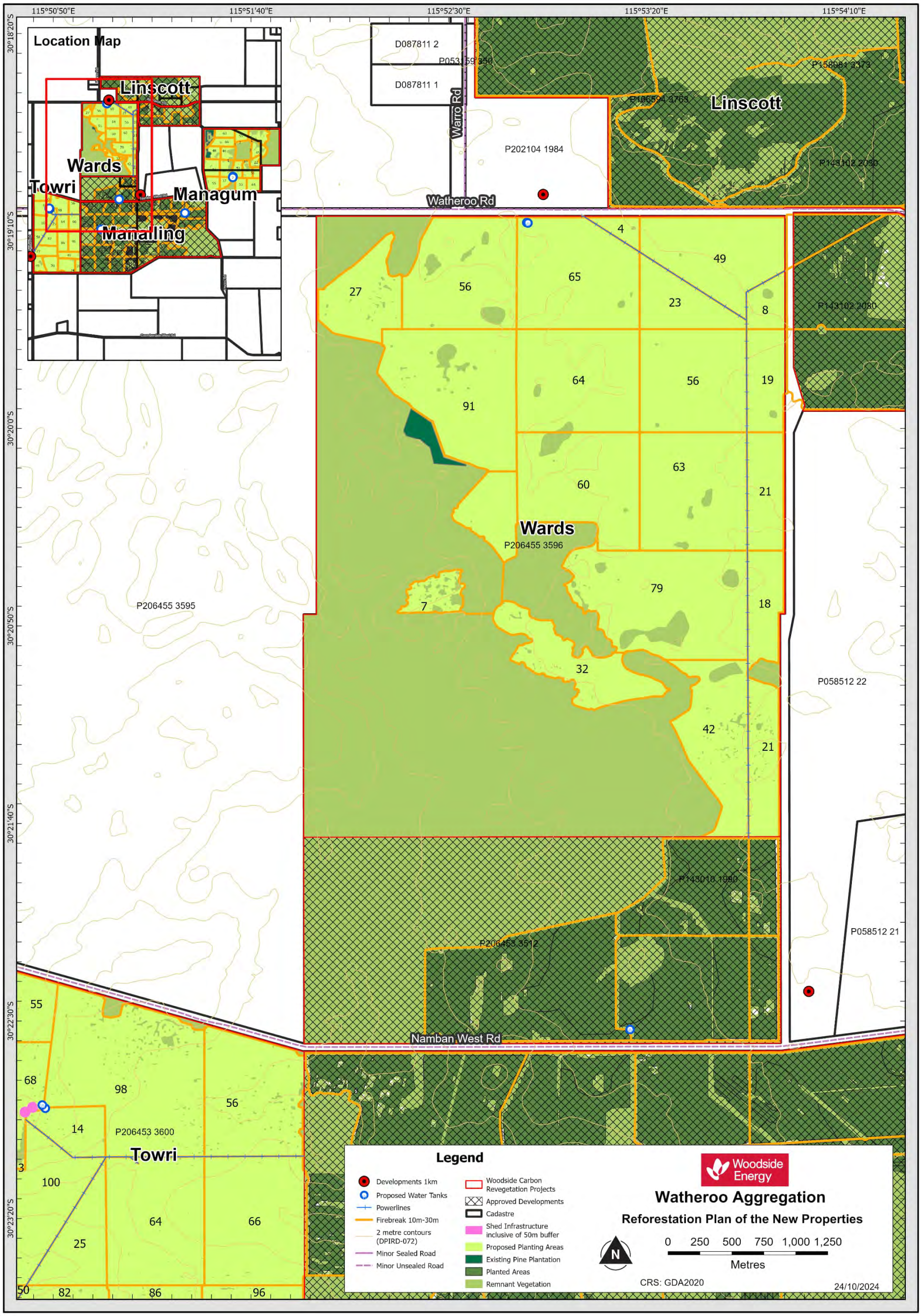
APPENDIX A: Proposed Preliminary Reforestation Plan



APPENDIX B: Proposed Preliminary Reforestation Plan Towri

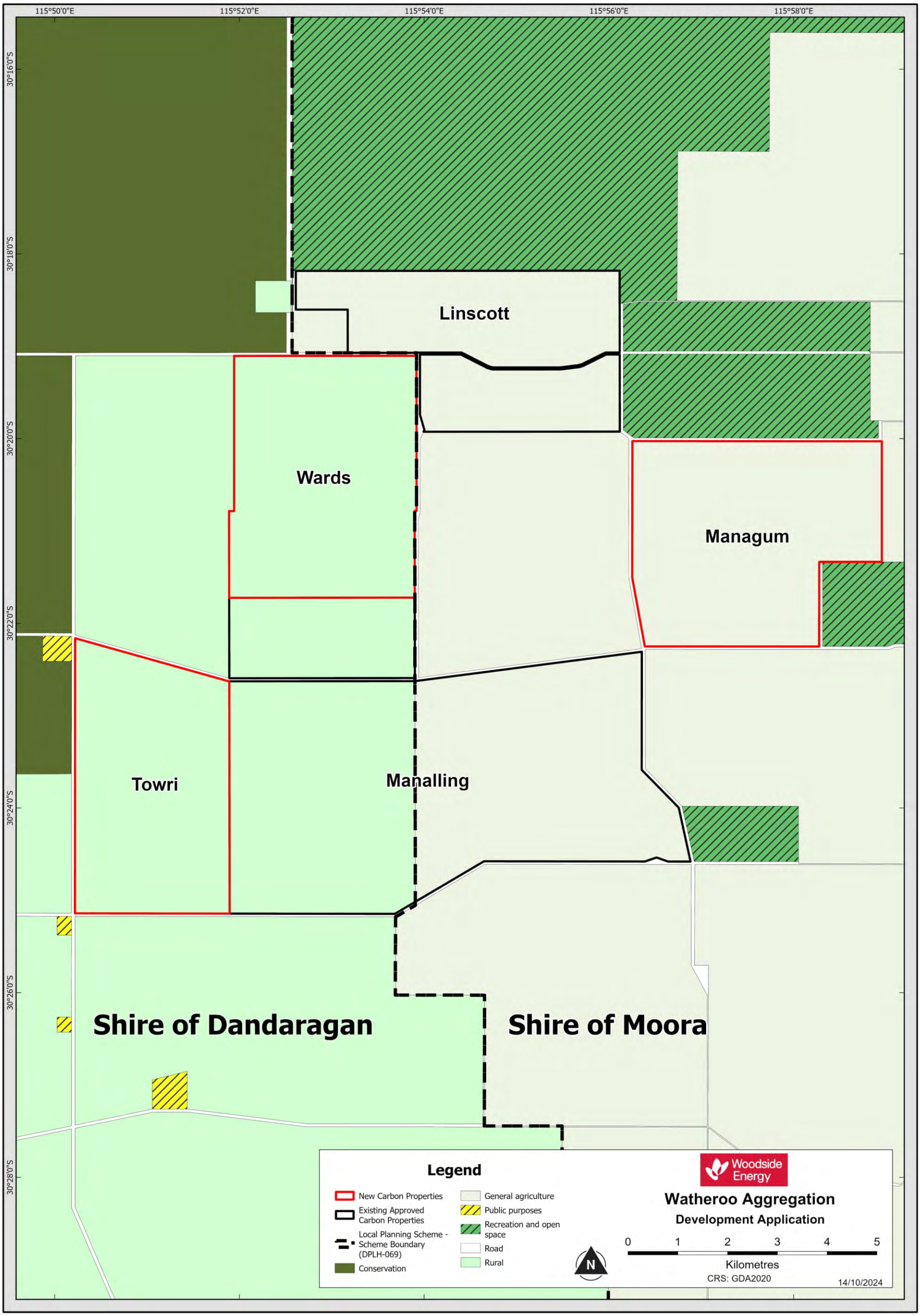


APPENDIX C: Proposed Preliminary Reforestation Plan Wards

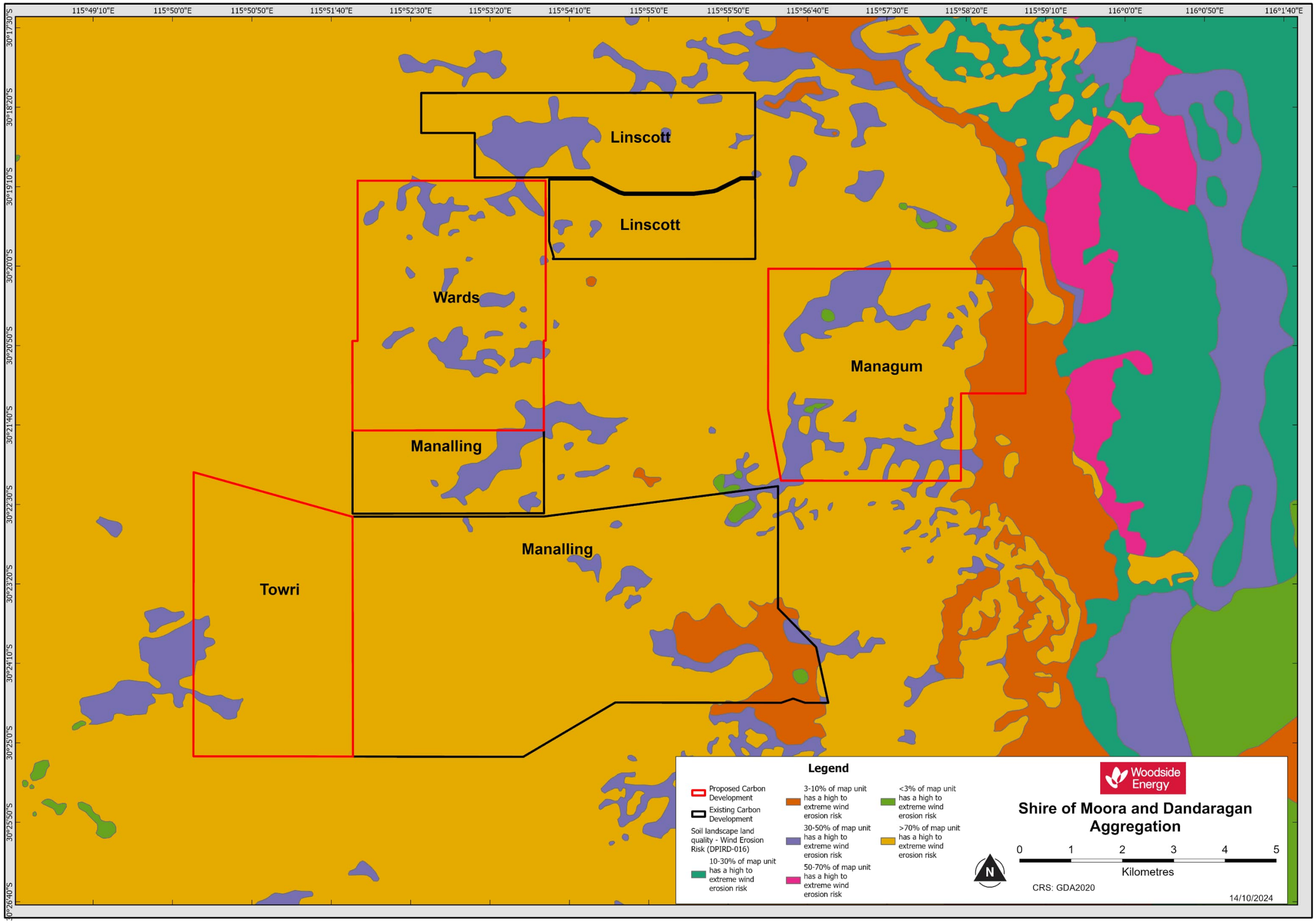


APPENDIX C: Proposed Preliminary Reforestation Plan Managum

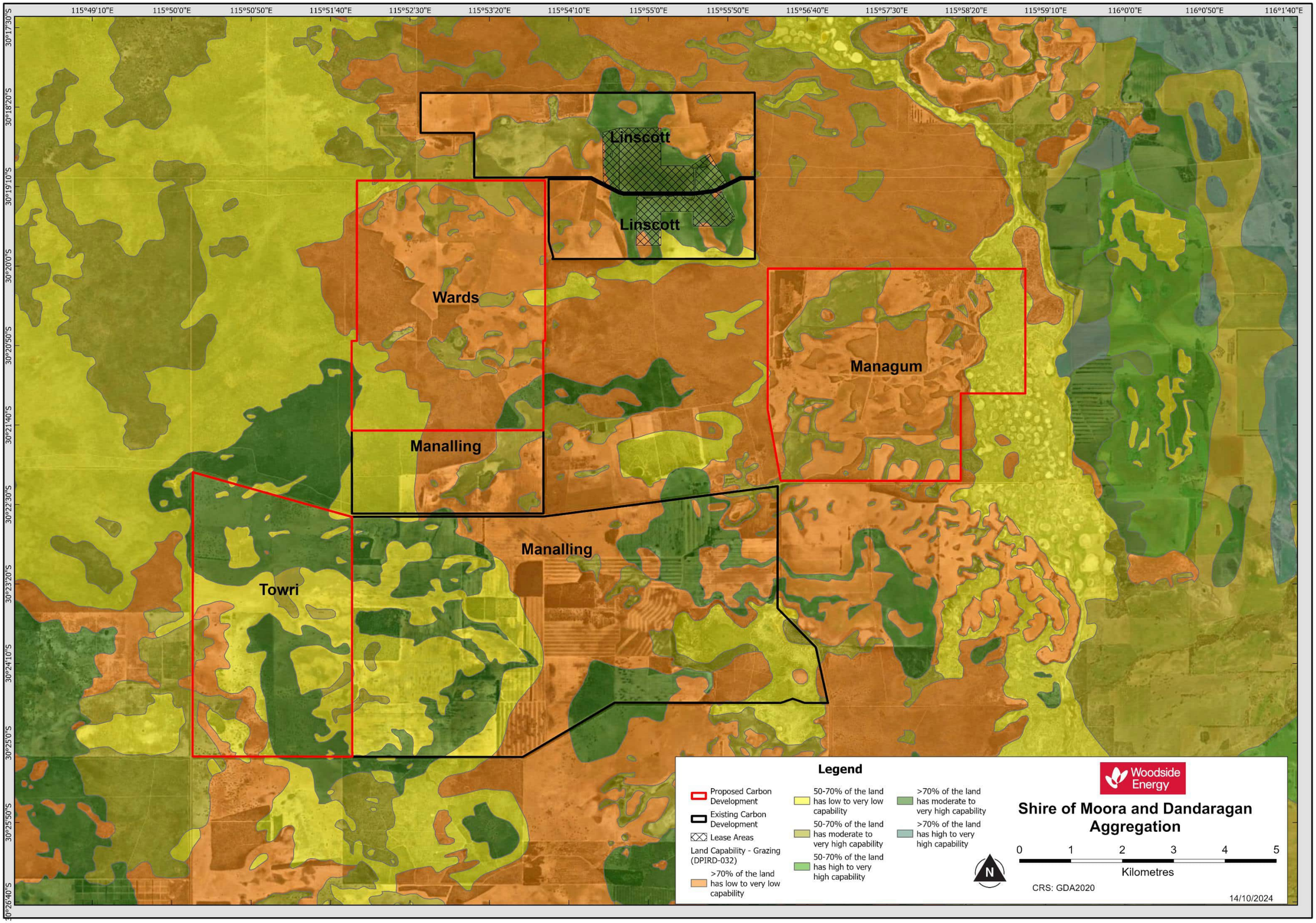
APPENDIX D: Local Planning Scheme



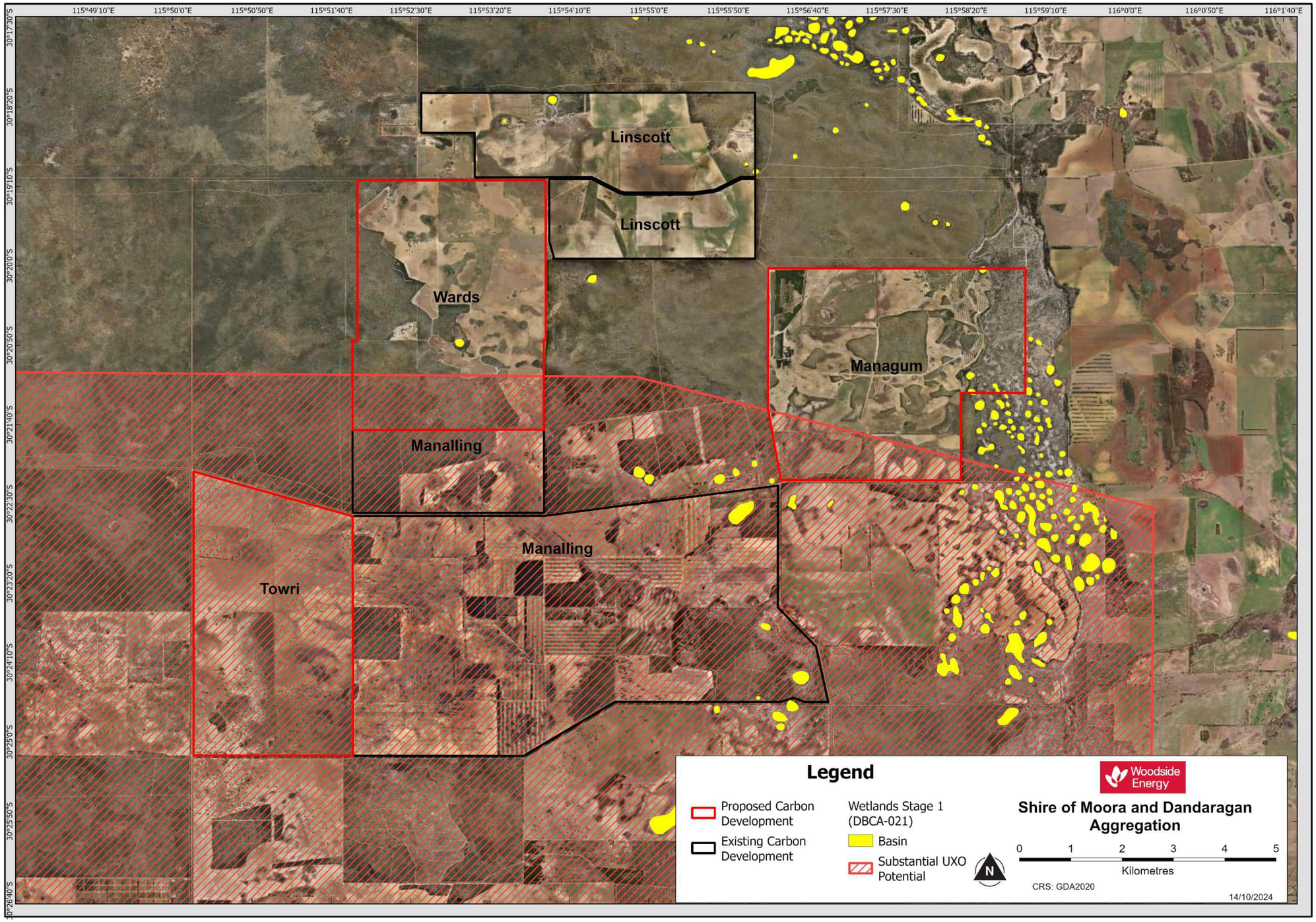
APPENDIX E: Wind Erosion Risk



APPENDIX F: Grazing Capability



APPENDIX G: Environmental Considerations



APPENDIX H: Managum Property

APPENDIX I: Wards Property

APPENDIX J: Towri Property

Watheroo Aggregation Development Application

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Watheroo Aggregation Plantation Management Plan

Woodside Energy Carbon (Services) Pty Ltd

November 2024

Confidential

Table of Contents

1. Summary

The "**Watheroo Aggregation**" is composed of five properties owned by Woodside Energy Carbon (Services) Pty Ltd ("**WEC(S)**"). The five properties that make-up the 'Watheroo Aggregation' are known as 'Managum', 'Towri', 'Wards', 'Manalling' and 'Linscott', these properties are split between the Shire of Moora and the Shire of Dandaragan.

The development of a plantation land-use has occurred in stages with the 'Manalling' property receiving development approval in 2020 (development approval: TP/DA01/2021), and the 'Linscott' property receiving approval in 2022 (development approval: TP/DA13/2022). The 'Managum', 'Towri' and 'Wards' properties currently have a proposed land-use of plantation, pending development approval.

This Plantation Management Plan (**"PMP"**) provides an explanation of proposed activities that may be undertaken to protect sequestered carbon stored in native trees planted as part of the 'Watheroo Aggregation'. This document should be read in conjunction with the latest version of the Bushfire Management Plan (**"BMP"**) and the Bushfire Preparedness and Response Plan ("**BPRP**") which provide additional information regarding bushfire mitigation, management, and response. The objectives of these documents are provided in section 1.1.

This PMP describes the assessment of key risks to the 'Watheroo Aggregation' and outlines proposed preventative and mitigative control actions.

The PMP provides a summary of all activities to date and highlights how WEC(S) and its contractors, as operators of the 'Watheroo Aggregation', may deliver against these activities.

1.1 FRAMEWORK

1.1.1 Bushfire Management Plan

Objective: To address the requirements for development approval as required by the Local Government.

1.1.2 Plantation Management Plan (This Plan)

Objective: To identify activities involved for the establishment and management of the Watheroo Aggregation.

1.1.3 Bushfire Preparedness and Response Plan

Objective: To provide detailed information on fire management activities in line with prevention, preparedness, response and recovery and address the goal as stated in the *Code*

of Practice for Timber Plantations in WA (2006)[1] to prevent bushfires entering or escaping from the plantation consistent with State and local government requirements.

[1] Code of Practice for Timber Plantations in WA (2006)

2. Watheroo Aggregation Operational Details

Properties:	Manalling Linscott Managum Towri Wards
Plantation type:	Native reforestation
Proprietor:	Woodside Energy Carbon (Services) Pty Ltd
Plantation Manager	Woodside Communication Centre
ABN:	91 625 509 450
Primary Contact:	Woodside Communication Centre **24-hour Phone:** 1300 833 333 **M:** +61 8 9348 7184 **E:** wcc@woodside.com.au **Woodside Carbon Solutions team** **E:** carbon@woodside.com.au
Address:	Manalling: 2947 Prices Road, Namban WA Linscott: 4369 Watheroo Rd, Watheroo Managum: Namban West Rd, Badgingarra, WA Towri: 2248 Agaton Rd, Badgingarra, WA Wards: Lot 3596 Watheroo Rd, Badgingarra, WA
Land Titles:	Manalling: • Lot 3599 on Deposited Plan 206453, Volume 1648, Folio 200 • Lot 1990 on Deposited Plan 143010, Volume 2110, Folio 607 • Lot 3512 on Deposited Plan 206453, Volume 2110, Folio 607 Linscott: • Lot 3404 on Deposited Plan 160531, Volume 1557, Folio 260 • Lot 2030 on Deposited Plan 143102, Volume 1557, Folio 260 • Lot 3373 on Deposited Plan 158081, Volume 1557, Folio 260

	• Lot 3763 on Deposited Plan 166594, Volume 1557, Folio 262 • Lot 1642 on Deposited Plan 130666, Volume 1557, Folio 259 • Lot 1643 on Deposited Plan 228243, Volume 1557, Folio 261 Managum: • Lot 2342 on Deposited Plan 89269, Volume 2162, Folio 640 • Lot 2054 on Deposited Plan 143308, Volume 2162, Folio 640 • Lot 3598 on Deposited Plan 206455, Volume 192, Folio 172A Towri: • Lot 3600 on Deposited Plan 206453, Volume 1794, Folio 673 Wards: • Lot 3596 on Deposited Plan 206455, Volume 1914, Folio 130
Local Government Area:	Shire of Moora and Shire of Dandaragan
GPS Location:	Manalling: • -30.373193, 115.927142 • -30.376801, 115.887839 Linscott: • -30.320509, 115.924758 Managum: • -30.3708759, 115.9630896 Towri: • -30.3722769, 115.8475520 • -30.3841863, 115.8368651 Wards: • -30.3183421, 115.8798151
Shire of Moora Local Fire Control Agencies:	Chief Bush Fire Control Officer (“**CBFCO**”) • Brendan Pratt **M: 0427 541 086** Deputy Chief Bush Fire Control Officer (“**DCBFCO**”) • James McNamara (Jim) **M: 0427 541 083** Fire Weather Officer

	• Hugh Bryan **M: 0427 542 007** Fire Control Officer, Ranger Sean Harris **M: 0408 511 409**
Shire of Dandaragan Local Fire Control Agencies:	CBFCO • Andrew Kenny: **M**: **0428 529 110** DCBFCO: • Hugh Roberts **M**: **0428 962 030** Watheroo Fire Control Officer (FCO): Richard Allen - **M**: **0448 038 486**
Local Volunteer Fire Brigade Note: in an emergency always call **000** first**.**	**Shire of Moora** Watheroo Volunteer Bushfire Brigade (Captain) Lloyd Elliot **M: 0438 936 610** **Shire of Dandaragan** Badgingarra Volunteer Bushfire Brigade. (Captain) Graham Lethlean **M: 0429 647 201**

3. Property Overview

3.1 Area

The "**Watheroo Aggregation**" is located approximately 20km North of the Moora townsite and is split between the Shire of Moora and the Shire of Dandaragan.

The 'Manalling' property located at 2947 Prices Rd, Namban, WA covers approximately 3,695ha and was purchased in 2020. The property was originally planted in a belt formation in 2020 over 1210ha but was infilled to a block configuration between 2020-2023.

The 'Linscott' property located at 4369 Watheroo Rd, Watheroo, WA covers approximately 1375ha and was purchased in 2021. The property was planted in a block formation over 821ha in 2022.

The three new properties namely 'Managum', 'Towri' and 'Wards' were all purchased separately in 2024 and together cover a combined area of approximately 4,566ha. WEC(S) is currently assessing the feasibility of using these properties to generate Australian Carbon Credit Units ("**ACCUs**") under the Australian Federal Government's *ACCU Scheme*.

The properties have been described below in the table below.

Property	**Approximate Size (ha)**	**Approximate Plantation Area (ha)**	**Previous Land use**
Manalling	3,695	1,210	Grazing and Cropping
Linscott	1,375	821	Grazing
Managum	1,579	738	Grazing and Plantation
Towri	1,359	982	Grazing
Wards	1,628	815	Grazing and Plantation

3.2 Planting Overview

Reforestation of native plants is proposed for the new properties under the Carbon Farming Initiative ("**CFI**") Act – Reforestation by Environmental or Mallee Plantings- FullCAM 2020 Method ("**FullCAM 2020 Method**"). The FullCAM 2020 Method involves block planting across a property and seeding and/or planting using local native species with the objective of establishing a native forest.

3.3 Locality Map and Access Roads

Located across the Shire of Moora and the Shire of Dandaragan, the Watheroo Aggregation is divided into North and Southern sections by Namban West Road. Entry points for each of the relevant properties has been listed below:

Table 1. Access to Properties in the Watheroo Aggregation

Property	Access Points	Coordinates
Managum	Namban West Road Road reserve in the North-East Corner Connecting to Linscott	-30.371010, 115.971331 (Southern entrance)
Wards	Watheroo Road Direct access from North Manalling	-30.3183421, 115.8798151 (Northern entrance)
Towri	Namban West Road Additional entry from Agaton Road Direct access from West Manalling	-30.3722769, 115.8475520 (Northern entrance) -30.3841863, 115.8368651 (Southern entrance)
Manalling	Namban West Road Price Road	-30.373193, 115.927142 (Northern entrance) -30.376801, 115.887839 (Southern entrance)
Linscott	Watheroo Road	-30.320509, 115.924758 (Central entrance)

3.4 Infrastructure

Table 1. Infrastructure on Properties in the Watheroo Aggregation.

Property	Infrastructure
Linscott	• Dwellings; • Sheds and Silos; and • Active farming lease
Manalling	• Dwelling • Sheds
Towri	• Sheds
Managum	• No remaining infrastructure
Wards	• No remaining infrastructure

3.5 Natural Features

The Department of Biodiversity, Conservation and Attractions ("**DBCA**") datasets[2] identify that within the boundaries and along the perimeters of the Watheroo Aggregation there are:

- no recorded threatened and priority fauna;
- a recording of threatened and priority flora on the Manalling property; and
- approximately 100 threatened ecological communities.

Mitigation measures are proposed to be taken to minimise possible impacts to surrounding areas including:

- the use of equipment used for standard farming activities;
- minimising any potentially significant noise or dust events;
- the use of fertiliser for a limited time during establishment of the relevant carbon farms; and

[2] https://www.dbca.wa.gov.au/management/threatened-species-and-communities

- the spraying of herbicide will likely deviate significantly from current farming activities.

A review of the DBCA's wetland-related dataset[3] relative to where the Watheroo Aggregation is located, highlights existing salt lakes basins within the Moore River catchment. These areas contain peripheral vegetation and are located in existing remnant vegetation, as can been seen in Appendix G. In the process of attempting to restore the natural environment to pre-farming vegetation types, it is intended that natural surface water points on the Watheroo Aggregation will not be modified or altered as part of the management of the plantation.

It is intended for the Principles of Environmental Care outlined in the Code of Practice for Timber Plantations in Western Australia[4] to be upheld by planting locally native species to potentially:

- create a functional hydrological mimic of the original vegetation; and
- reduce recharge rates of the aquifer back to levels that existed prior to agricultural development (with potential improvement to minimising dryland salinity).

3.6 Sensitive Areas

A review of the Department of Planning, Lands and Heritage Aboriginal Cultural Heritage Information System indicates that there are no current registered Native Title Determination areas or Aboriginal Heritage Sites located within the Watheroo Aggregation.

WEC(S) plans for the existing reserve and conservation covenant on approximately 313.9ha of Wards to be upheld in accordance with Section 30 of the *Soil and Land Conservation Act 1945* (WA) by protecting areas of remnant vegetation under the covenant.

3.7 Hazardous Areas

A review of the Department of Defence's Unexploded Ordinance Mapping Application (UXO)[5] indicates that the Southern section of the Watheroo Aggregation overlaps with the "Moora Artillery Armoured Range Areas WWII." WEC(S) has previously engaged an UXO consultant to assess the potential impact of unexploded ordinances on carbon farming activities on Manalling, specifically, the activites of ripping, scalping, spraying, planting, walking and driving on paddocks and roads. The findings of the report that

[3] Wetland mapping | Department of Biodiversity, Conservation and Attractions
[4] Code of Practice for Timber Plantations in Western Australia
[5] UXO Map

was prepared by the relevant consultant indicated that there is a low risk of potential exposure to unexploded ordinances.

4. Environmental Plantings Establishment Plan

4.1 Planting Configuration

Carbon farming is proposed to be conducted by WEC(S) under the Carbon Farming Initiative ("**CFI**") Act – Reforestation by Environmental or Mallee Plantings- FullCAM 2020 Method ("**FullCAM 2020 Method**"). The FullCAM 2020 Method involves seeding and/or planting using local native species of plants with the objective of establishing a native forest. The key target characteristics are for the forest to achieve a 2m height with 20% canopy cover.

A "block planting" method is proposed to be used whereby portions of the Properties are subdivided by both soil and vegetation community types before being planted in furrows approximately 3m apart in rows spaced 6m apart.

Figure 1. Wilcocks Farm (Eganu)~570 stems per hectare, 2-years-old, 6m row spacing, mixed natives to achieve an open banksia / eucalyptus woodland

WEC(S) proposes seedlings to be planted by a mix of manual and mechanical techniques.

In accordance with the *Guidelines for Plantation Bushfire Protection (2011)*[6], the planting configuration will resemble the Kyoto Compliant Plantings Carbon Farming Initiative ("**Kyoto Compliant Planting**") which features a basal area of >5m^2/ha or a canopy cover up to 40% at maturity over cadastral area.[7] The proposed planting of the Properties will differ from this configuration as follows:

[6] Guidelines Plantation Fire Prctn 2011_P.indd (website-files.com)
[7] Guidelines Plantation Fire Prctn 2011_P.indd (website-files.com)

- ~470 stems per hectare ("**spha**") (as opposed to 1500 spha for Kyoto Compliant Plantings);
- trees approximately 3m apart in rows spaced 6m apart (as opposed to 2.2m by 2.2m for Kyoto Compliant Plantings); and
- a targeted canopy cover of no less than 20% (as opposed to 40% for Kyoto Compliant Plantings).

Figure 2. Two-year-old planting from one of WEC(S)'s farms in the Watheroo-Namban area of WA.

The proposed planting on Towri, Wards and Managum is outlined in Appendix A and features:

4.1.1 Land Management Cells

Plantation cells are designed to be less than 100 hectares per cell and feature on average ~470spha. These cells are proposed to feature a 10m firebreaks between plantation cells, remnant vegetation as required and a 20m boundary firebreak.

Figure 3. Proposed AB lines in a north to south planting direction, with a vehicle-turn-around area.

4.2 Species

Planting is proposed to include a mixture of species built from surveys of the native remnant vegetation within and around the Watheroo Aggregation. Species mixes are proposed to be matched with soil types on which different native vegetation systems grow. Species distribution may vary dependent on plantation cell type. These cell types are depicted in appendix A, on average the planting density will be approximately 470spha. See below for a complete species list:

Table 3. Watheroo Aggregation Species List

Acacia blakelyi	*Calothamnus quadrifidus*	*Hakea lissocarpha*
Acacia scirpifolia	*Corymbia calophylla*	*Hakea preissii*
Actinostrobus sp.	*Corymbia calophylla*	*Hakea prostrata*
Allocasuarina campestris	*Eremaea pauciflora*	*Hakea trifurcata*
Allocasuarina huegeliana	*Eucalyptus camaldulensis x rudis*	*Leptospermum erubescens*
Allocasuarina humilis	*Eucalyptus drummondii*	*Melaleuca atroviridis*
Banksia attenuata	*Eucalyptus eudesmioides*	*Melaleuca hamulosa*
Banksia burdetii	*Eucalyptus gittinsii subsp. Illucida*	*Melaleuca preissiana*
Banksia menziesii	*Eucalyptus opimiflora*	*Melaleuca thyoides*
Banksia prionotes	*Eucalyptus pyriformis*	*Melaleuca viminea*
Banksia sessilis (or local equiv)	*Eucalyptus todtiana*	*Xylomelum angustifolium*
Callistemon phoeniceus	*Grevillea leucopteris*	

5. Plantation Management

4.3 Site Design and Preparation

Site design is prosed to enable the following:

- implementation of fire controls;
- appropriate compartment sizing and firebreaks designed in consultation with a suitably accredited bushfire practitioner;
- appropriate water points aligning with the Guidelines for Plantation Fire Protection; and
- initial fuel reduction activities.

Site preparation may also include initial fuel reduction activities such as:

4.3.1 Controlled grazing

Leasing of specific paddocks may occur in order to help reduce standing fuel loads.

4.3.2 Clearing and heaping

Managum includes a medium sized *Acacia* plantation which currently stands as dead timber. These areas are proposed to be cleared and replaced with native trees and shrubs.

4.3.3 Weed control

Broad-acre knockdown herbicide treatment may be used to prepare areas of the Watheroo aggregation for planting and selectively used post-planting to manage weed growth in the inter-rows and along firebreaks.

4.3.4 Mitigation burning

Mitigation burning is widely used to reduce fuel loads in areas with high loads of annual or perennial grasses. Prior to the 2024/25 bushfire season, dense areas of rushes on Managum have been mechanically compartmentalised in preparation for potential 'cool season' mitigation burning.

Post-planting use of mitigation burning in the 'cool season' is proposed to be assessed bi-annually once native trees have been determined to have built a resistance to cool grass fires.

4.3.5 Water Tanks and Bores

WEC(S) have pre-ordered six 25kL Polyethylene tanks which are proposed to be installed at strategic locations at Towri, Managum and Wards for a total of 50kL. Manalling and Linscott have a total of three 110kL water tanks capable of delivering water for herbicide treatments, mitigation burns and wildfire response. The provisional location of these tanks is indicated in Appendix A, but the final location of the tanks, and the total volume water available and re-fill rates and options, will be determined in consultation with experienced bushfire planners and, where appropriate, local brigade responders and Shire Fire Control Officers.

4.4 Fire Management

Fire management for the Watheroo Aggregation is outlined in the BPRP for the five properties and is intended to capture both planning and operational aspects of fire management and to address components for fire management that have been identified in the *Code of Practice for Timber Plantations in Western Australia (2006)*.

The BPRP is appended as Appendix G. Table 4 below summarises the key information applicable to this PMP.

Table 4: Summary of relevant fire management information

Topic	Document Name	Reference Location(s)
Key Contacts	Bushfire Preparedness and Response Plan	• Appendix A: Emergency Response Plan
Resources and equipment		• Chapter 3.9 Resources and Equipment
Preparedness and availability		• Chapter 3.4: Fire Danger Ratings and Preparedness Actions
Fire Detection and Reporting		• Chapter 3.6: Detection • Chapter 4.4: Reporting
Fuel Hazard Assessments		• Chapter 2.3.1.1: Fuel Hazard Assessments
Fire History		• Appendix A: Emergency Response Plan (Map 1)
Bushfire Emergency Response Planning		• Appendix A: Emergency Response Plan
Mitigation methods and requirements (including planned burning)		• Chapter 2.2: Fuel Hazard Management • Chapter 2.4: Mitigation Options • Appendix B: Indicative Proposed Strategic Burn Program

4.5 Weed Management

Pre-planting weed management has been focused on the deployment of spraying and mitigation burning mechanisms. A site-wide knockdown spray is proposed to occur prior to planting at Towri, Managum and Wards with a follow-up treatment of grasses post-planting across the Watheroo Aggregation. Broadleaf selective herbicide may also be used post-planting, with a targeted spray the following year to be conducted (if required).

Weed status is proposed to be monitored on a regular basis throughout the first year after establishment and on an annual basis thereafter.

4.6 Harvest

There is no proposed harvest for the trees planted on the Watheroo Aggregation.

Under the ACCU scheme, the plantings in the Watheroo Aggregation will be subject to a 100-year permanence period. During this time, an obligation remains for WEC(S) to maintain carbon stores in the Watheroo Aggregation.

4.7 Australian Carbon Credit Units

The primary product that WEC(S) intends to generate via the proposed carbon farms on the Properties would be ACCUs issued by CER to WEC(S) under the FullCAM 2020 Method. ACCUs are summarised by the CER as "a tradable financial product … [which] incentivise carbon abatement activities through projects ranging from reforestation to energy efficiency One ACCU represents one tonne of carbon dioxide equivalent (tCO_2-e) that would have otherwise been released into the atmosphere."[8]

The *ACCU scheme* outlines that the risk of fire needs to be actively managed and documented as an obligation to reduce the risk of disturbance from fire events. Carbon stored in a plantation that has been credited and is lost in a significant reversal event would need to be restored or paid back in the form of ACCUs to the *ACCU Scheme* throughout the 100-year life of the plantation.

Additionally, permanence plans are to be provided to the Clean Energy Regulator (CER) at project registration and in offset reports in years 8 and 24. While the CER does not prescribe a single type of management activity, WEC(S) would like to highlight that the CER is supportive of mitigation burning detailed in the CER's guidance for *Reducing the risk of fire and preserving sequestered carbon in ERF projects.*[9] The CER has undertaken to provide, in the lead up to the bushfire season, information regarding ACCU Scheme projects annually to state emergency services to assist with planning and response.[10]

WEC(S)'s modelling of potential ACCU yields has considered burn events as part of the WEC(S) management regime. As highlighted in Figure 4 below, if there is a fire (prescribed or wild), a project may still be able to generate credits in its lifetime.

[8] Australian carbon credit units | Clean Energy Regulator
[9] reducing-risk-fire-and-preserving-sequestered-carbon-accu-vegetation-projects
[10] reducing-risk-fire-and-preserving-sequestered-carbon-accu-vegetation-projects

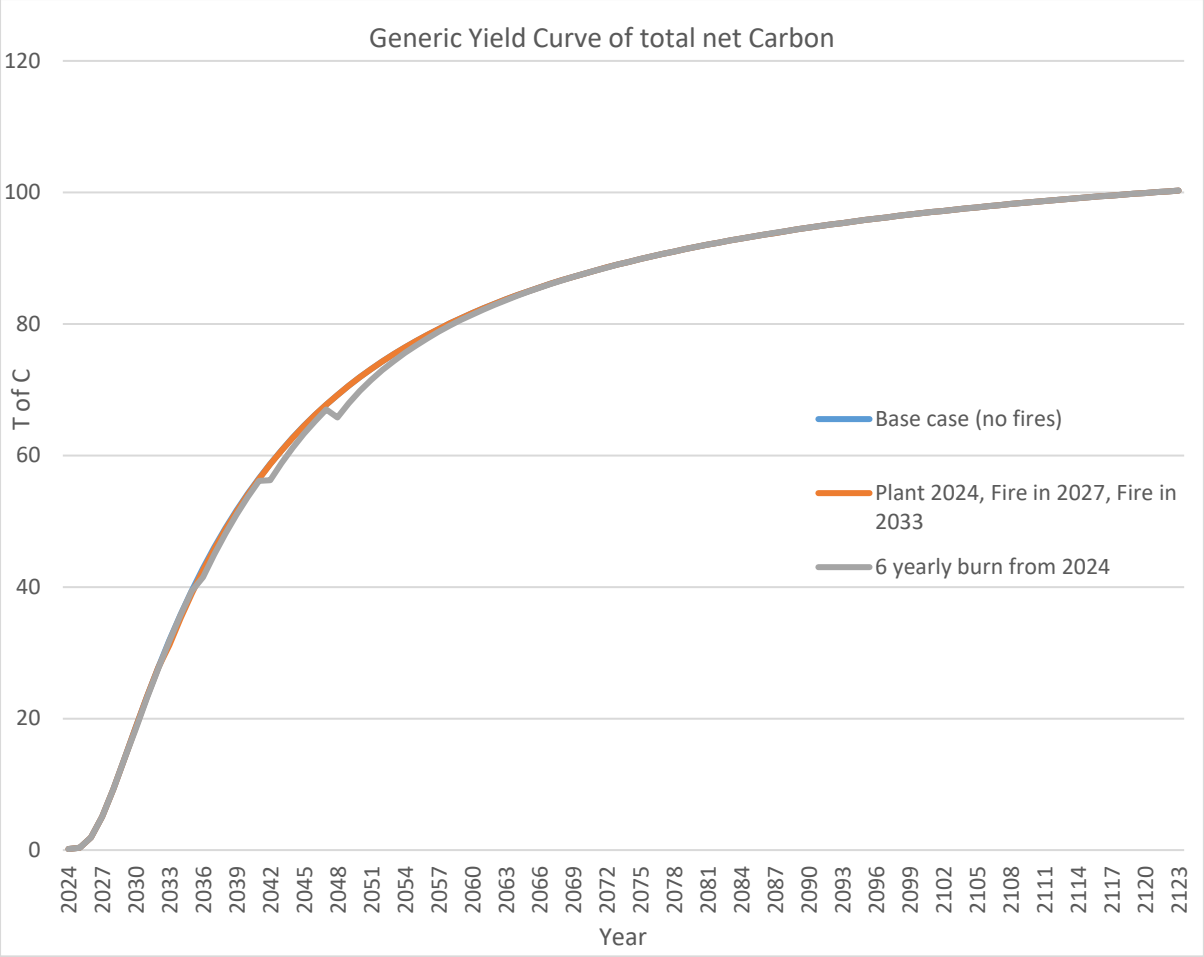


Figure 4. Generic carbon yield of an environmental planting property with and without prescribed fire events.

4.8 Monitoring and Contingencies for Disease and Pests

Monitoring for disease and pests is proposed to be conducted regularly during establishment, and annually during routine maintenance.

Rabbit control will likely be required through baiting stations, while shooting may be required for the control of other vertebrate pests such as kangaroos, goats, pigs, emus and foxes. Insect control may be done using residual insecticides (if required). Any insecticide spraying is proposed to be undertaken by a licensed professional sprayers.

4.9 Road and Firebreak Maintenance

Setback distances and firebreaks in the Watheroo Aggregation are included as shown in Appendix A. These include:

Situation	Firebreak Requirements

Boundary	20m external firebreak on the boundaries of a property, inclusive of 10m mineral earth section.
Plantation cell separation	10m firebreak between plantation cells, inclusive of a 6m mineral earth section
Firebreak for Western Power powerlines	10m mineral earth section.
Sheds and habitable buildings	Trees are proposed to not be planted within 100m of an existing habitable buildings and 50m for sheds.

Spraying of firebreaks with herbicide is proposed to be completed annually between August and October, with further mechanical maintenance to be conducted as necessary.

Annual inspections of unsealed roads is proposed, with maintenance programs developed to address any issues identified. Unsealed roads are intended to be maintained to a trafficable standard, i.e the quality of terrain will permit continued movement of 4WD and 2WD access to strategic water supplies off Namban West Road.

Current developments within 1km of the Watheroo Aggregation have been outlined in (Appendix A). These developments include two rural lots along Namban West Road within the Plantation and a rural lot off Watheroo East of Linscott.

4.10 Firebreak Pruning

Edges of the plantation on the Watheroo Aggregation are proposed to be maintained to ensure fire breaks have sufficient fire-vehicle access.

4.11 Pruning and Thinning Schedule

With the planned species mix, it is unlikely that any pruning or thinning will be required.

5. Risks to Stored Carbon

Woodside Energy Group Ltd (“**Woodside**”) Risk Management Policy is shown in Appendix H. The Risk Management Policy applies to the Watheroo Aggregation with risks to carbon stored in the trees during the permanence obligation period outlined in Table .

Table 5- Key Risks to Stored Carbon

Risk	Description
Site Preparation	Site preparation aims to provide the best conditions possible for establishing trees and shrubs. Activities include weed and ex-crop biomass control, invertebrate pest control, installation of furrows and mounds to aid water management and provide clear areas for ease of plant installation. Site preparation is important given the often degraded or challenging soils where trees are planted. Site preparation may not only impact early establishment but may also effect longer term growth and resilience of plantings.
Plant Selection	Plant selection aims to supply healthy seed and seedlings ready for planting. By selecting species and sourcing seed local to the areas in which they will be planted. Plant selection should also be cognisant of local site issues including salinity, water logging, water run-off and frost. Seedling quality is managed in nurseries to ensure seedlings are delivered of merchantable quality, healthy and free of disease.
Planting	Planting aims to install a seed or seedling into an environment which maximises its chances of healthy and enduring establishment. Skilled planting of a seed is typically performed via a mechanical “Direct seeding” machine. Like most agricultural equipment, these machines require proper setup and continuous monitoring to ensure that they continue to plant seeds in line with target specifications (e.g. depth, backfill, seed distribution, etc). Skilled planting of seedlings can be performed by hand or by mechanical means. Care must be taken to plant seedlings in the correct locations (e.g. position in furrows and mounts), at the right depth and with appropriate care to ensure holes are backfilled with soil to avoid air pockets. Planting must also be undertaken at the right time in the season, typically at the beginning winter. Planting during this time aims to maximise exposure of seedlings to water and nutrients prior to the main growing seasons of spring and early summer.

Risk	Description
Weeds	Weed control post planting is critical to ensure that sufficient water and nutrients are available for the establishing plants. In addition, removal of all weeds can be counterproductive as weeds can provide a useful interim role in stabilising soil and preventing wind erosion of topsoil. Controlling weeds is proposed to be achieved carefully through chemical and mechanical weed management, to ensure only weeds are impacted. Proposed controls includes spraying in ideal conditions, shielded spraying and chemical selection. Once plants are established, grazing stock may be introduced onto properties to graze on grass and weeds. In addition to supporting weed control, it may have the added advantage of reducing fire-prone biomass load on properties. By grazing at the right times, and in relatively short bursts, such grazing can be focussed on grass and weeds, and not the plantings. All forms of weed management are underpinned by good monitoring and timely response.
Pests	Pest control aims to minimise the impact of vertebrate and invertebrate pests on the establishment of plantings. Invertebrate pests include most commonly locusts and weevils. If left unchecked, they can have a significant impact on germinates and seedlings in a few weeks. Timely monitoring and application of pest treatments to impacted areas is critical. Vertebrate pests include both non-native species (e.g. rabbits, mice, foxes, feral goats, donkeys, pigs, and sheep) and native species (kangaroos, emus, and some bird species). These pests are typically found in large tracts of adjacent remnant vegetation to the Watheroo Aggregation. Timely monitoring and implementation of vertebrate pest management is critical. Effective co-ordination with stakeholders including neighbours, Shire representatives and managers of State parks and reserves is important to manage pests. Pest management is important during the establishment of plantings. Once trees are established, the impact of pests is likely to be minor.

Risk	Description
Disease	The impact of disease on mixed diverse native plant species is proposed to be managed through monitoring and timely response. Introduction of disease is proposed to be controlled by nursery practices and inspection prior to site delivery. Disease will typically exist in small patches and may have limited impacts on plantings.
Weather & Climate	Poor rainfall during the establishment period can have a significant impact on plant mortality through increased susceptibility to damage from pests and disease, this may limit growth and increase mortality. Addressing all previously mentioned risks may increase survivability during extended periods of low rainfall. Once plants are established the risks are generally reduced as species selected are typically adapted to a degree of variable climatic condition. Climatic change (especially a shift to longer, drier, hotter periods) may present additional risks to the survivability of plants. Extreme weather events may also impact plantings. There are limited opportunities to respond to extended drought. Ground works may be considered to optimise the capture of rainfall, and/or irrigate plants.
Fire	The Watheroo Aggregation sits in an agricultural area and may be susceptible to fire, especially during the hot, dry summer months. The highest priority in fire management is to prevent harm to people. All WEC(S) properties have Bushfire Management Plans (BMPs). The BMP has been developed in consultation with fire management experts and will be reviewed by relevant Shires as part of the Development Application. The objective of a BMP is to: • avoid any increase in the threat of bushfire to people and assets; • reduce vulnerability to bushfire through design; and

6. Prevention and mitigation of risks

The key risk control actions that aim to prevent the loss of carbon stored in the Watheroo Aggregation for the permanence obligation period are outlined in the following tables.

6.1 Site Preparation

Table 6 – Site Preparation

Control	Preventative Control Description	Mitigative Control Description	Residual Risk
1.1	Perform weed and biomass control	As per preventative control	Low
1.2	Perform invertebrate pest control		
1.3	Perform mechanical ground preparation	Limited mitigative control	

6.2 Plant Selection

Table 7 – Plant Selection

Control	Preventative Control Description	Mitigative Control Description	Residual Risk
2.1	Perform appropriate species selection for the area	Limited mitigative controls	Low
2.2	Perform seed collection proximal to site		
2.3	Perform testing of seed for viability		
2.4	Perform quality checks on seedlings	*Control 3.4 in Planting will provide some mitigation*	

6.3 Planting

Table 8 – Planting

Control	Preventative Control Description	Mitigative Control Description	Residual Risk
3.1	Perform effective seed installation	Limited mitigative controls	Low
3.2	Perform effective seedling installation		
3.3	Perform planting during seasonal planting window		
3.4	Provide nutrient and trace elements at planting		

6.4 Weeds, Pest and Disease

Table 9 – Weeds, Pests and Disease

Control	Preventative Control Description	Mitigative Control Description	Residual Risk
4.1	Perform timely weed, pest and disease monitoring	Limited mitigative controls	Low
4.2	Perform post planting weed and biomass control		
4.3	Perform post planting pest control		
4.4	Perform post planting disease control		

6.5 Weather and Climate

Table 10 – Weather and Climate

Preventative Control Description	Control	Mitigative Control Description	Residual Risk
All other controls represent preventative controls to the risk of drought	5.1	Perform mechanical groundwork to change water capture	Low
	5.2	Perform irrigation of drought impacted areas	

6.6 Fire

Table 11 – Fire

Control	Preventative Control Description	Control	Mitigative Control Description	Residual Risk
6.1	Designing proposed project to incorporate fire management requirements outlined in the Guidelines for Plantation Fire Protection[11].		*As per preventative control*	Low

[11] Guidelines Plantation Fire Prctn 2011_P.indd (website-files.com)

Control	Preventative Control Description	Control	Mitigative Control Description	Residual Risk
6.2	Perform annual fire management activities (inclusive of maintaining fire breaks) and, where appropriate, reducing fuel loads. Fuel load reduction operations may include mechanical reduction of standing biomass, 'cool season' mitigation burns and herbicide treatment of early-stage annual weed loads.			
6.3	Installation of fire tubes, which tubes include emergency contact details and maps.			
6.4	Increase capabilities for fire response.		Completing DFES 0995 bushfire safety awareness training or equivalent is a priority for all relevant members of WEC(S). WEC(S) owns four vehicle-mounted firefighting units, one water truck and one firefighting trailer. WEC(S) is currently tendering for a suitable on-ground / operational fire management consultant to supplement WEC(S)'s capabilities and equipment for responding to fires.	

Control	Preventative Control Description	Control	Mitigative Control Description	Residual Risk
	All other controls represent mitigative controls in situations where the preventive controls fail.	6.5	Perform emergency response plan to an emergency event within the Watheroo Aggregation.	
		6.6	Post emergency event action plan	

7. Organisation

This section provides an overview of the accountability for delivery of this PMP.

WEC(S) are a wholly owned subsidiary of Woodside Energy Ltd, an ASX, LSE and NYSE listed entity.

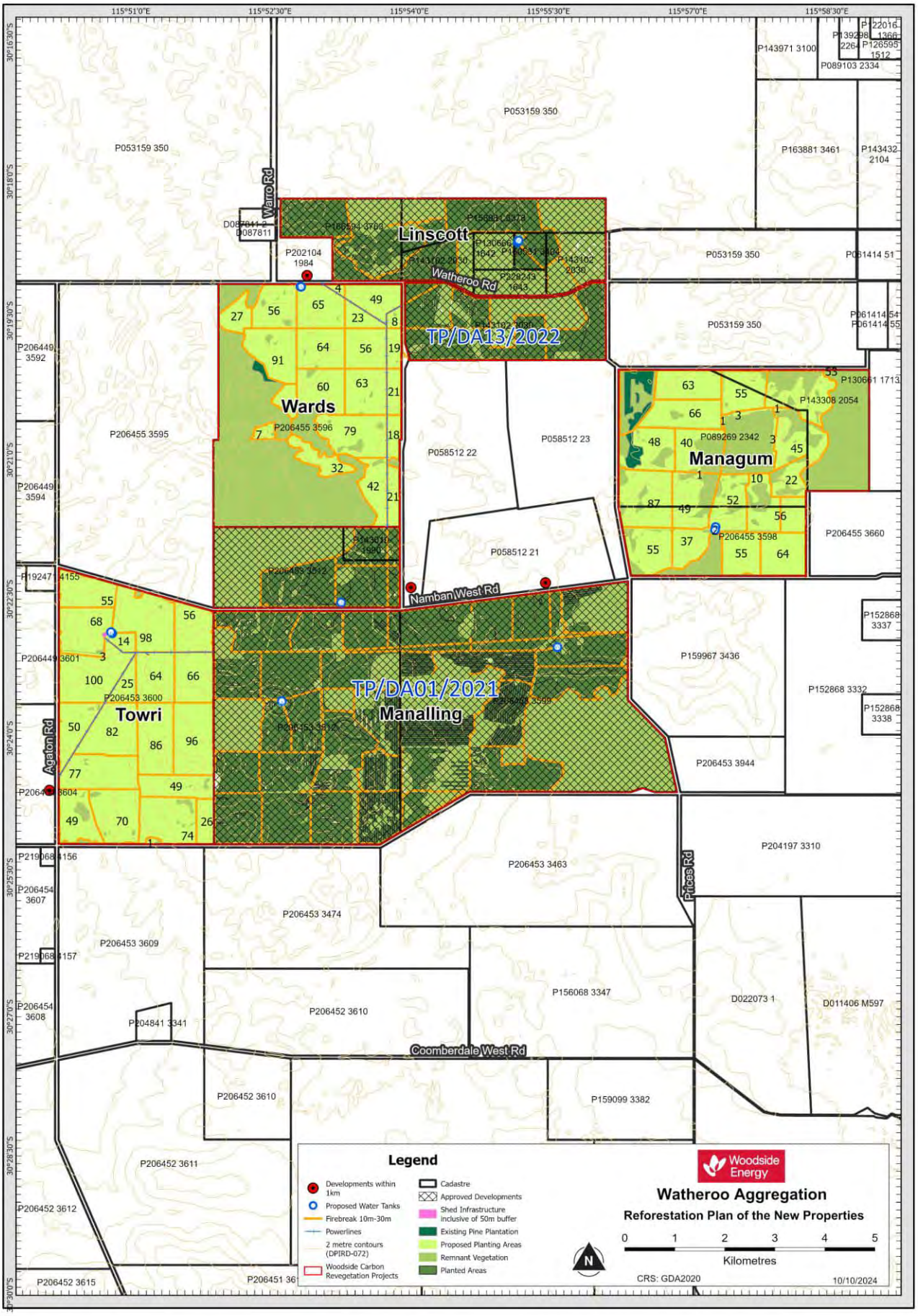
WEC(S) is the proponent for the Watheroo Aggregation and is accountable for delivery of this PMP.

Within WEC(S), the activities required to acquire, establish, and manage the Watheroo Aggregation are performed by the “Carbon Solutions” organisational unit which contains capabilities, either directly or through contracted organisations and individuals, that help enable it to perform the required activities of this PMP.
Contracted activities are proposed to be provided by proven, capable individuals and companies to a specification requested by WEC(S). There will likely be several overlaps between WEC(S) and the relevant contractor in relation to the performance of activities under this PMP, which overlaps may provide added flexibility and coverage in the facilitation of timely delivery of activities. Examples of activities that are likey be performed by relevant contractor under this PMP are shown in Table .

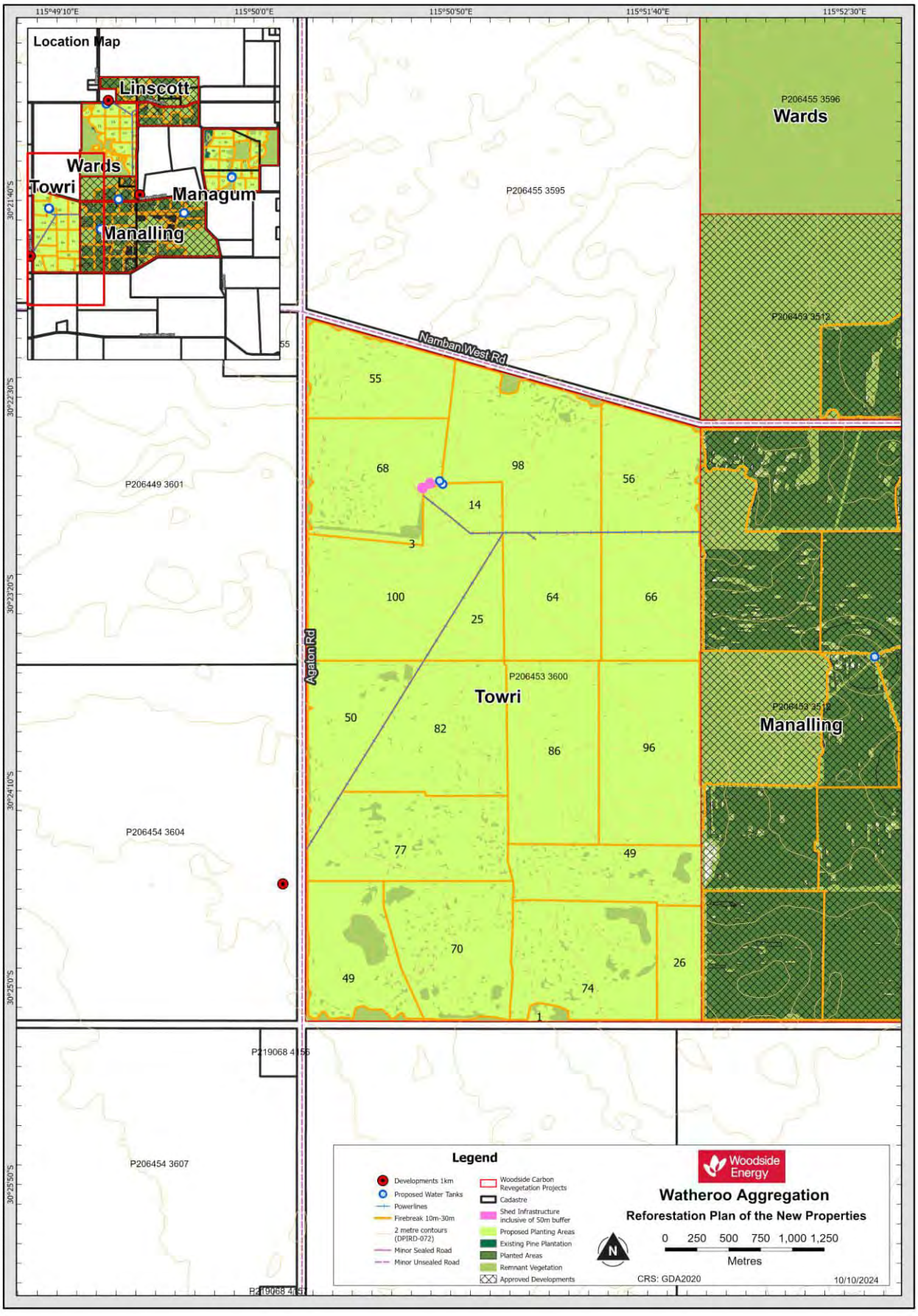
Table 12 – Typical Activities Completed by Contractors

Area	Activity
Site Preparation	• weed / biomass control • invertebrate pest control via spraying • large scale mechanical groundworks
Plant Selection	• expert species identification and selection • provision of quality seed and seedlings
Planting	• expert input to planning of planting requirements • provision of quality planting execution
Weeds, Pest and Disease	• timely weed, pest and disease monitoring • invertebrate pest control via spraying • provision of vertebrate pest control
Fire	• expert input to design in fire management plan • Training, supplemental capability and equipment

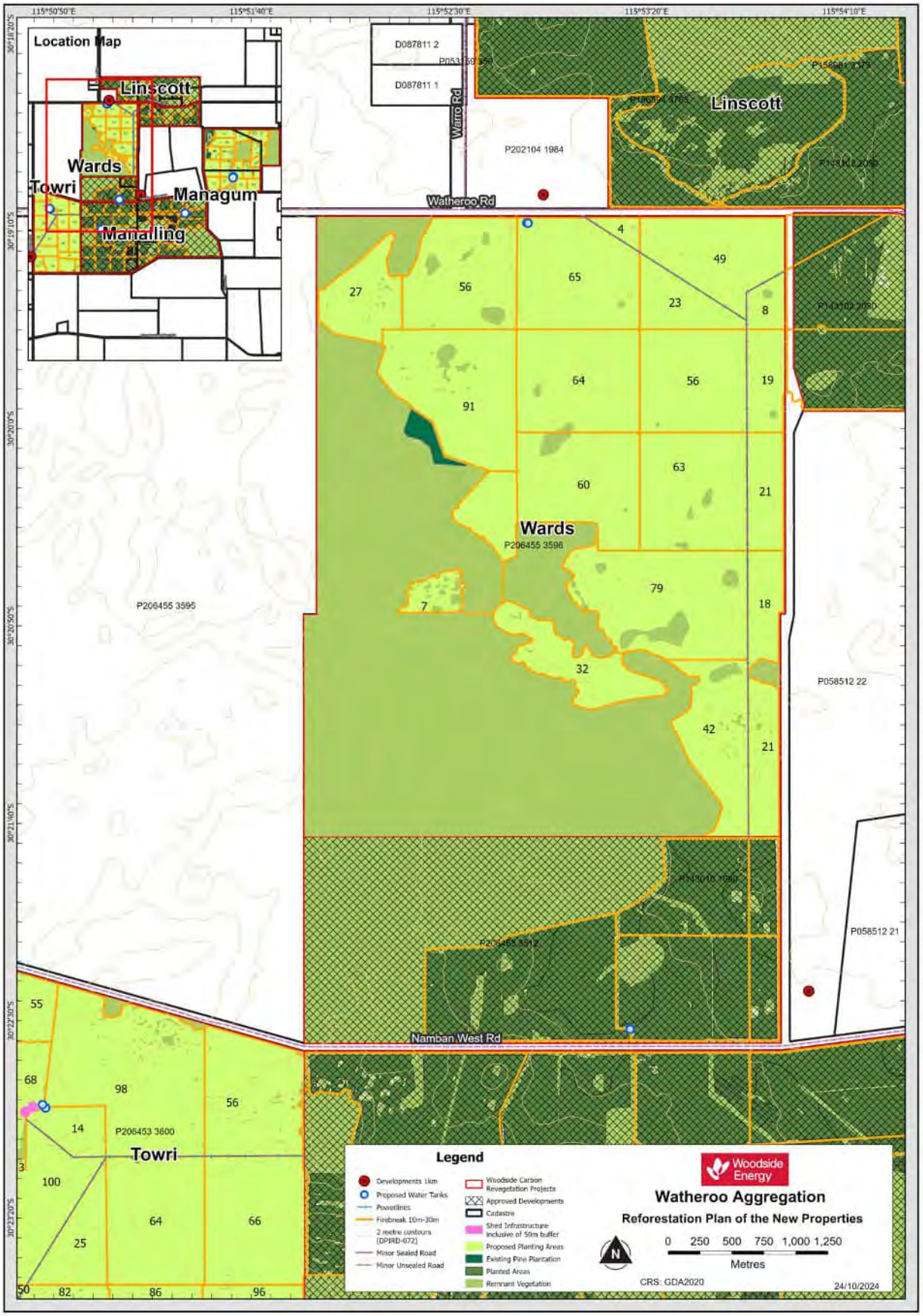
8. Appendix A: Proposed Plantation Design



9. Appendix B: ProposedPlantation Design (Towri)

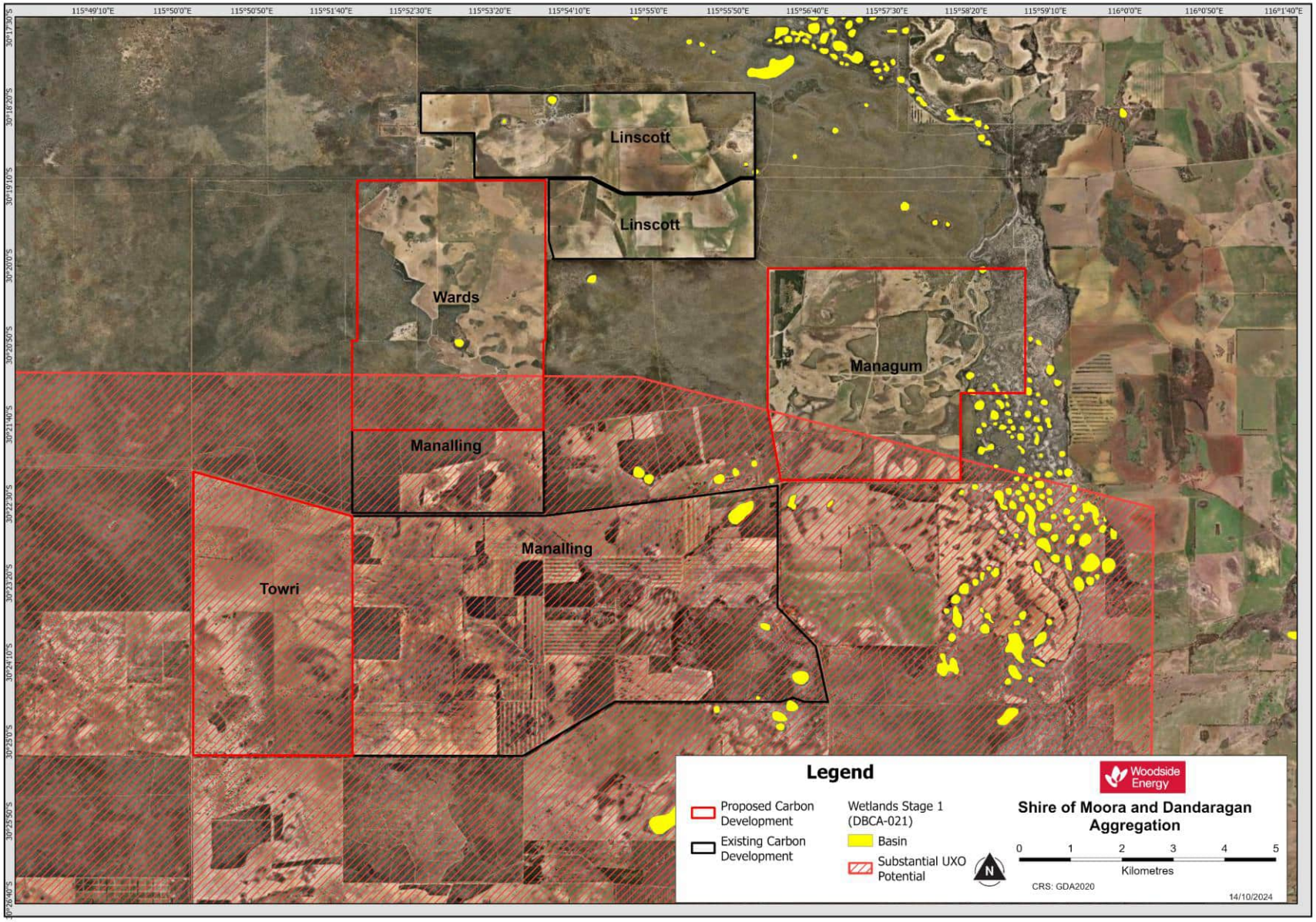


10. Appendix C:Proposed Plantation Design (Wards)



11. Appendix D: Proposed Plantation Design (Managum)

12. APPENDIX F: Environmental Considerations



13. APPENDIX L: Risk Management Policy

WOODSIDE POLICY

Woodside Energy

Risk Management Policy

OBJECTIVES

Woodside recognises that risk is inherent in our business and the effective management of risk is vital to deliver our strategic objectives, continued growth and success. We are committed to managing risks in a proactive and effective manner as a source of competitive advantage.

Our approach protects us against potential negative impacts, enables us to take risk for reward and improves our resilience against emerging risks. The objective of our risk management framework is to provide a single consolidated view of risks across the company to understand our full risk exposure and prioritise risk management and governance.

The success of our approach lies in the responsibility placed on everyone at all levels to proactively identify, assess and treat risks relating to the objectives they are accountable for delivering.

PRINCIPLES

Woodside achieves these objectives by:

- Applying a structured and comprehensive framework for the identification, assessment and treatment of current risks and response to emerging risks;
- Ensuring line of sight of financial and non-financial risks at appropriate levels of the organisation;
- Demonstrating leadership and commitment to integrating risk management into our business activities and governance practices;
- Recognising the value of stakeholder engagement, best available information and proactive identification of potential changes in external and internal context;
- Embedding risk management into our critical business processes and control framework;
- Understanding our exposure to risk and tolerance for uncertainty to inform our decision making and assure that Woodside is operating with due regard to the risk appetite endorsed by the Board; and
- Evaluating and improving the effectiveness and efficiency our approach.

APPLICABILITY

The Managing Director of Woodside is accountable to the Board of Directors for ensuring this Policy is effectively implemented.

Responsibility for the application of this Policy rests with all Woodside employees, contractors and joint venturers engaged in activities under Woodside operational control. Woodside managers are also responsible for promotion of this Policy in non-operated joint ventures.

This Policy will be reviewed regularly and updated as required.

Reviewed by the Woodside Energy Group Ltd Board in December 2023.

14. APPENDIX M: Watheroo Aggregation Bushfire Preparedness and Response Plan

Bushfire Preparedness and Response Plan

Watheroo Aggregation

Prepared for Woodside Energy Carbon (Services)
by Bushfire Prone Planning

11 November 2024

Job Reference No: 240853

Version	Status/Details	Date
Final Draft	Draft For Comment	13 November 2024
-		

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Contents

Figures and Tables

1 INTRODUCTION

1.1 PURPOSE

The "**Watheroo Aggregation**" is composed of five properties owned by Woodside Energy Carbon (Services) Pty Ltd ("**WEC(S)**"). The five properties know as 'Managum', 'Towri', 'Wards', 'Manalling' and 'Linscott' that make-up the 'Watheroo Aggregation' are split between the Shire of Moora and the Shire of Dandaragan.

This plan has been developed for WEC(S) to identify the prevention, preparedness, response and recovery arrangements for the proposed Watheroo Aggregation.

1.2 FRAMEWORK

1.2.1 BUSHFIRE MANAGEMENT PLAN

Objective: To address the requirements for development approval as required by the Local Government.

1.2.2 PLANTATION MANAGEMENT PLAN

Objective: To identify activities involved for the establishment and management of the proposed Watheroo

1.2.3 Aggregation. BUSHFIRE PREPAREDNESS AND RESPONSE PLAN (THIS PLAN)

Objective: To provide detailed information on fire management activities in line with prevention, preparedness, response and recovery (PPRR).

1.3 FIRE MANAGEMENT PRINCIPLES

The principles of fire management on the proposed Watheroo Aggregation are to help:

- Mitigate risk from fire escaping or entering property which may impact internal or neighbouring assets;
- Minimise extent of vegetation impacted by high intensity bushfire;
- Ensure built assets are protected through maintained low fuel areas;
- Minimise damage to vegetation through planned burning or mechanical activities; and
- Maintain ecological health of vegetation through considered application of planned fire at appropriate intervals, spatial extent and intensity

1.4 SITE DETAILS

Table 1. Site Details

Properties:	Manalling Linscott Managum Towri Wards
Plantation type:	Native reforestation
Proprietor:	Woodside Energy Carbon (Services) Pty Ltd (WEC(S))
Plantation Manager	Woodside Communication Centre
Primary Contact:	Woodside Communication Centre **24-hour Phone:** 1300 833 333 **M:** +61 8 9348 7184 **E:** wcc@woodside.com.au **Woodside Carbon Solutions team** **E:** carbon@woodside.com.au
Address:	Manalling: 2947 Prices Road, Namban WA Linscott: 4369 Watheroo Rd, Watheroo Managum: Namban West Rd, Badgingarra, WA Towri: 2248 Agaton Rd, Badgingarra, WA Wards: Lot 3596 Watheroo Rd, Badgingarra, WA
Local Government Area:	Shire of Moora and Shire of Dandaragan

2 PREVENTION

2.1 LOCAL GOVERNMENT BUSHFIRE RISK MANAGEMENT PLAN

Bushfire Risk Management Plans (BRMP) are developed by Local Government in line with the Guidelines for Preparing a Bushfire Risk Management Plan (DFES). This is a tenure blind approach to bushfire risk management and includes identification and assessment of bushfire risk to assets, stakeholder engagement approaches and tenure blind treatments to reduce risk. Consideration should be given to involvement in future reviews of these plans to ensure WEC(S) assets are captured, along with treatments undertaken in managing bushfire risk.

2.2 FUEL HAZARD MANAGEMENT

Fuel hazard management is one component of meeting the fire management principles for the proposed Watheroo Aggregation. This may be achieved through the following management objectives listed in Table 2 below.

An estimation of fuel accumulation for the proposed vegetation types, with consideration of soil productivity, climate and plantation vs remnant vegetation is difficult to determine.

Table 2. Proposed Management Cells

Cell Classification	Description	Management Objectives	Treatment(s)
Asset Protection Zone	Areas defined in the Bushfire Management Plan.	Maintain vegetation in line with Bushfire Management Plan (BMP).	Mechanical vegetation management as defined in property BMP.
Land Management	All other areas within the relevant properties. This may include planted and remnant vegetation if deemed appropriate.	Maintain overall fuel hazard of moderate or below across a determined area as identified in the strategic planning process with input from experienced bushfire practitioners.	Utilise a combination of fuel management which may include mechanical/grazing/mild planned burning rotation to manage fuel loads

The Land Management objective has been developed to provide a measurable proportion of vegetation where direct attack to control a fire has some chance of being

successful[1] on the days of high fire danger. It is recognised that maintaining fuel hazard below high can increase likelihood of successful direct attack when suppressing a bushfire. If successful, direct attack usually results in a smaller fire area.

2.2.1 ASSUMPTIONS

There are several assumptions made in considering potential fuel hazard across the Watheroo Aggregation when developing objectives and indicative plans for fuel management. These may influence actual hazard and include but are not limited to;

- Artificial planting (ie rows) with single aged stands will exhibit similar fuel accumulation and overall fuel hazard to native forest vegetation;
- Time for vegetation to establish from planting to a steady productive state will be consistent; and
- Productivity of selected species are similar compared to native vegetation on which fuel accumulation models are developed.

2.3 STRATEGIC PLANNING

An indicative strategic plan has been developed to guide cell rotation in line with objectives and is included in Appendix B. This is primarily based on a rotational program to maintain fuel loads and considers operational practicalities along with reducing large areas of high fuel loads. Additional factors such as seasonality, frequency and intensity should be considered through this process[2]. Additional treatments such as grazing or mechanical fuel management may also be implemented. The scale and effectiveness of any treatment may influence fuel loads.

The indicative plan may be supported by fuel hazard assessments to determine annual treatment priorities remain focused on reducing high fuel load areas. (refer Section 2.3.1.1).

Proposed strategic planning aims to:

- Manage fuel hazard to below high in targeted areas (indicatively 10 years fuel age) (Refer S2.2). This is proposed to be achieved through a combination of planned burning, grazing, mechanical and chemical treatments. This threshold of high may be varied if required based on fuel accumulation and observed fuel hazard and structure to ensure appropriate;
- Vary season of burning and consider previous burn outcomes (ie. avoid successive hot fires);

[1] https://www.ffm.vic.gov.au/__data/assets/pdf_file/0005/21110/Report-82-overall-fuel-assess-guide-4th-ed.pdf
https://www.publish.csiro.au/wf/pdf/WF19029
[2] https://www.dbca.wa.gov.au/management/fire/fire-information-notes
https://publications.dfes.wa.gov.au/publications/banksia-woodlands-bushfire-fuel-management-guide

- Prioritise buffers through cell selection to reduce likelihood of large bushfires either entering or exiting the property boundaries. This is a key focus on prioritising treatment areas and should consider existing remnant vegetation, plantation areas and grassland; and
- Identify areas where planned burning is not a feasible option (environmental, complexity, access or vegetation constraints).

Additional pre planting burning may be undertaken for debris or vegetation removal. These areas are not identified on the strategic plan and should be considered as part of an annual review program.

A map of proposed treatment cells has been provided in Appendix B which identifies an indicative rotation of treatments to reduce fuel hazard across a portion of the identified vegetation area. This includes remnant vegetation management and also identifies areas where burning is not likely to be possible. Other mitigation measures in these areas may be worth consideration, which may reduce the required annual treatment requirements. By maintaining fuel hazard below high it is recognised that suppression success increases, however does not remove the risk of bushfire.

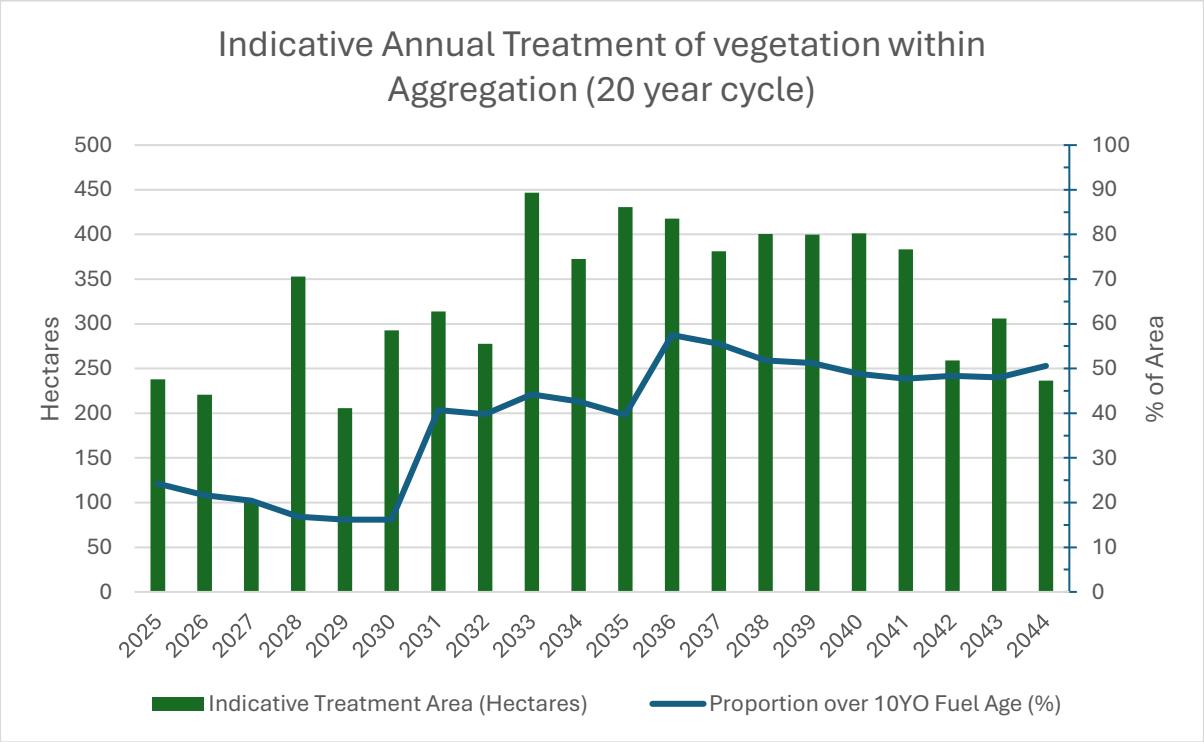


Figure 1: Indicative Annual Fuel Reduction Program (2025-2045). Note this may vary depending on treatments, actual fuel load accumulation and other factors.

2.3.1.1 FUEL HAZARD ASSESSMENTS

Fuel hazard may be measured to quantify annual burn program priorities and maintain an awareness of areas of high risk due to fuel load.

This may be undertaken using the Overall Fuel Hazard Assessment Guide[3]. Assessment results may be mapped and used to identify areas of high hazard to refine the annual treatment program.

Fuel hazard assessments should be undertaken during summer where possible to measure actual fuel loads experienced in a bushfire event.

2.4 MITIGATION OPTIONS

2.4.1 MECHANICAL

Mechanical works may be utilised to manage vegetation and may include the following methods: slashing, mulching and firebreaks. Additional detail on these can be found in the DFES Guide To Mechanical Mitigation[4].

2.4.2 PLANNED BURNING

Planned burning may be utilised to meet fuel management objectives. This is a long term strategy and the proposed program may vary as a consequence of fuel accumulation, seasonal conditions, natural events (bushfire), planned burn achievements, vegetation health and time to establish to maturity from planting.

2.4.2.1 OPERATIONAL PLANNING

Operational planning is required to be undertaken prior to commencing individual planned burns and includes the development of burn maps, prescriptions and permits from local authorities. The detail included in an operational may include:

- Objectives
- Description of the area, including fuels and assets/values
- Operational map
- Description of the values including built assets/infrastructure (residences, sheds, schools, transmission lines, major roads, etc.)
- Prescriptions and weather conditions
- Ignition patterns and techniques
- Measures for protection of assets and other values
- Resourcing requirements
- Health and safety issues (for burn personnel and the public)
- Risk assessment based on site conditions
- Environmental considerations or constraints, including consideration of hygiene management (disease and weed)

[3] OFHA; Hines et al. 4th Edition 2010
https://www.ffm.vic.gov.au/__data/assets/pdf_file/0005/21110/Report-82-overall-fuel-assess-guide-4th-ed.pdf
[4] https://publications.dfes.wa.gov.au/publications/guide-to-mechanical-bushfire-mitigation

- Notifications to stakeholders
- Guidance on implementation for a planned burn
- Communications Plan and reporting structure
- Authority and approvals to implement a planned burn
- Post burn actions and monitoring (ie post burn weed control)

2.4.2.2 IMPLEMENTATION

FIRE WEATHER FORECASTS

A relevant incident weather forecast or local area forecast (Meteye) must be obtained and considered prior to any ignition. Weather forecast information must be included in pre burn briefings to crew.

FIRE BEHAVIOUR MODELS

The appropriate fire behaviour model should be used depending on vegetation type and structure, which may alter over time. A link to the online model calculator for all the identified models is https://aurora.landgate.wa.gov.au/fbc/#!/

- The Dry Eucalypt Forest Fire Model (DEFFM/Vesta)[5] is appropriate for eucalypt forest and is used for fire behaviour and fuel accumulation modelling.
- The grassland model should be used for areas of grassland.

2.4.2.3 AUTHORITY TO COMMENCE IGNITION

Depending on the timing of a planned burn, there may be a requirement to obtain a permit from the relevant Local Government Authority. In an unrestricted season it is not a requirement to obtain a permit but it is recommended to do so.

Regardless of whether a permit is required or obtained a suitable authority within the land manager structure should approve the burn prior to ignition and notification to the local fire authority made.

2.4.2.4 CONSTRAINTS

All proposed burning activities must comply with the Bushfires Act 1954. Consultation with local fire authorities is required.

Checks for sensitive values such as environmental or cultural values must be undertaken to ensure there is no negative impact arising from burning operations.

[5] https://research.csiro.au/pyropage/wp-content/uploads/sites/17/2015/11/CSIRO-PyroPage-Issue-4-Dry-Eucalypt-Forest-Fire-Model.pdf

2.4.2.5 POST BURN MONITORING

Burn plans should identify post burn monitoring requirements and conditions to certify a burn is complete and safe. Consideration is also important to identify high fire danger days following a burn to ensure monitoring is undertaken in line with the risk presented.

2.4.3 OTHER MITIGATION TREATMENTS

Grazing and chemical treatments are also considered potential treatments in managing fuel hazard across the property and may be implemented as identified.

Chemical spraying of weeds or regrowth following mechanical works and planned burning may be undertaken as required to complement both fuel and environmental management outcomes.

Herbicide may be applied in line with chemical label application instructions by competent personnel. Weather conditions are to be considered when scheduling herbicide application works.

2.5 IGNITION PREVENTION (ACCIDENTAL OR DELIBERATE)

Powerlines

- Maintenance of breaks around poles may be undertaken to 3m horizontal clearance from lines. Vertical clearance 3m.
- Whilst undertaking maintenance, a visual inspection of poles may also to be undertaken to identify obvious areas of pole degradation or damage. If suspected, contact Western Power for advice.

Access restrictions into property

- Public access is currently aimed to be restricted to the Watheroo Aggregation with main access gates locked and signposted private property and under surveillance.

3 PREPAREDNESS

3.1 KEY CONTACTS AND INFORMATION SOURCES

Key contacts are located in the Bushfire Emergency Response Plan (Appendix A) and the Plantation Management Plan.

3.2 INDICATIVE ANNUAL WORKS PROGRAM

TASK	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Conduct Planned burning	X	X	X								X	X
Deliver/Coordinate required training		X	X									
Undertake firebreak maintenance		X	X	X								
Review BPRP. Update ERP, maps and distribute			X	X								
Map completed works (firebreak/fuel age)				X								
Check and service equipment				X								
Pre-Season Briefings conducted				X								
Check field signage and maintain as required					X							
Check BMP for any required actions and complete.					X							
Follow up weed or vegetation spraying as required					X	X						
Assess fuel hazards						X	X	X	X			
Plan for planned burn program							X	X	X	X		
Identify required training and plan							X					
Review training packages and update							X	X				
Maintain Operational Preparedness				X	X	X	X	X	X	X		

Figure 2 Proposed Indicative Annual Works Program

3.3 FIRE WEATHER AND AUSTRALIAN FIRE DANGER RATING SYSTEM (AFDRS)

The Watheroo Aggregation is located in the Yarra Yarra Fire Weather District. Fire Danger Ratings FDR) can be found at www.emergency.wa.gov.au or http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml.

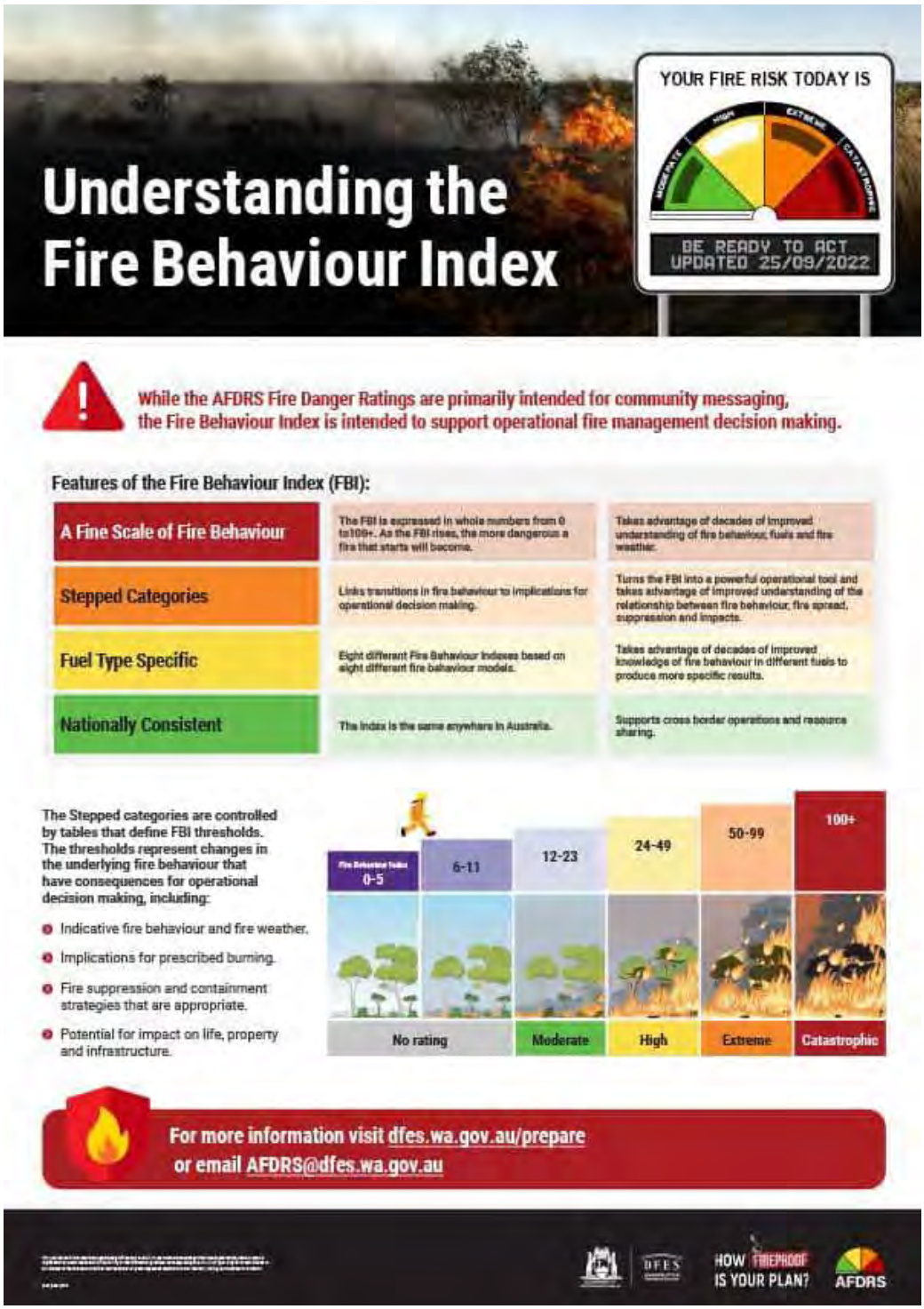
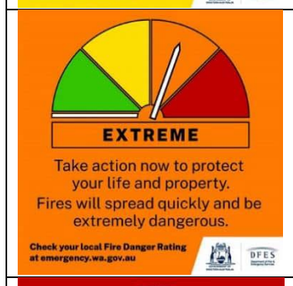
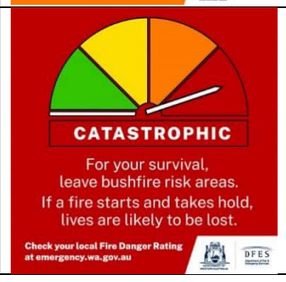


Figure 3: Fire Behaviour Index (source: DFES)

3.4 FIRE DANGER RATINGS AND PREPAREDNESS ACTIONS

Table 3: FDR and Preparedness Actions

Location	FDR	ACTIONS		
		Resources	**Comments**	**Coordination**
Watheroo Aggregation		None identified but may be available on request depending on availability.	None specified.	Plantation Manager to monitor conditions, remain alert and abide by local laws and regulations.
		None identified but may be available on request depending on availability.	Where on site work is being undertaken ensure minimum 1 x 400L unit is in proximity with appropriate staff.	
		Consider making available 2 x vehicles to dispatch from Perth within 8 hours from mobilisation request if risk of ignition or impact is increased.	Where on site work is being undertaken ensure minimum 1 x 400L unit is in proximity with appropriate staff. Consider weather (ie. Lighting forecast) and current bushfires in the area.	Plantation Manager to monitor conditions, remain alert and abide by local laws and regulations. Monitor www.emergency.wa.gov.au for incidents within 5km of property or where potential to impact identified. Monitor hotspots on https://myfirewatch.landgate.wa.gov.au/map.html. Check for Total Fire Ban (TFB) or Harvest Vehicle Movement Ban (HVMB) and ensure compliance and notification to staff.
		2 x vehicles available to dispatch from Perth within 4 hours from mobilisation request.	Where on site work is being undertaken ensure minimum 1 x 400L unit is in proximity with appropriate staff. Consider postponing work which may increase risk of ignition.	
		3 x vehicles available to dispatch from Perth within 2 hours from mobilisation request	No non critical site work to be undertaken.	

3.5 TOTAL FIRE BANS AND HARVEST VEHICLE MOVEMENT BANS

Total Fire Bans (TFB) and Harvest Vehicle Movement Vehicle (HVM) Bans may be imposed by DFES or Local Government. It is proposed that staff and contractors present within the Watheroo Aggregation should follow any applicable fire bans or restrictions.

Notification of HVM bans can be subscribed to via the relevant Local Government website (both Moora and Dandaragan). ABC Local radio generally announces any bans at 10am, 12.30pm & 2pm daily.

It is recommended that all plantation managers and key staff subscribe to both Local Government notification services.

3.6 DETECTION

Local fire response agencies are responsible for detection and reporting of fires through 000.

On days of High FDR or above the Plantation Manager should monitor local conditions and www.emergency.wa.gov.au. All fires detected must be reported to 000 with as much information as possible, including location, area, fuels in which it is occurring and any other information such as resources on site and communications utilised.

3.7 ACCESS

Main property access is from Namban West Rd, Watheroo Rd and Agaton Rd through locked gate access.

3.8 FIREBREAKS

Firebreaks are planned to be designed and maintained in line with Local Government firebreak notices and as defined in the BMP.

The spatial location and width standards of identified firebreaks can be found in the Operations Map located in the Emergency Response Plan (Appendix A).

Additional firebreaks may be maintained in areas of remnant vegetation if required to enable access for fuel management treatments or fire access in line with environmental considerations.

Table 4 Proposed Firebreak specifications

Situation	Firebreak Requirements
Boundary	20m external firebreak on the boundaries of a property, inclusive of 10m mineral earth section.
Plantation cell separation	10m firebreak between plantation cells, inclusive of a 6m mineral earth section
Firebreak for Western Power powerlines	10m mineral earth section.
Sheds and habitable buildings	Trees are proposed to not be planted within 100m of an existing habitable building and 50m for sheds.

3.9 RESOURCES AND EQUIPMENT

3.9.1 PERSONAL PROTECTIVE EQUIPMENT (PPE)

All relevant personnel involved in fire prevention and fire operations activities on the Watheroo Aggregation are expected to wear or carry, appropriate standard firefighting PPE.

3.9.2 EQUIPMENT AND VEHICLES

Human and equipment resources are proposed to be available to assist in patrol, monitoring and support roles. These vehicles are not equipped to the same standard as a BFB fireground vehicle but maintain a level of capability in line with support roles. These are identified in the table below:

Table 5 Resource listing

Type	Location	Description
WEC(S) Support (slip-on)	Mobile	4x4 ute with 800L water tank
WEC(S) Support (slip-on)	Mobile	4x4 ute with 600L water tank
WEC(S) Support (slip-on)	Mobile	4x4 ute with 600L water tank
WEC(S) Support (slip-on)	Perth CBD	4x4 ute with 300L water tank
WEC(S) Support truck	Mobile	Truck with 10,000L water tank
WEC(S) Support trailer	Mobile	Trailer with 1,500L water tank
WEC(S) Support vehicle	Perth CBD	4wd vehicle
WEC(S) Support vehicle	Perth CBD	4wd vehicle

3.9.2.1 FIRE VEHICLE REQUIREMENTS

All vehicles must be in a roadworthy condition and be equipped with the following as a minimum equipment checklist as provided in Appendix D.

3.9.3 PERSONNEL AND ROLES

3.9.3.1 BUSHFIRE COORDINATION MANAGER

This role is proposed to have duties related to daily preparedness in line with this plan.

WOODSIDE LIAISON

A role identified to be contact into an active bushfire Incident Management Team (IMT) to provide advice and represent the interests of Woodside Energy Group Ltd (“**Woodside**”) in an emergency incident. Woodside maintain a whole of business emergency coordination capability and are considering how bushfire management integrates in a broader context.

This role should have:

- knowledge and experience of incident management; and
- an understanding of Woodside fire management objectives

3.9.3.2 FIELD SUPPORT ROLES

Used to describe all other personnel operating in support of the incident by Woodside or Woodside contracted staff.

3.9.4 PLANT

No heavy earthmoving equipment is owned or operated. It is proposed, if required, this equipment will be supplied by relevant contractors. Engagement of heavy earthmoving equipment for suppression should be engaged through the incident logistics section. All equipment to meet regulatory and legal requirements.

3.10 WATER

There is no reticulated water supply in the area, with water tanks being the primary emergency water source. Locations of water tanks are described below and are marked on the operations map provided in the Emergency Response Plan (Appendix A).

Table 6: Water Point Locations

Property Name	Tanks	Details
Manalling	2 x 110kL Polyethylene tank	2 inch camlock fitting 1 x solar bore 1 x solar soak
Linscott	1 x 110kL Polyethylene tank	1 x solar bore
Managum	2 x 25kL Polyethylene tanks	To be determined on approval
Towri	2 x 25kL Polyethylene tanks	To be determined on approval
Wards	2 x 25kL Polyethylene tanks	To be determined on approval

Woodside have pre-ordered six 25kL Polyethylene tanks which are proposed to be installed at strategic locations across the new properties for a total of 150kL. Currently, Manalling and Linscott have a total of three 110kL water tanks, which may be utilised for herbicide treatments, mitigation burns and wildfire response. The provisional location of these tanks is indicated in Appendix A, with the final location of the tanks, and the total volume water available and re-fill rates and options, proposed to be chosen in consultation with experience bushfire planners and, where appropriate, local brigade responders and Local Government Fire Control Officers. The use of polyethylene tanks enables them to be moved to optimal locations as the finer details of the plantation are finalised.

Additional dams are located on the properties but depending on season may not be reliable water sources.

3.11 SIGNAGE

Water points should be signed on site and also marked on Operations Maps. Signage is proposed to be a standard blue ‘W’ within a blue circle with white background or alternatively, the word ‘water’ written in blue with a white background.

3.12 TRAINING

Two categories of training have been identified for WEC(S) staff in line with role expectations.

All WEC(S) staff	• Nationally accredited course in Basic Wildfire Awareness **(22541VIC);**[6] , or • DFES 0995 Bushfire Safety Awareness
WEC(S) Farm team	• Fire skills training from an accredited provider. This is being investigated further as to available options but there are options available from registered training organisations; or • DFES1056 Rural Fire Awareness.

4 RESPONSE

4.1 OBJECTIVE

Resources are proposed to be provided by WEC(S) to assist fire agencies in response and monitoring of bushfire only on WEC(S) managed tenure. WEC(S) are not a response agency and may provide support in line with capability and experience under the command-and-control structure of any incident. Initial response is proposed to be provided by WEC(S) on own tenure where a small and controllable fire is started or located, if safe, until control is established.

4.2 PRINCIPLES FOR BUSHFIRE SUPPORT BY WOODSIDE

- Everyone at the fire has a responsibility for safety.
- Support only on Woodside owned or managed land.
- Accept responsibility for your decisions and actions.
- Ensure someone from the Incident Management Team (IMT) at the fire is aware of your presence and of what tasks you are undertaking.
- Work cooperatively with emergency services and others.
- Be aware of the situation around you and any hazards likely to cause you or others harm.
- Wear appropriate personal protective clothing (PPE) at all times.
- Know and work within your personal limits and ability.
- Ensure your equipment is well maintained and that you know and operate it within its limits and capability.

[6] https://training.gov.au/training/details/22541VIC/summary

- Ensure the tasks you undertake match your capability and that of your equipment.
- Maintain communications.

4.3 SAFETY

Safety is the number one priority at all bushfires. Consider changing weather conditions and individual personnel capabilities before and during operations.

Any near misses or incidents that occur at an incident must be reported to the controlling agency and internally through standard WEC(S) processes.

4.4 REPORTING

Under the Bushfires act (1954) S28 the occupier of the land is to attempt to extinguish bush fire occurring on own land where a bush fire is burning on any land —

(a) at any time in any year during the restricted burning times; or

(b) during the prohibited burning times. This does not apply to burning operations being undertaken in compliance with the Act.

WEC(S) is not a response agency under the State Hazard Plan – Fire. All incidents must be reported immediately to local fire agencies via 000.

4.5 EMERGENCY RESPONSE PLAN (ERP)

Important information for first responders is contained within a simple to reference A3 document which is referred to as the Emergency Response Plan (ERP). This is contained in Appendix A of this document and is proposed to be updated annually, provided to listed distribution contacts on the ERP and copies maintained on site at site access points.

The intent of the ERP is to provide key information and convey the local knowledge and priorities of Woodside in the event of an incident.

4.6 GUIDELINES FOR OPERATING PRIVATE EQUIPMENT AT FIRES

The Department of Fire and Emergency Services have developed a useful resource in the Guidelines for Operating Private Equipment at Fires. This guideline should be referred to for further detail as it outlines expectations and guidance for landowners responding to bushfire on their property.

https://dfes.wa.gov.au/documents/Guidelines-for-Operating-Private-Equipment-at-Fires.pdf

4.7 INCIDENT COORDINATION

It is proposed that all response activities are to be undertaken under the direction of the Incident Controller of the incident and authorised under the Bushfires Act (1954)[7].

It is essential that communications are established and maintained during an incident, to enable collaboration while suppressing a fire and ensuring the safety of all personnel.

4.8 BRIEFINGS

All staff or contractors on site should receive an SMEACS (Situation, Mission, Execution, Admin and Logistics, Command and Communications, Safety) briefing if undertaking fire support activities.

4.9 COMMUNICATIONS

Incident communication should follow the incident Communications Plan as established by the Incident Controller.

The default UHF channel utilised by WEC(S) is normally UHF38.

The default fire communications channel for the Shire of Dandaragan is UHF 11. During each incident a communications plan is proposed to be established and followed.

4.10 DEBRIEFS AND MAJOR INCDIENT REVIEWS

Following a bushfire, or a major bushfire, a debrief should be conducted to identify learning opportunities and feedback to better inform future incident management.

The detail and scope to be determined based on the severity of the incident. At a minimum an internal debrief should be conducted and any broader areas identified be communicated with the controlling agency.

[7] https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_106_homepage.html

5 RECOVERY

5.1 POST INCIDENT ACTION PLAN

Where a major bushfire (i.e. an incident involving a loss of greater than 50% of the tree biomass over the Watheroo Aggregation) has impacted assets, a post incident action plan may be required to be developed. This plan may document any proposed remedial actions to be undertaken by the landowner and may include:

- Rehabilitation of burnt areas
- Maintenance of firebreaks
- Vegetation management (tree hazard/debris removal)
- Monitoring of weeds
- Carbon project specific actions

Following major incidents, the IMT may develop recovery plans and WEC(S) may provide input into this if suitable.

APPENDIX A: EMERGENCY RESPONSE PLAN

This page left intentionally blank – Print following 7 pages as stand-alone document for dissemination and access on site.

EMERGENCY RESPONSE PLAN	WATHEROO AGGREGATION	CURRENT FOR 2024/2025	REVIEW BY 30 NOVEMBER 2025

KEY CONTACTS

Emergency	**000**		
Woodside plantation manager	Woodside Communication Centre 24-hour Phone: **1300 833 333/9348 7184**		
Shire of Moora	Chief Bush Fire Control Officer	Brendan Pratt	**0427 541 086**
	Deputy Chief Bush Fire Control Officer	James McNamara (Jim)	**0427 541 083**
	Fire Control Officer/Ranger	Sean Harris	**0408 511 409**
Shire of Dandaragan	Chief Bush Fire Control Officer	Andrew Kenny	**0428 529 110**
	Deputy Chief Bush Fire Control Officer	Hugh Roberts	**0428 962 030**
	Fire Control Officer	Richard Allen	**0448 038 486**
Fire Danger ratings	http://www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml		
Emergency information	www.emergency.wa.gov.au		
Hotspot monitoring	https://myfirewatch.landgate.wa.gov.au/map.html		

MAPS AND REFERENCE DOCUMENTS

Map ID	Type	Purpose
Map 1_2024	Fire History	Current fuel age of property to identify low threat areas or potential high fuel loads
Map 2_2024	Operations Map (Ortho) - Linscott	Orthophoto with key assets/water/access/hazards identified. To provide guidance for response activities and planning.
Map 3_2024	Operations Map (Ortho) - Wards	
Map 4_2024	Operations Map (Ortho) - Managum	
Map 5_2024	Operations Map (Ortho) - Towri	
Map 6_2024	Operations Map (Ortho) - Manalling	

SITE DETAILS

Plantation type:	Native reforestation
Proprietor:	Woodside Energy Carbon (Services) Pty Ltd
Plantation Manager	Woodside Communication Centre
ABN:	91 625 509 450
Address:	Manalling: 2947 Prices Road, Namban WA Linscott: 4369 Watheroo Rd, Watheroo Managum: Namban West Rd, Badgingarra, WA Towri: 2248 Agaton Rd, Badgingarra, WA Wards: Lot 3596 Watheroo Rd, Badgingarra, WA

VALUES AND HAZARDS

CONSIDERATION	RESPONSE
Carbon assets (vegetation)	Minimise disturbance to vegetation. Utilise existing breaks where possible
Power Lines (Distribution)	Protect poles from fire and tree impact through patrol and monitoring actions. Locations marked on ops map.
Communications	Mobile coverage is limited. WEC(S) staff to monitor UHF 11. Incident communications plan to be followed.
Hazards - site	Areas of soft sand. Areas of planted vegetation exist and may not exhibit expected fire behaviour.
Hazards - UXO	There is an area of substantial UXO potential across much of the area. Refer to operations map for location.

OPERATIONAL PLANTATION GUIDELINES

Objectives

- Protect life and property from bushfire.
- Minimise the spread of bushfire originating from the plantation land.
- Protect surrounding properties and community interests from the damaging effects of bushfire.
- Minimise area of vegetation lost to fire or mechanical clearing.

Strategies

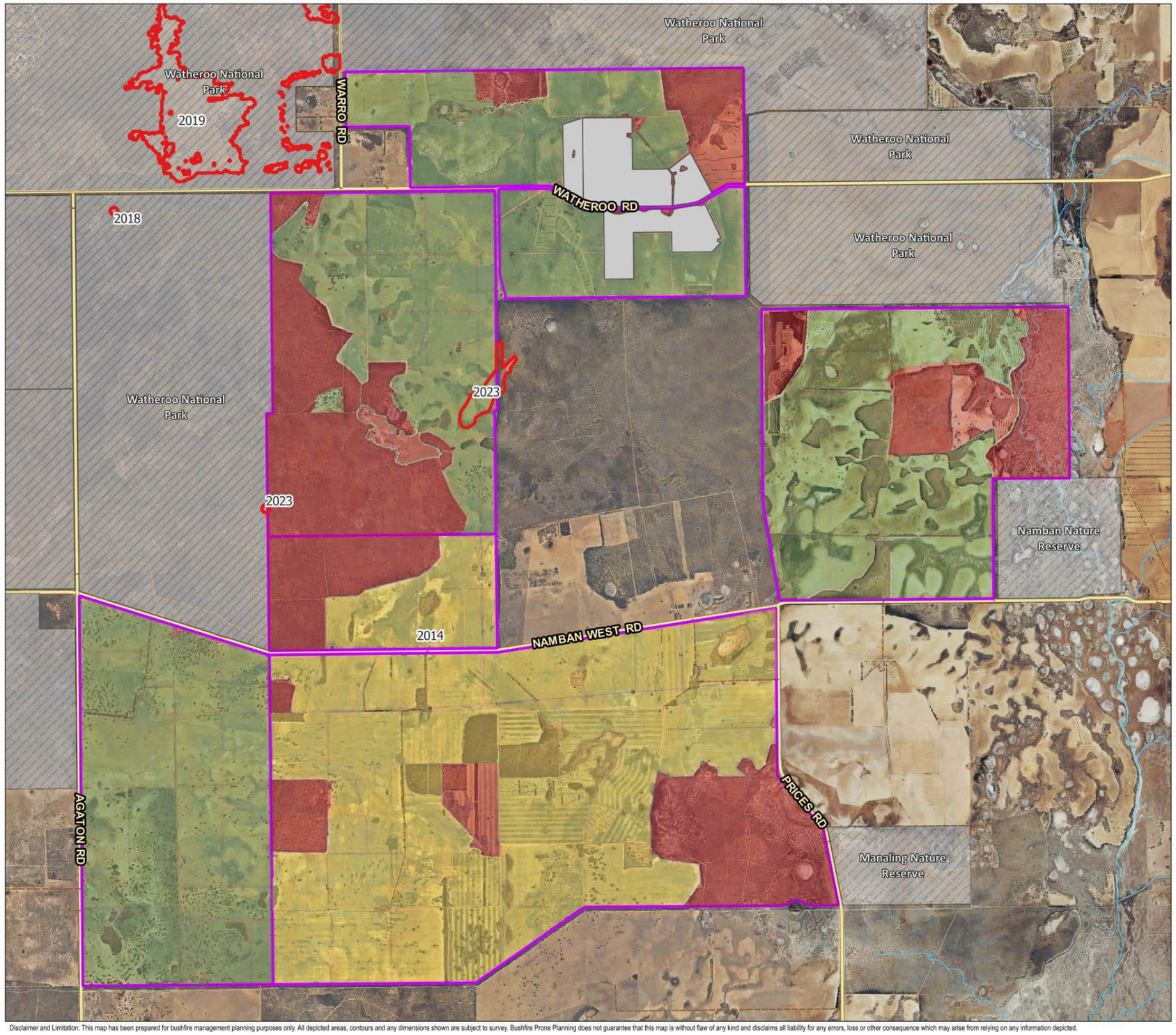
- Prevent impact to surrounding properties.
- Collaborate and support response agencies through provision of local knowledge and resources.
- Conduct direct attack where conditions and access allow.

Tactics

- Ensure all staff are briefed (SMEACS).
- Utilise machinery to support suppression and directly track fires where conditions allow.
- Request air support where appropriate, particularly in support of first attack phase. WEC(S) has no objection to foam use.
- Backburning of large cells is not preferred unless direct attack is unlikely to succeed or to keep fire area smaller.
- Prioritise protection of plantation assets over built infrastructure.
- Utilise Woodside Resources to support as appropriate in line with equipment and training capabilities.

DOCUMENT LOCATIONS AND DISSEMINATION

Woodside Communication Centre
Watheroo Aggregation Farm gates



MAP1_2024

Fire History Map

Woodside Watheroo Aggregation
Shire of Dandaragan
Shire of Moora

------ LEGEND ------

- Project_Area
- Remnant_Vegetation
- Lease_Areas

DBCA_Fire_History_DBCA_060
- Fire History Outline

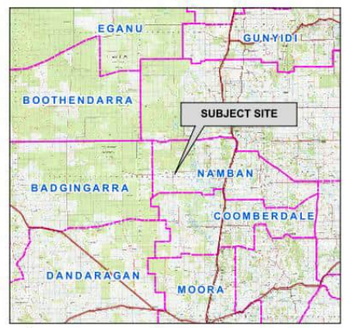
Fuel Age_Watheroo Aggregation
- Greater than 10 Years/Unknown
- 7 - 10 Years
- 4-6 Years
- 0-3 Years

DBCA Legislated Lands and Waters
- National Park
- Nature Reserve

0 1,000 2,000 3,000

Metres

------ LOCALITY ------



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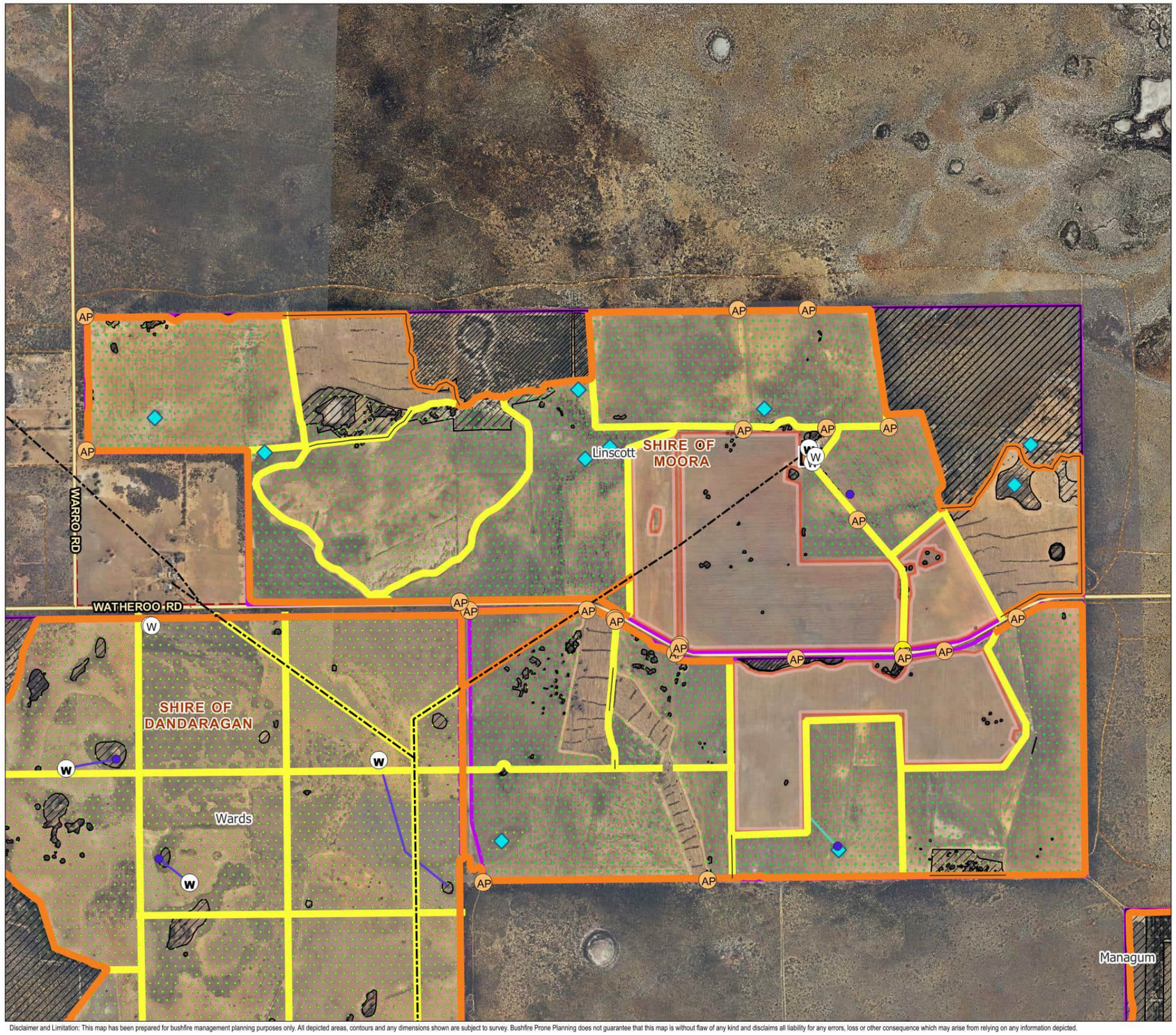
Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Merctaor Units: Metre
Map by: Michael Ayton 05-11-2024
SCALE (A3): 1 : 50000

240583_Woodside_Fuel Age.qgz



MAP2_2024

Operations Map
Linscott

Watheroo Aggregation
Woodside Energy Carbon Services
Shire of Moora
Shire of Dandaragan

------ LEGEND ------

Infrastructure
- Main Access Gate
- Water Tank
- House
- Access Gate
- Dam
- Solar Pump

Infrastrucutre_Lines
- Above Ground Water Pipe
- Overhead Powerlines
- Add Firebreak 10m
- Add Firebreak 20m
- Below ground water pipe
- Fence Line
- Firebreak 10m
- Firebreak 20m
- Firebreak 30m

Vegetation
- Planted_Areas
- Remnant_Vegetation
- Lease_Areas
- Watheroo_Aggregation_Boundary

0 200 400 600 800 1,000

Metres

------ LOCALITY ------

AERIAL IMAGERY: Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
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Map by: Michael Ayton 05-11-2024
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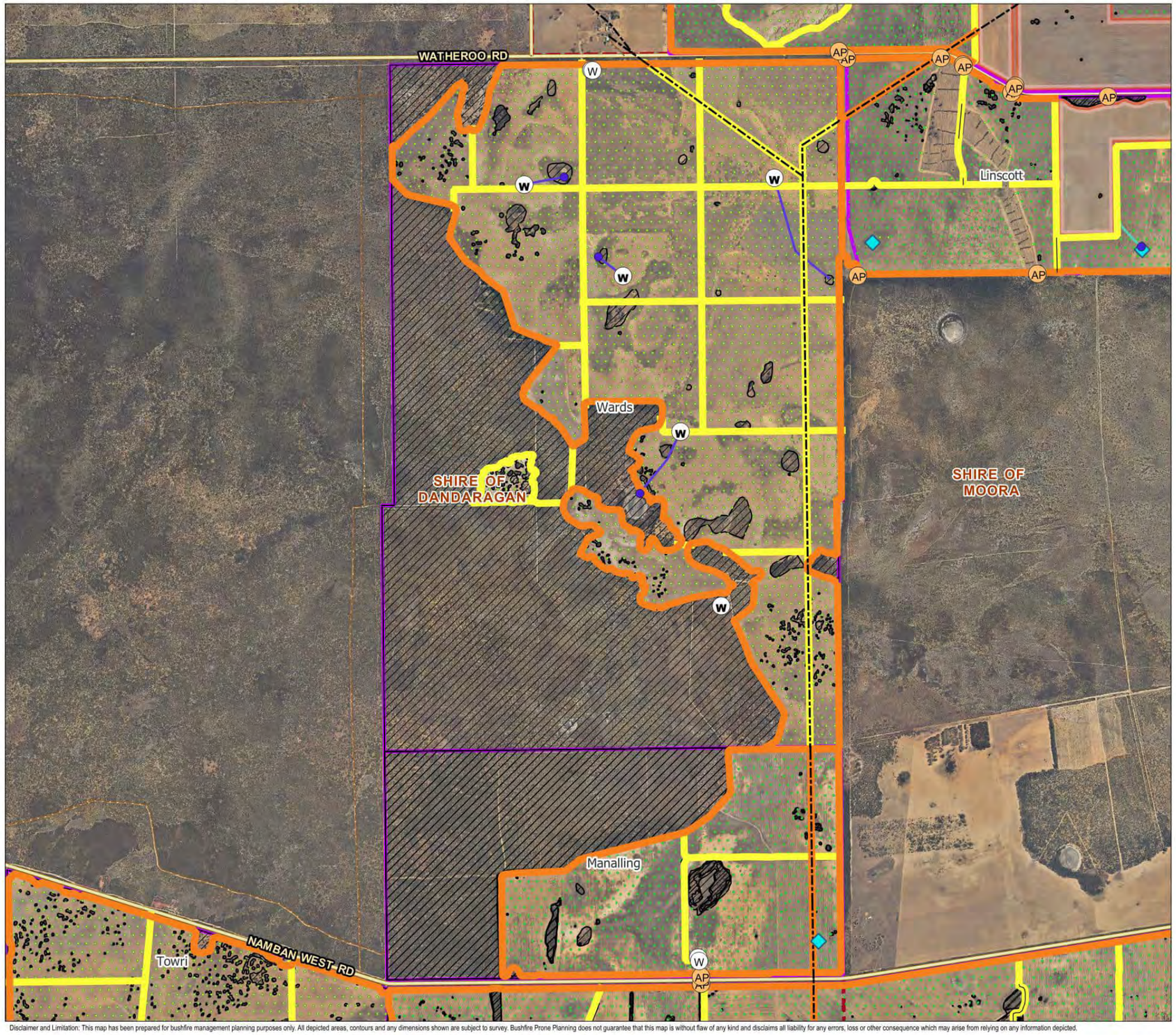


MAP3_2024

Operations Map
Wards

Watheroo Aggregation
Woodside Energy Carbon Services
Shire of Moora
Shire of Dandaragan

------ LEGEND ------

Infrastructure
- Main Access Gate
- Water Tank
- House
- Access Gate
- Dam
- Solar Pump

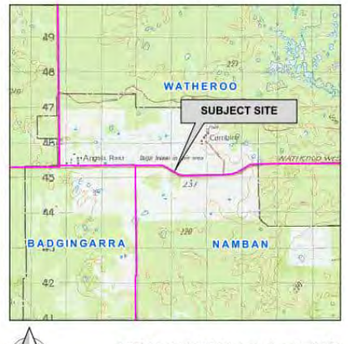
Infrastrucutre_Lines
- Above Ground Water Pipe
- Overhead Powerlines
- Add Firebreak 10m
- Add Firebreak 20m
- Below ground water pipe
- Fence Line
- Firebreak 10m
- Firebreak 20m
- Firebreak 30m

Vegetation
- Planted_Areas
- Remnant_Vegetation
- Lease_Areas
- Watheroo_Aggregation_Boundary

0 300 600 900 1,200 1,500

Metres

------ LOCALITY ------



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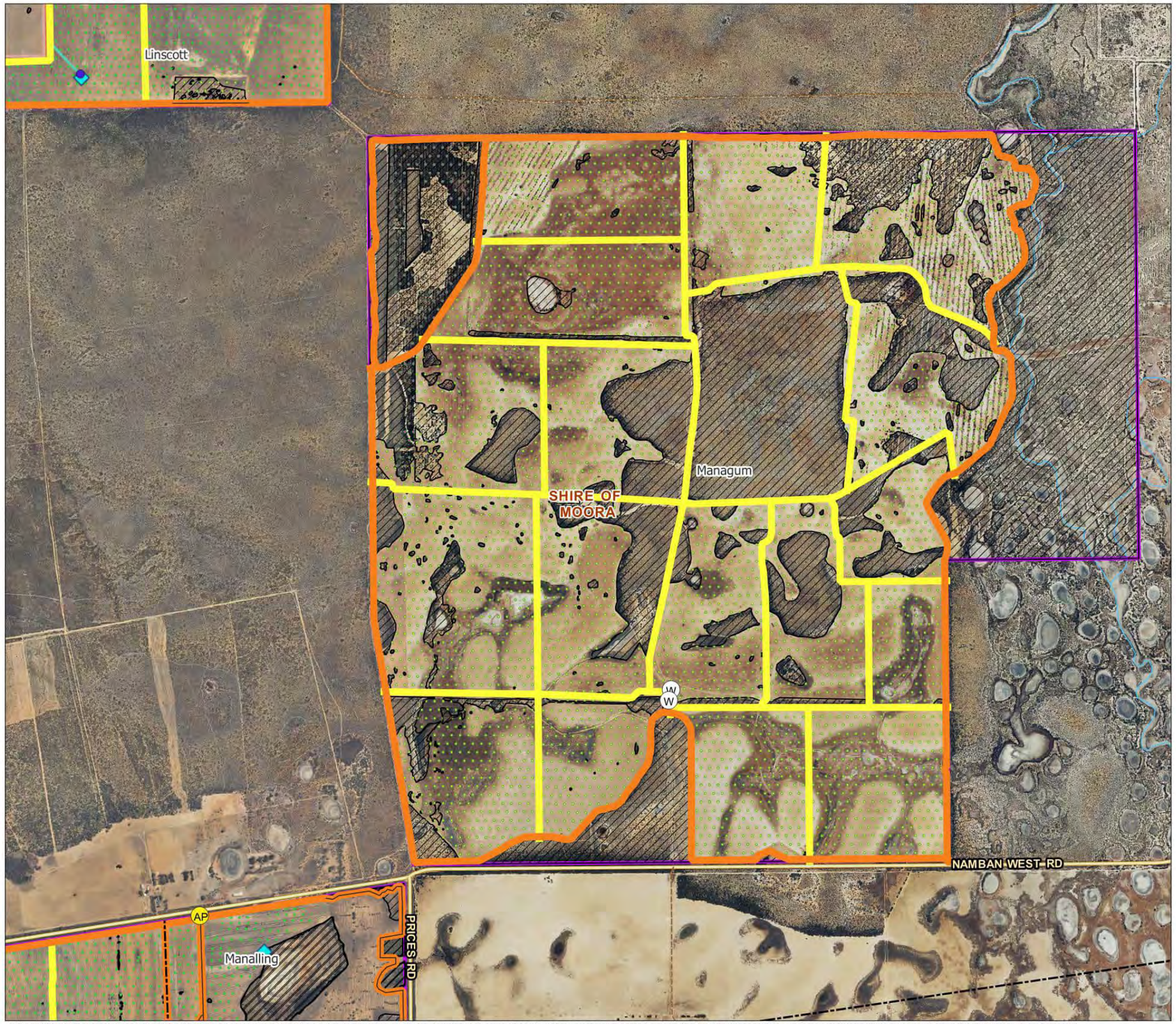


MAP4_2024

Operations Map Managum

Watheroo Aggregation
Woodside Energy Carbon Services
Shire of Moora
Shire of Dandaragan

------ LEGEND ------

Infrastructure
- Main Access Gate
- Water Tank
- House
- Access Gate
- Dam
- Solar Pump

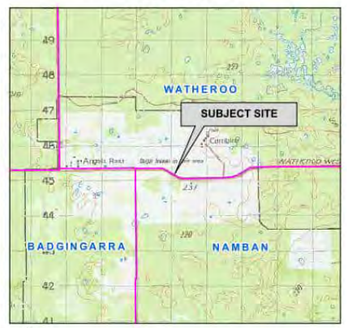
Infrastrucutre_Lines
- Above Ground Water Pipe
- Overhead Powerlines
- Add Firebreak 10m
- Add Firebreak 20m
- Below ground water pipe
- Fence Line
- Firebreak 10m
- Firebreak 20m
- Firebreak 30m

Vegetation
- Planted_Areas
- Remnant_Vegetation
- Lease_Areas
- Watheroo_Aggregation_Boundary

0 200 400 600 800 1,000

Metres

------ LOCALITY ------



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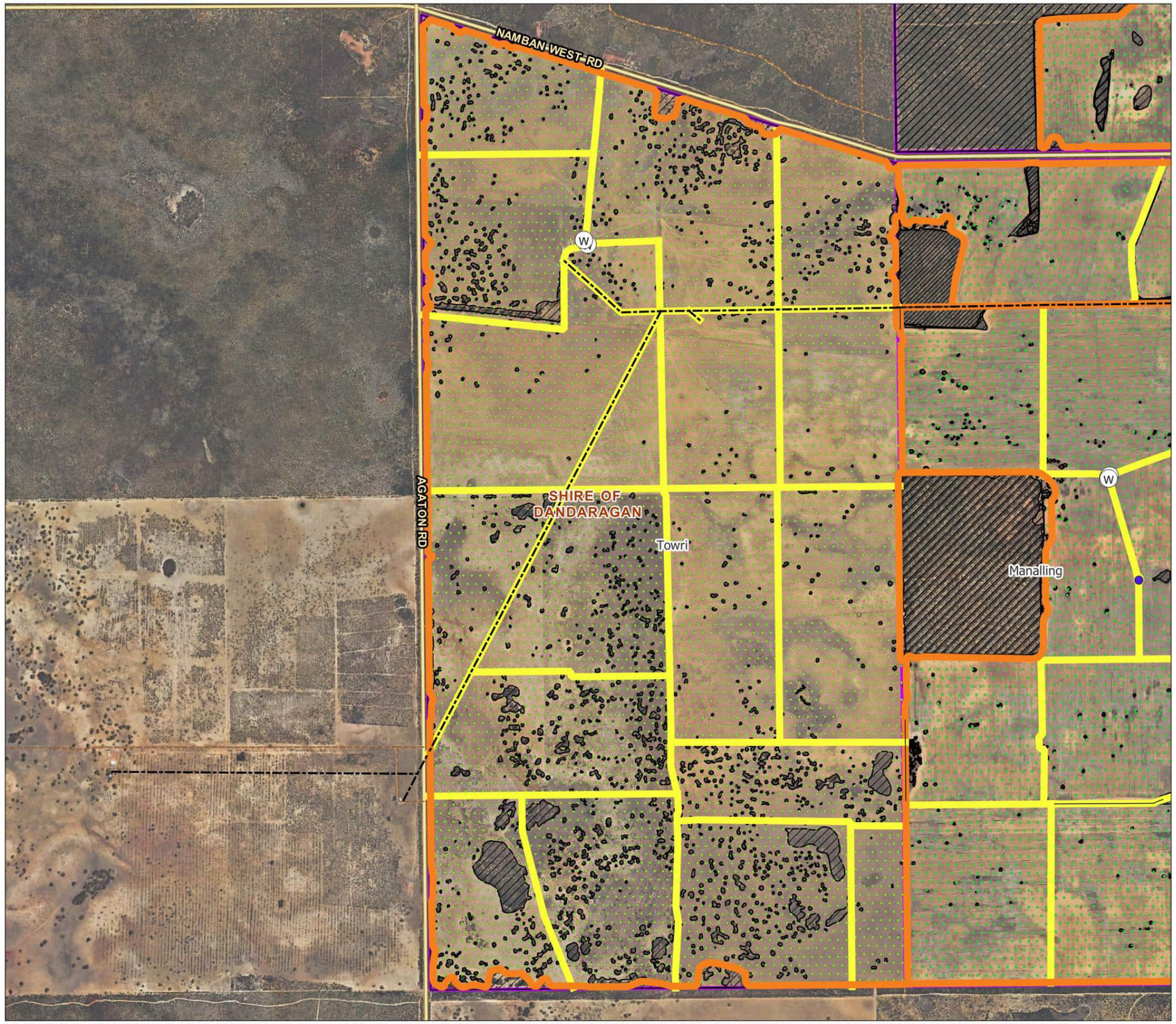


MAP5_2024

Operations Map
Towrie

Watheroo Aggregation
Woodside Energy Carbon Services
Shire of Moora
Shire of Dandaragan

------ LEGEND ------

Infrastructure
- Main Access Gate
- Water Tank
- House
- Access Gate
- Dam
- Solar Pump

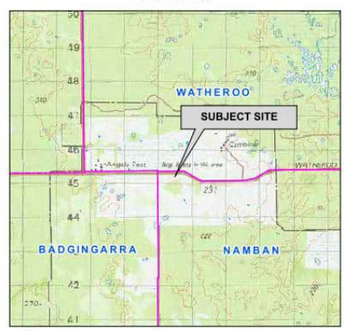
Infrastrucutre_Lines
- Above Ground Water Pipe
- Overhead Powerlines
- Add Firebreak 10m
- Add Firebreak 20m
- Below ground water pipe
- Fence Line
- Firebreak 10m
- Firebreak 20m
- Firebreak 30m

Vegetation
- Planted_Areas
- Remnant_Vegetation
- Lease_Areas
- Watheroo_Aggregation_Boundary

0 200 400 600 800 1,000

Metres

------ LOCALITY ------



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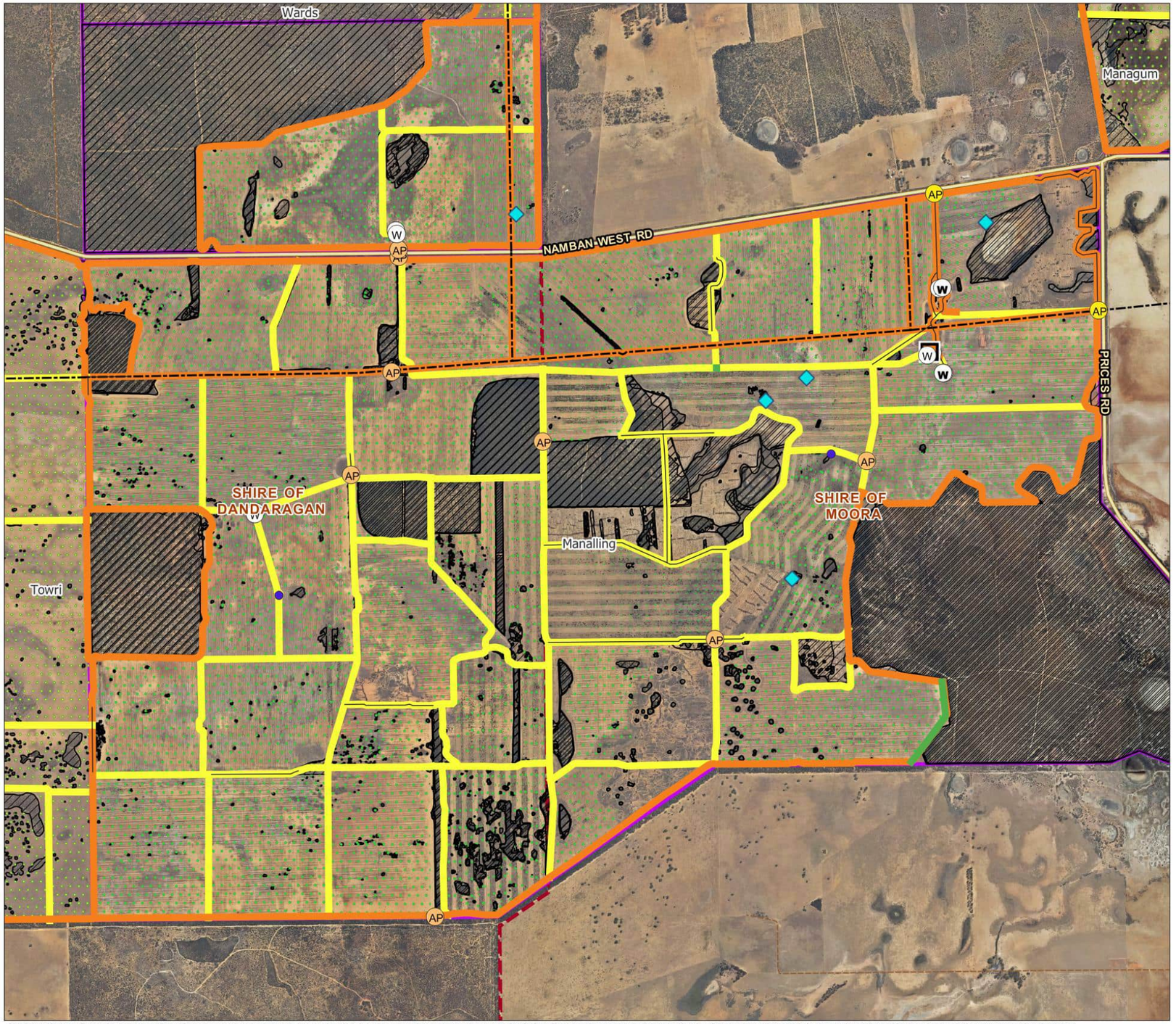


MAP6_2024

Operations Map Manalling

Watheroo Aggregation
Woodside Energy Carbon Services
Shire of Moora
Shire of Dandaragan

------ LEGEND ------

Infrastructure
- Main Access Gate
- Water Tank
- House
- Access Gate
- Dam
- Solar Pump

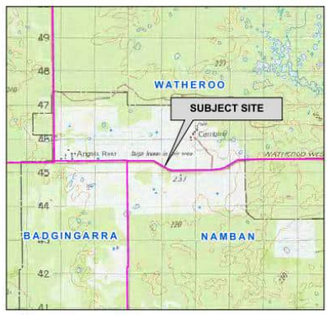
Infrastrucutre_Lines
- Above Ground Water Pipe
- Overhead Powerlines
- Add Firebreak 10m
- Add Firebreak 20m
- Below ground water pipe
- Fence Line
- Firebreak 10m
- Firebreak 20m
- Firebreak 30m

Vegetation
- Planted_Areas
- Remnant_Vegetation
- Lease_Areas
- Watheroo_Aggregation_Boundary

0 300 600 900 1,200 1,500

Metres

------ LOCALITY ------



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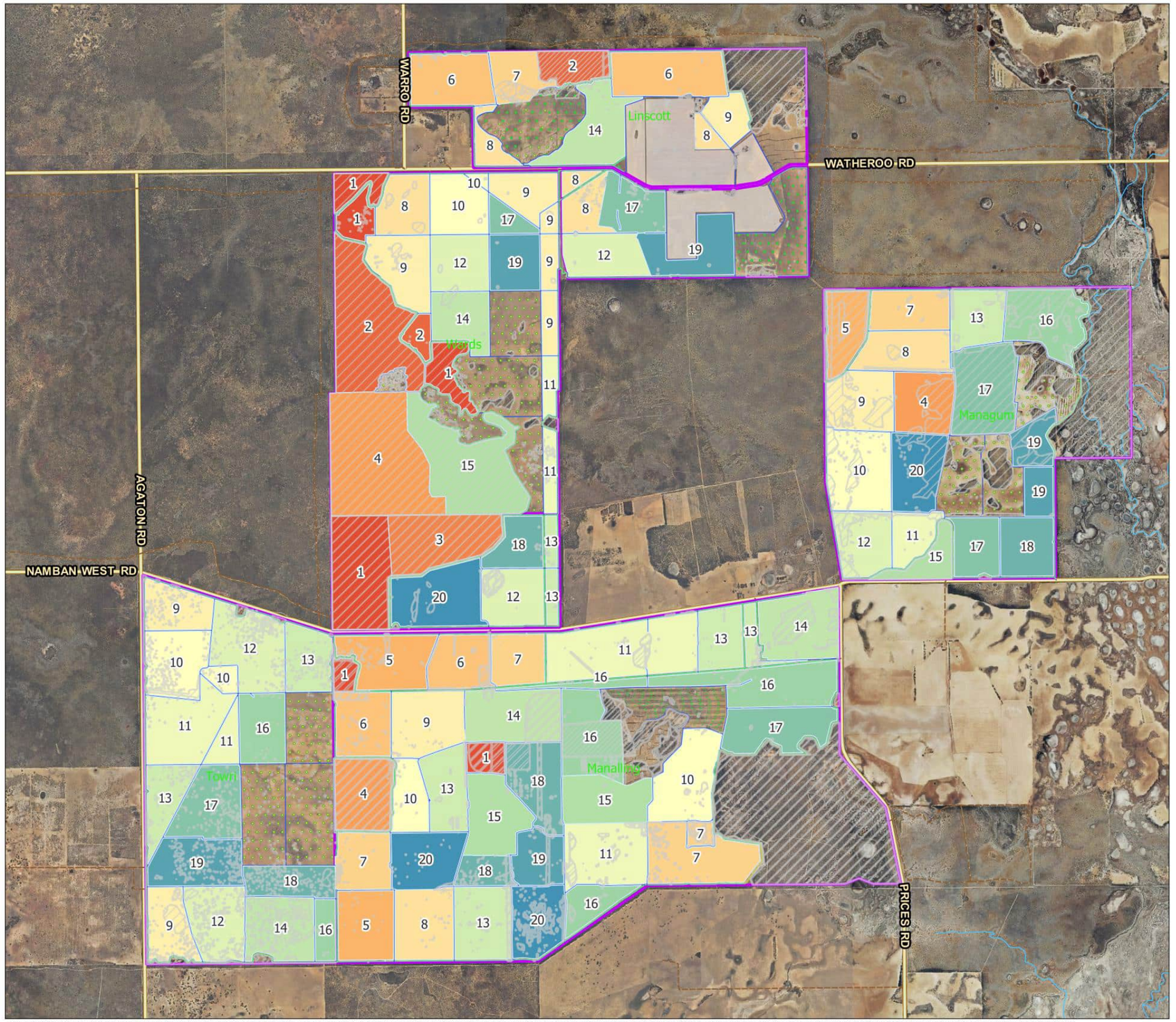
Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Merctaor Units: Metre
Map by: Michael Ayton 05-11-2024
SCALE (A3): 1 : 25000

240583_Woodside_OPS.qgz

APPENDIX B: INDICATIVE PROPOSED STRATEGIC BURN PROGRAM

MapB1: Indicative Proposed Strategic burn plan identifying target years by cell.

MapB2: Map showing all logical cell identification



MAP B1

Indicative Strategic Burn Plan 2025-2044

Watheroo Aggregation
Woodside Energy Carbon Services
Shire of Moora
Shire of Dundas

------ LEGEND ------

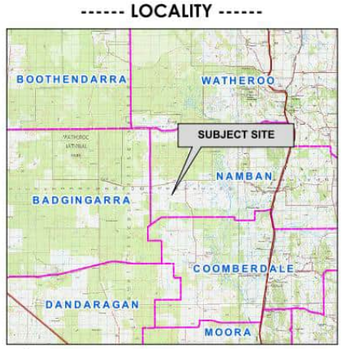
Burn_Cells_YR

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Remnant_Vegetation
Watheroo_Aggregation_Project_Area
Watheroo_Aggregation_Boundary
Lease_Areas
Proposed_Planting_Areas

0 1 2 km
Metres

------ LOCALITY ------



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Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: Michael Ayton 01-11-2024
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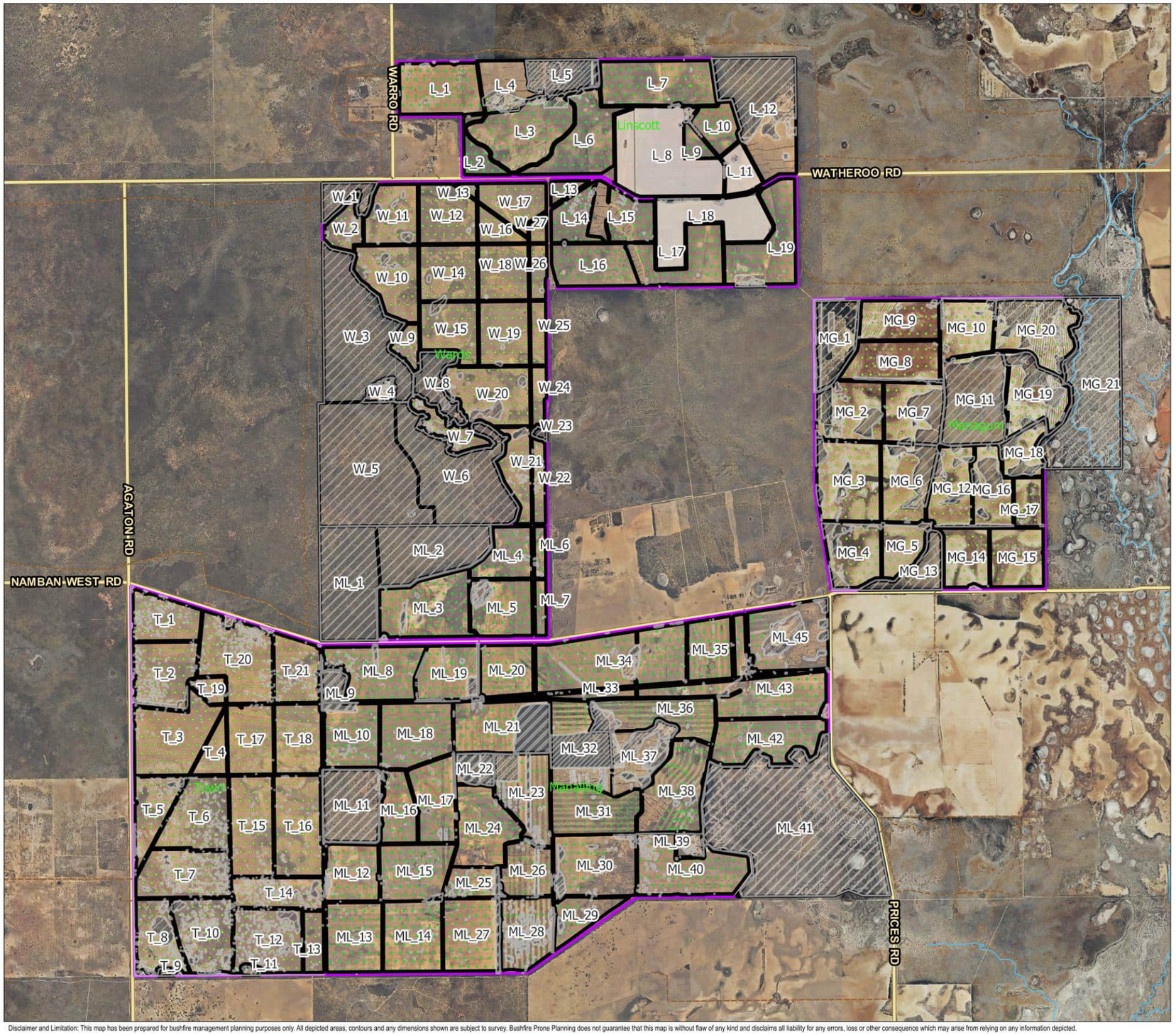
BUSHFIRE PRONE PLANNING

240583_Woodside_Burn Program.qgz



MAP B2

MANAGEMENT CELLS

Watheroo Aggregation
Woodside Energy Carbon Services
Shire of Moora
Shire of Dundas

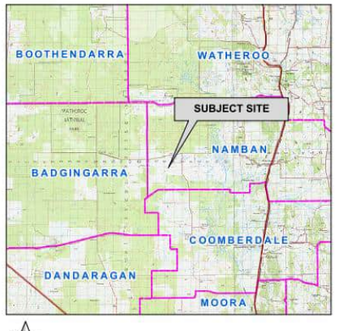
------ LEGEND ------

- Burn_Cells_ID
- Watheroo_Aggregation_Project_Area
- Remnant_Vegetation
- Proposed_Planting_Areas
- Planted_Areas
- Lease_Areas

0 1,000 2,000 3,000

Metres

------ LOCALITY ------



AERIAL IMAGERY: Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Merctaor Units: Metre
Map by: Michael Ayton 24-10-2024
SCALE (A3): 1 : 50000

BUSHFIRE PRONE PLANNING

240583_Woodside_Burn Program.qgz

APPENDIX C: ANNUAL PREPAREDNESS CHECKLIST

Table 7: Annual Preparedness Checklist

ACTIVITY	COMPLETE	DATE	COMMENTS
Firebreaks maintained to required standard			
Water points audited for location and serviceability			
Staff trained for roles and currency			
Vehicles and Equipment operational in line with requirements (pumps/vehicles/firefighting equipment)			
Maps reviewed and updated			
Assess and update fuel hazard assessments			
BPRP review complete and distributed. Including - ERP updated and available on site - Discussed with LG's and details confirmed			

APPENDIX D: VEHICLE EQUIPMENT CHECKLIST

Table 8: Annual Vehicle Equipment Checklist

VEHICLE	COMMENTS	COMPLETE
Oil level		
Fluids (wipers/radiator)		
Lights functioning		
Fuel – maintain above 3/4		
Tyres (pressures and condition). Check spare tyre.		
UHF radio functioning		
Service schedule		
Beacon operational		
Test drive and all ok		
INTERIOR	COMMENTS	COMPLETE
Fire blankets (min x 2)		
First aid kit		
Fire Extinguisher (including date)		
EQUIPMENT	COMMENTS	COMPLETE
Pump operational		
Pump fuel checked and available		
Water tank full		
Hose reel functional		
Rake hoe available and maintained		

Inspection Date:_____

Inspected By:_____

If any items missing or action required follow up with supervisor immediately and rectify

APPENDIX E: PREPAREDNESS AND RESPONSE FLOWCHART

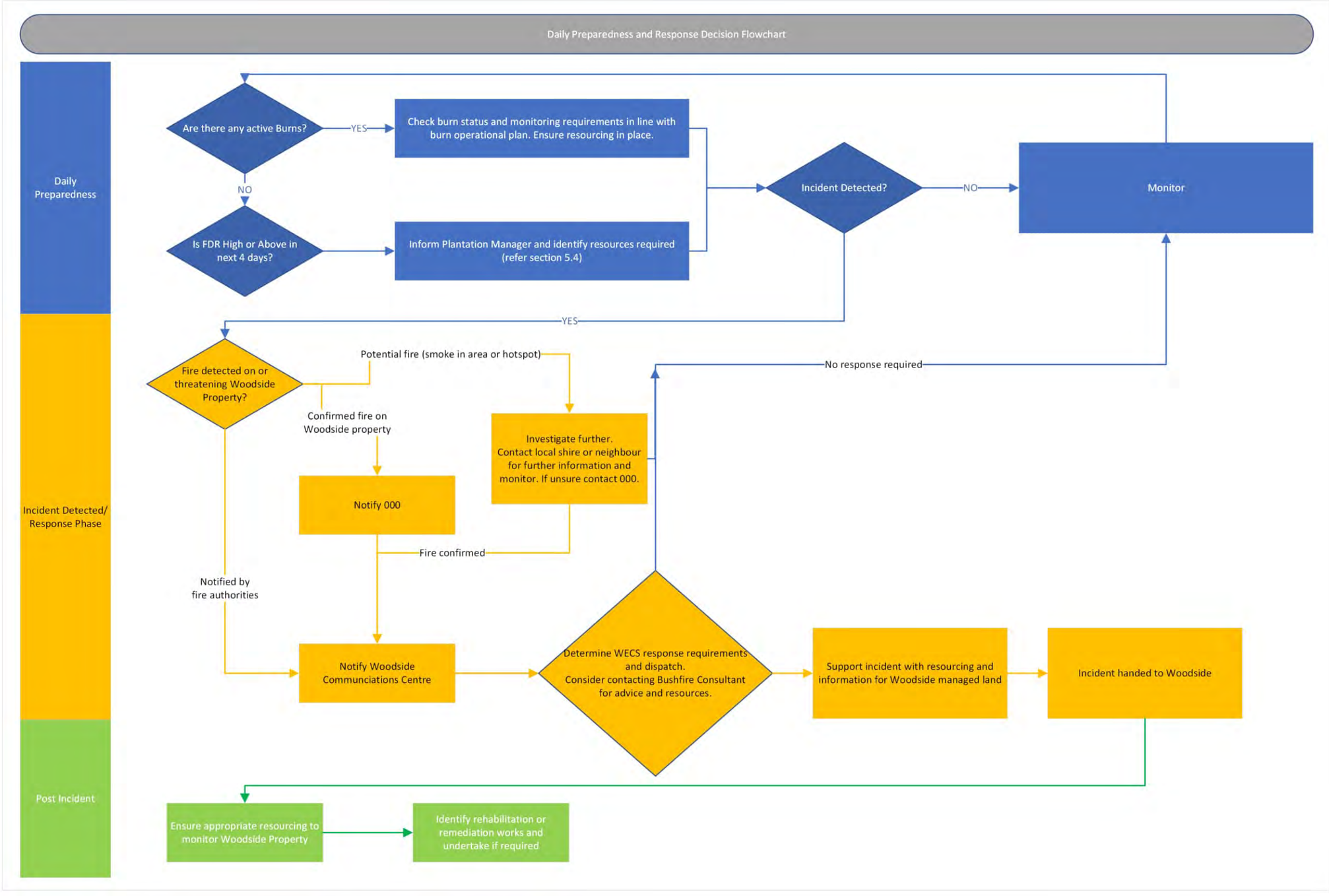


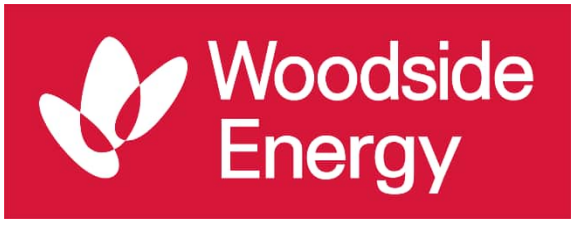
Figure 4: Preparedness and Response Flowchart

Watheroo Aggregation Plantation Management Plan

Head Office
Mia Yellagonga
11 Mount Street
Perth WA

Postal address:
GPO Box D188
Perth WA 6840
Australia

Contact:
Gareth Parry
E: carbon@woodside.com.au



Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address: Lot 2342, 2045, 3598 Namban West Rd & Lot 3600 Agaton Rd, Badgingarra. Lot 3596 Watheroo Rd, Watheroo

Site visit: Yes ☑ No ☐

Date of site visit (if applicable): Day 24 Month September Year 2024

Report author or reviewer: Kathy Nastov

WA BPAD accreditation level (please circle):

Not accredited ☐ Level 1 BAL assessor ☐ Level 2 practitioner ☐ Level 3 practitioner ☑

If accredited please provide the following.

BPAD accreditation number: 27794 Accreditation expiry: Month August Year 2025

Bushfire management plan version number: (v1.1)

Bushfire management plan date: Day 24 Month October Year 2024

Client/business name: Woodside Energy Ltd

	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?		✓
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?		✓

Is the proposal any of the following (see SPP 3.7 for definitions)?	Yes	No
Unavoidable development (in BAL-40 or BAL-FZ)		
Strategic planning proposal (including rezoning applications)		
High risk land-use		
Vulnerable land-use		

None of the above ☑

Note: Only if one (or more) of the above answers in the tables is yes should the decision maker (e.g. local government or the WAPC) refer the proposal to DFES for comment.

Why has it been given one of the above listed classifications (E.g. Considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

Not Applicable

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

Signature of report author or reviewer 

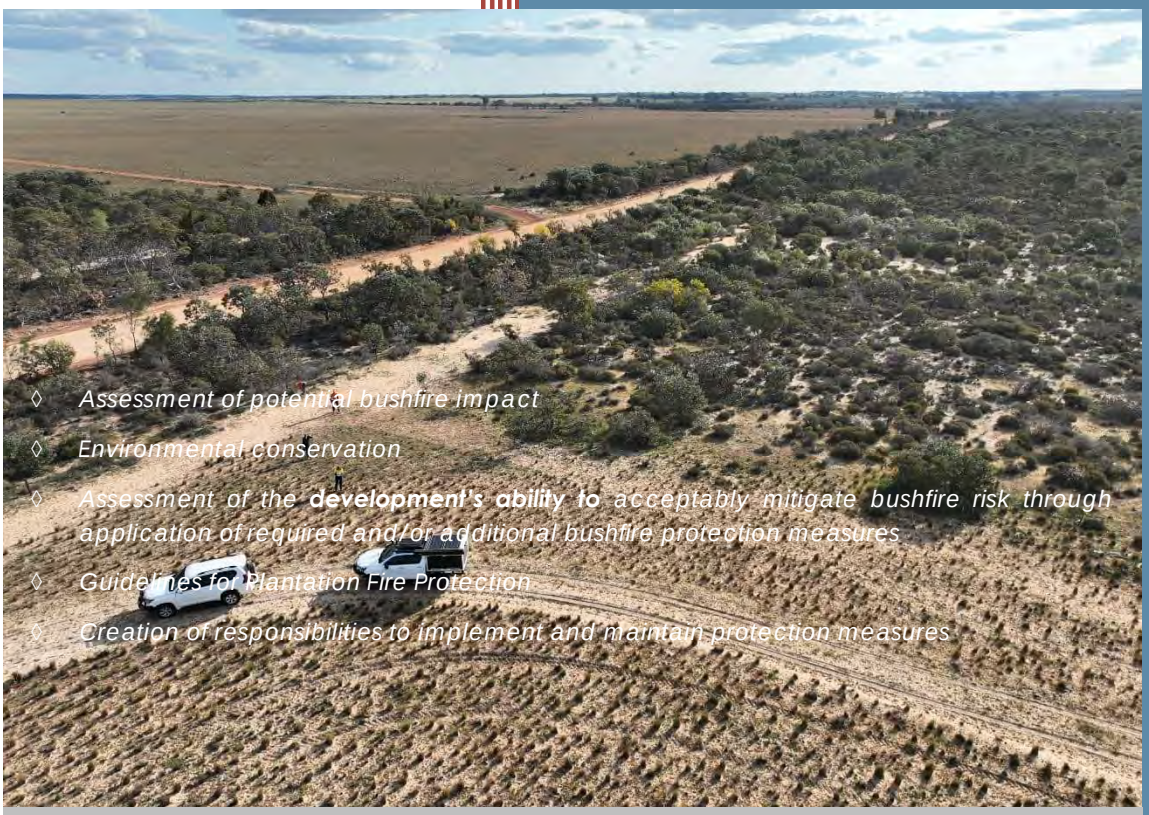
Date 24 / 10 / 2024

BUSHFIRE PRONE PLANNING

Woodside Native Reforestation Stored Carbon Project

(Managum - Towri – Wards)

Bushfire Management Plan (BMP)



Produced to meet the relevant requirements of Guidelines for Plantation Fire Protection

Lot 2342, 2045 & 3598 Namban West Rd, Badgingarra

Lot 3600 Agaton Rd, Badgingarra

Lot 3596 Watheroo Rd, Watheroo

Shire of Moora and Dandaragan

Change in Land Use – Plantations

24 October 2024

Job Reference No:

240583, 240584 & 240585

BPP GROUP PTY LTD T/A BUSHFIRE PRONE PLANNING

ACN: 39 166 551 784 | ABN: 39 166 551 784

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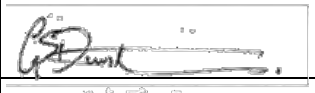
DOCUMENT CONTROL

PREPARATION		
Author:	Greg Dunstan (BPAD Level 1 No. 16382)	
Reviewed:	Kathy Nastov (BPAD Level 3 No. 27794)	

VERSION HISTORY		
Version	Details	Date
1.0	For Comment	21 October 2024
1.1	For Distribution	24 October 2024

PBMP (Master) Template v1.0

DISTRIBUTION					
Destination		Version	No. Copies	Hard Copy	Electronic Copy
Person	Email				
Gareth Parry	gareth.parry@Woodside.com	1.1	1	☐	☒
Jeffrey Ball	jeffrey.ball@Woodside.com	1.1	1	☐	☒
Ollie Viant	ollie.viant@Woodside.com	1.1	1	☐	☒

Limitations: The protection measures contained in this Bushfire Management Plan are minimum requirements and they do not guarantee that buildings or infrastructure will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the recommended protection measures will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.

All surveys, forecasts, projections and recommendations made in this report associated with the proposed development are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.

Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.

TABLE OF CONTENTS

LIST OF FIGURES

Woodside Contacts

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(PRIMARY CONTACT)

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M: +61 8 9348 7184

E: wcc@Woodside.com.au

Woodside Carbon Solutions team

E: carbon@Woodside.com.au

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Proposal Details and the Bushfire Management Plan

Commissioning and Purpose

Landowner / Proponent:	Woodside Energy Ltd Mia Yellagonga Karlak, 11 Mount Street Perth WA 6000
Bushfire Prone Planning commissioned to produce the BMP by:	Woodside Energy Ltd Mia Yellagonga Karlak, 11 Mount Street Perth WA 6000
Purpose of the BMP:	Development Application - To identify and subsequently implement the minimum standards responding to the local risk and local government requirements of the proposed re-vegetation (Plantation) area.
Local Govt. Area:	Shire of Dandaragan and Shire of Moora

The Proposed Land Use Details

Land use type:	Native Reforestation Plantation for the purposes of carbon stores.
Factors that have identified the **proposal's bushfire planning** requirements:	Australian Government Clean Energy Regulator requirements for proponents to manage the risk of bush fire in Emissions Reduction Fund vegetation projects. Department of Fire and Emergency Services (DFES) Guidelines for Plantation Fire Protection 2011 (as agreed upon by the Forest Industries Federation of Western Australia (FIFWA)).
Subject site address:	Managum: Namban West Rd, Badgingarra, WA Towri: 2248 Agaton Rd, Badgingarra, WA Wards: Lot 3596 Watheroo Rd, Badgingarra, WA
Subject lot/site total area:	Landgate Lot on Plan: Managum: P089269 2342 (814.3361 hectares) P143308 2054 (332.2039 hectares) P206455 3598 (432.7430 hectares) Towri: P206453 3600 (1358.5879 hectares) Wards: P206455 3956 (1540.7730 hectares)
Plantation type(s):	Native Mixed Species – Biodiversity Planting/Various Species – Including but not limited to; eucalyptus, melaleuca, banksia, Hakea and allocasuarina.

Description of the proposed development/use:

The proposed land use for the subject sites is to use these properties to generate Australian Carbon Credit Units (ACCUs) under the Federal Government's Emissions Reduction Fund (ERF).

The subject site/s purchased by Woodside Energy Carbon (Services) Pty Ltd (WEC(S)) in stages, are located approximately 20km North of Moora townsite incorporating 3 properties adjoining an additional 2 properties previously approved plantation for carbon stores, split between the Shire of Moora and the Shire of Dandaragan.

The Plantation for carbon stores intends to revegetate existing cleared farmland with native species within their natural range, retain native vegetation where possible, avoid unnecessary clearing and minimise environmental impact on the site. The proposed plantation will fall into a Biodiversity planting category, with the intent to link the planting areas with remnant native vegetation within the site.

The bushfire management plan provides details on the intended future management of the plantation site and configuration of revegetation 'Cells' (or block planting) and existing native vegetation with the intent of minimising ignition sources, confining bushfires within the site within the cell firebreaks limiting the potential for bushfires originating within the site to spread to land outside of the plantation boundaries.

The requirement for this Bushfire Management Plan is for the 'Development Application' planning purpose to address a condition of change in land use. The necessity for additional documents in addition to this bushfire management plan arises to further address the management actions, activities and preparedness, response and recovery requirements for the plantation site. These documents are designed to be 'living documents' that will require updating to meet changing environmental conditions and management strategies for the lifespan of the plantation.

No existing or proposed habitable buildings are located within the Managum, Towri and Wards sites. Therefore the requirement to address SPP 3.7 and the Planning for Bushfire Guidelines is not applicable for this development proposal.

Figure 1.0

Proposed Plantation Sites

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

BOOTHENDARRA
WARROO RD
WATHEROO
WATHEROO RD
WARDS
MANAGUM
NAMBAN
AGATON RD
BADGINGARRA
NAMBAN-WEST-RD
PRICES RD
TOWRI
COOMBERDALE

------ LEGEND -----

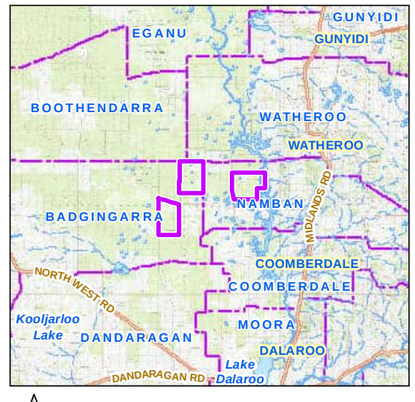
- Plantation Areas
- Other Lots
- Locality / Suburb

Property

- Managum
- Towri
- Wards

0 1 2 3
Kilometres

------ LOCALITY ------



Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 21/10/2024
Map updated by: Ian Ross 21/10/2024
A3 Scale 1:55,000

BUSHFIRE PRONE PLANNING

Map Document Path / Name: K:\Projects\Jobs 2024\240583 - (W'SIDE) Lot 3596 Watheroo Road Watheroo (BMP) (Parent Folder)\Mapping_Master\Mapping_IR\MXD\240583_Fig1-0_PLANT_Overall.mxd

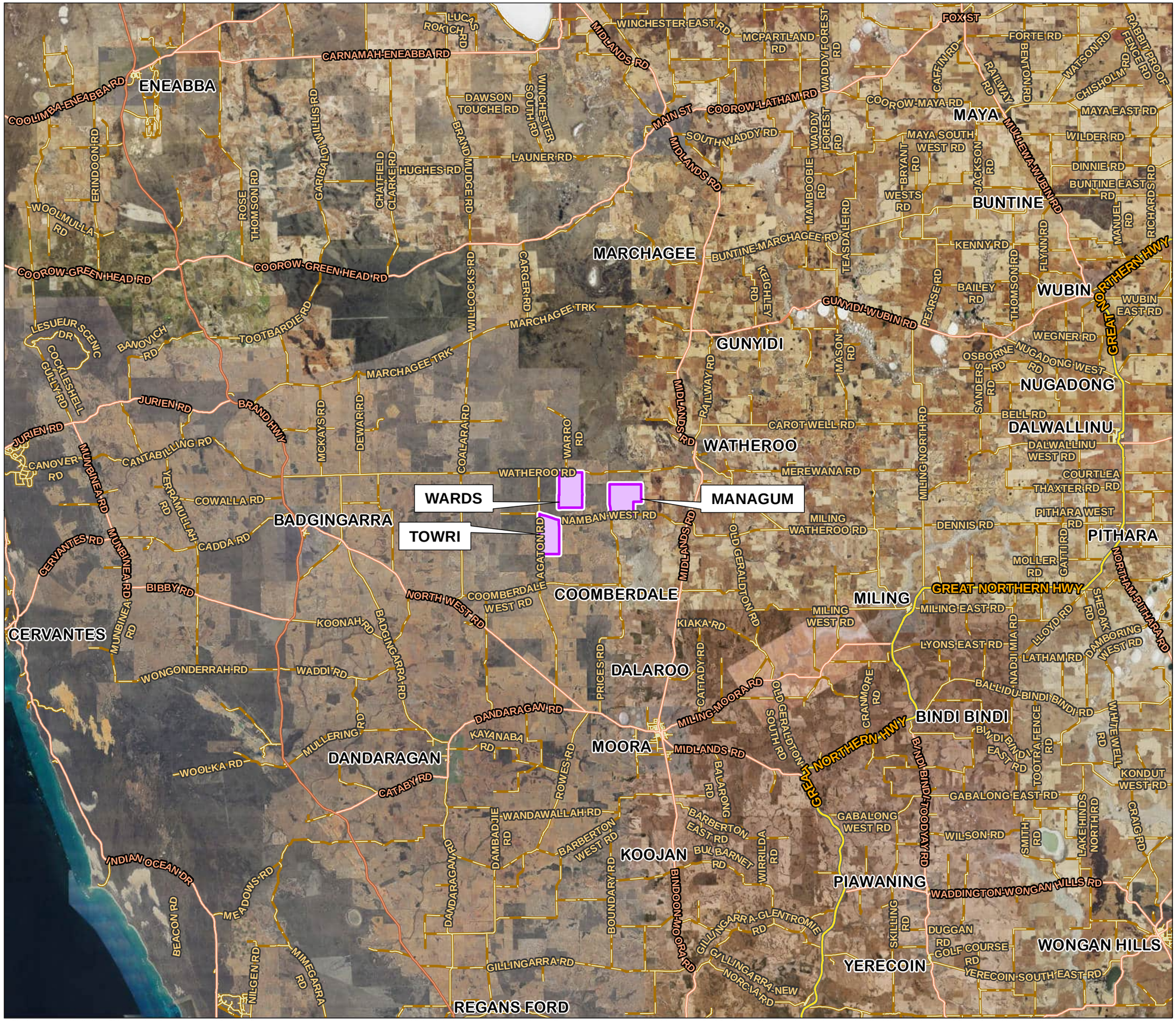


Figure 1.3

Location Plan

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

------ LEGEND ------

Plantation Areas

------ LOCALITY ------

Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 21/10/2024
Map updated by: Ian Ross 21/10/2024
A3 Scale 1:500,000

BUSHFIRE PRONE PLANNING

Map Document Path / Name: K:\Projects\Jobs 2024\240583 - (W'SIDE) Lot 3596 Watheroo Road Watheroo (BMP) (Parent Folder)\Mapping_Master\Mapping_lR\MXD\240583_Fig1-1_LOC_Overall.mxd

Summary Statements

THIS DOCUMENT – STATEMENT OF PURPOSE

The Bushfire Management Plan (BMP)

The BMP sets out the required package of bushfire protection measures to lessen the risks associated with a bushfire event. It establishes the responsibilities to implement and maintain these measures.

The BMP also identifies the potential for any negative impact on any environmental, biodiversity and conservation values that may result from the application of bushfire protection measures or that may limit their implementation.

Risks Associated with Bushfire Events

The relevant risks are the potential for loss of life, injury, or destroyed or damaged assets which results in personal loss and economic loss. For a given site, the level of that risk to persons and assets (the exposed elements) is a function of the potential threat levels generated by the bushfire hazard, and the level of exposure and vulnerability of the at-risk elements to the threats.

Bushfire Protection Measures

The required package of protection measures is established by the Guidelines for Plantation Fire Protection 2011. These measures are limited to those considered by the WA planning authorities as necessary to be addressed for the purpose of land use planning. They do not encompass all available bushfire protection measures as many are directly relevant to a planning approval stage. For example:

- Protection measures to reduce the vulnerability of buildings to bushfire threats is primarily dealt with at the building application stage. They are implemented through the process of applying the Building Code of Australia in accordance with WA building legislation and the application of construction requirements based on a building's level of exposure - determined as a Bushfire Attack Level (BAL) rating); or
- Protection measures to reduce the threat levels of consequential fire (ignited by bushfire and involving combustible materials surrounding and within buildings) and measures to reduce the exposure and vulnerability of elements at risk exposed to consequential fire, are not specifically considered.

The package of required bushfire protection measures for plantations established by the Guidelines for Plantation Fire Protection 2011 includes:

- Planning for Plantation Fire Management.
- Plantation Fire Protection Specifications.
- Response to Bushfire, Equipment and Training.

The set of fire protection standards for plantations aims to protect human life and local community interests, while minimising fire risk to plantation assets.

Compliance of the Proposed **Land Use with 'Guidelines for Plantation Fire Protection' Requirements**

This BMP indicates how the proposed land use can implement and maintain the required 'acceptable' measures as detailed in the Guidelines for Plantation Fire Protection 2011 and any additionally recommended bushfire protection strategies - or its capacity to satisfy the Guidelines intent through the justified application of additional bushfire protection measures as supportable 'alternative' solutions.

Elements of the DPLH State Planning Policy 3.7 (SPP 3.7) and Guidelines for Planning in Bushfire Prone Areas are not specifically relevant where the development proposal is for plantation purposes only and no built infrastructure or subdivision land use is proposed. A pragmatic approach in consideration of the bushfire mitigation measures and intent of both 'Guidelines' is in this instance warranted.

The Department of Fire and Emergency Services and the Department of Planning Lands and Heritage endorse the Guidelines for Plantation Fire Protection 2011 and encourage local authorities to adopt them.

Compliance of the Proposed Development or Use with SPP 3.7 Requirements

The BMP assesses the capacity of the proposed development or use to implement and maintain the required 'acceptable' solutions and any additionally recommended bushfire protection measures - or its capacity to satisfy the policy intent through the justified application of additional bushfire protection measures as supportable 'alternative' solutions.

The package of required bushfire protection measures established by the Guidelines includes:

- The requirements of the bushfire protection criteria which consist of:
    - Element 1: Location (addresses threat levels).
    - Element 2: Siting and Design of Development (addresses exposure levels of buildings).
    - Element 3: Vehicular Access (addresses exposure and vulnerability levels of persons).
    - Element 4: Water (addresses vulnerability levels of buildings).

THE PROPOSED DEVELOPMENT/USE – BUSHFIRE PLANNING COMPLIANCE SUMMARY		
Environmental Considerations		Assessment Outcome
Will identified environmental, biodiversity and conservation values limit the full application of the required bushfire protection measures?		No
Will identified environmental, biodiversity and conservation values need to be managed in the implementation and maintenance of the bushfire protection measures - but not limit their application?		Yes
Summary Statement: The proposal will include revegetation of native plant assemblages. The establishment and maintenance of the Plantation will require ongoing management planning to ensure environmental assets are preserved appropriately.		
Required Plantation Bushfire Protection Measures		Applied
Element	The Acceptable Standards	
1: Implementation	1.1 Local Government	Fully Compliant
	1.2 Plantation Managers	Fully Compliant
2: Planning for Plantation Fire Management	2.1 External Firebreaks and Setback Distances	Fully Compliant
	2.2 Fuel Reduction	Fully Compliant
3: Fire Management Plan	3.1 Fire Management Plan	Fully Compliant
4: Plantation Fire Protection Specifications	4.1 Compartment Size and Layout	Fully Compliant
	4.2 Fire Breaks and Access	Fully Compliant
	4.3 Water Supplies	Fully Compliant
5: Equipment and Training	5.1 Equipment	Fully Compliant
	5.2 Training	Fully Compliant
6: Harvesting and Post Plantation Management	6.1 Harvesting	Fully Compliant
	6.2 Post Plantation Management	Fully Compliant
7: Plantation Species	7.1 Plantation Species Category	Biodiversity plantings
Other Documents Establishing Bushfire Protection Measure Variations or Additions		N/A
The Methodology Applied to the Development of an Alternative Solution The necessity for an alternative solution is in response to non-compliance with the applicable acceptable solutions.		N/A

Other 'Bushfire Planning' Documents to Be Produced This necessity for additional documents is determined by the proposed development/use type and the requirements established by The Guidelines for Plantation Management (as amended). They may be produced concurrently or subsequent to the BMP.	Required
Plantation Management Plan: The Plantation Management Plan sets out the management actions and activities, as well as disturbance events and other relevant information for this project. The PMP intends to set out how the project will be run ('the management regime'). Where relevant, set out other information about how the project will be managed, including the management activities that have been or will be implemented to address identified risks.	Yes
Bushfire Preparedness and Response Plan: An operational document presenting prevention, preparedness, response, and recovery procedures and associated actions. As necessary, supporting information to justify determinations is included.	Yes
Summary Statement: The requirement for the Bushfire Management Plan for the Development Application planning purposes also includes additional requirements to manage the risks associated with the new activities on the Plantation site, which considers the plantation forestry methods being undertaken. The requirements for the subsequent plantation documentation will differ depending on which activity or activities the project is undertaking.	

THE PROPOSED DEVELOPMENT/USE – BUSHFIRE PLANNING RISK SUMMARY
Asset identification and risk assessment Assets at risk from bushfires in the Plantation area are recorded in the *Asset Risk Register* in the Plantation Management Plan (PMP) if applicable. Assets are divided into four categories: human settlement, economic, climate, and cultural. Each asset has been assigned a bushfire risk rating between low and extreme based on the risk assessment methodology. Plantation asset risk profile A summary of the risks assessed in the Plantation area is indicated in the Plantation Management Plan. The PMP shows the proportion of assets at risk from bushfires in each risk category at the time the PMP was prepared. This information may become outdated as risks are treated, or additional risks are identified and assessed. Risk acceptance criteria The acceptable level of risk for each asset category is shown in the PMP. A risk that is assessed as exceeding the appropriate risk limits will be considered for treatment. Treatment priorities The treatment priority for each asset is automatically assigned based on the asset's risk rating. Consequence and likelihood combine to give the risk rating and subsequent treatment priority for an asset. The treatment priority assigned will help inform decision-making for risk acceptability and the development of the Treatment Strategy and schedule. Risks below the acceptable level do not require treatment during the life of the Plantation Management Plan. They will be managed by routine plantation management controls and monitored to detect any increase in their risk rating.

THE PROPOSED DEVELOPMENT/USE – BUSHFIRE PLANNING COMPLIANCE SUMMARY		
Required SPP 3.7 Bushfire Protection Measures The Acceptable Solutions of the Bushfire Protection Criteria (Guidelines)		Assessment Outcome
Element	The Acceptable Solutions	
1: Location	A1.1 Development location	N/A
2: Siting and Design of Development	A2.1 Asset Protection Zone (APZ)	N/A
3: Vehicular Access	A3.1 Public roads	N/A
	A3.2a Multiple access routes	N/A
	A3.2b Emergency access way	N/A
	A3.3 Through-roads	N/A
	A3.4a Perimeter roads	N/A
	A3.4b Fire service access route	N/A
	A3.5 Battle-axe legs	N/A
	A3.6 Private driveways	N/A
4: Water	A4.1 Identification of future water supply	N/A
	A4.2 Provision of water for firefighting purposes	N/A
Summary Statement: Elements of the DPLH 'Guidelines' are not specifically relevant where the development proposal is for plantation purposes only and no built infrastructure or subdivision land use is proposed.		

1.0 Implementation

A major impact on the site assets (Plantation) is bushfire. Obligations for bushfire management arise from the *Bush Fires Act 1954 and* the *Code of Practice for timber Plantations in Western Australia*. The 'Act' and 'Code' place a responsibility on the landowner/plantation management to:

- Protect life and property from bushfire;
- Minimise the spread of bushfire originating from the plantation land, and
- Protect surrounding properties, community interests and State forests from the damaging effects of bushfires.

Bushfires present risks to the health, safety and welfare of personnel, contractors and visitors to the site. Fire and associated smoke can also impact the local community and neighbouring properties. This BMP indicates the required bushfire protection measures from a bushfire planning perspective for the Plantation site that aim to protect life and local community interests while minimising fire risk to the plantation assets. The Bushfire Management Plan contains both a planning component and an overview of the operational component, which should be read in conjunction with the *Plantation Management Plan* and *Preparedness and Response Plan* prepared for the sites.

Areas outside of the site are not under the control of the landowner. The management of these areas is limited generally to unprogrammed or uncoordinated with adjoining landowners seasonal planned burning (where undertaken by an adjoining landowner) and firebreak maintenance. Therefore, the potential for bushfire impact originating from the broader landscape external to the subject site has been considered in preparing the plans.

1.1 Local Government

Local Governments have a statutory ability to consider the impact of plantations or large areas of re-vegetation with local species and implement provisions to ensure safe management through their town planning scheme which may require additional considerations. The Plantation landowner is also required to comply with elements of the *Shire of Dandaragan Fire Break and Fuel Hazard Reduction Notice and Shire of Moora Fire Break Requirements (Notice)*, in conjunction with the Guidelines for Plantation Fire Protection.

This Bushfire Management Plan describes the measures developed to implement bushfire management strategies on the land to meet obligations and business priorities. The Plan provides the base framework for how the site manager/s intends to manage the accumulative fuel loads, firebreaks and access, water supplies for firefighting and respond to bushfires originating on or from an external impact to the site. It is not intended to repeat existing plans, policies or procedures, but to provide overarching guidance to the bushfire management arrangements. Included are strategies, and approaches to minimise the fire risks to the assets of value on the site and to neighbours and the wider community.

The broad range of vegetation types, fire history, climate change, weather conducive to bushfires, unpredictability between years and seasons and local vegetation values across the local area mean that the risk posed by bushfires varies significantly therefore there is a requirement for a planned approach to site management.

1.2 Plantation Managers

The landowner/plantation manager is responsible for the ongoing management of the plantation site. Future responsibilities for implementation and management of the bushfire protection measures may be established through contractor mutual agreement and contracted obligations for the project duration, in line with a project activity timelines schedule. As such, on formal cessation of the project works by either party, the responsibilities for the continued management of the bushfire protection measures detailed within the bushfire management plan for the site remain the responsibility of the landowner.

The term 'bushfire management' includes both fire prevention and fire suppression activities. It is recommended that a cooperative bushfire management and response arrangement is established between key local fire authorities and forms part of the annual reviewing of the bushfire management planning for the site. These arrangements assist the site landowner and/or manager in lessening accumulative bushfire fuel on their land and adequately responding to and assisting in controlling bushfires where conditions are tenable to do so. It also facilitates high levels of support and coordination between the agencies to ensure sufficient resources to respond to escalating bushfire situations which are beyond the capability of the site manager or any one agency. It provides for a shared responsibility and ability to operate within an inter-agency coordinated system.

Any substantial loss of plantation resources has long-term implications. In order to deliver bushfire protection to the greatest extent possible, Woodside recognises that it needs to:

- Work collaboratively with local fire authorities to develop bushfire management and operations plans;
- Implement programs for bushfire prevention, mitigation, preparedness, response and recovery;
- Work cooperatively with local fire authorities to respond to bushfires to minimise the adverse impacts on human life, on social, economic and environmental values;
- Use fire under appropriate conditions to promote ecosystem health, diversity and resilience in native vegetation areas, and as a risk reduction strategy;
- Maintain appropriate levels of bushfire management capability to effectively discharge its responsibilities as an organization, recognising that bushfire mitigation is a responsibility of the landowner/plantation management for this site.
- Woodside may also develop partnerships with First Nations peoples as the Traditional Owners and ongoing custodians of the land to ensure the maintenance and protection of their culture and values.

2.0 Planning for Plantation Fire Management

One of the greatest risks to the plantation for carbon stores is the impact of unplanned bushfires. The loss of significant areas of plantation or native forest ultimately impacts the ability to meet the carbon store commitments.

The Plantation which is intended to incorporate local native species is susceptible to bushfires, particularly at regular intervals. Historically native vegetation shows a tolerance to mild fire once native vegetation is established. However, when not killed outright, fire can damage plantation vegetation or greatly reduce growth rates. Whilst it may still be possible to recover plantation cell areas, it will be at a much-reduced carbon offset value until fully established again. There is a significant loss of resources and time to re-establish these areas if they are impacted by bushfires. The following mitigation measures detailed within this bushfire management plan have been considered for the preparation of the Plantation site and will be further detailed in subsequent preparedness and response plans.

2.1 External Fire Breaks and Setback Distances

Firebreaks and setback distances will be developed throughout the subject sites comprising external perimeter and internal firebreaks that form compartment cells and assist with hazard reduction measures that reduce fuel loads to protect neighbouring infrastructure and essential infrastructure, where existing, including any additional requirements determined by the Local Government.

Assessment of the broader landscape out to 1 kilometre of the plantation boundary ensures that neighbouring infrastructure is considered in the planning for the plantation site so as not to adversely impact adjoining land use or development.

The minimum setback distances as specified for Plantation Hazard Separation Zone and Asset Protection Zone Distances are detailed below.

1. The Shire of Dandaragan Fire Break and Fuel Hazard Reduction Notice and Shire of Moora Fire Break Requirements (Notice) standard requirement for an asset protection zone (APZ) dimension around a building or an asset of value is 20m.

2. Guidelines for Plantation Fire Protection 2011 require an asset protection zone (APZ) between the plantation and an existing or approved habitable building must be a minimum of 100 metres, unless the building has been constructed to an approved higher standard.

3. Guidelines for Plantation Fire Protection 2011 require an asset protection zone (APZ) between the plantation and an existing or approved non- habitable structure (i.e. sheds and enclosed storage areas) must be a minimum of 50 metres.

The above Guidelines for Plantation Fire Protection requirements for an APZ comprise the following:

PLANTATION AREA — Hazard Separation Zone/Low Fuel Zone <8t/ha + Firebreak 6m + APZ 20m < 2t/ha — HABITABLE BUILDING

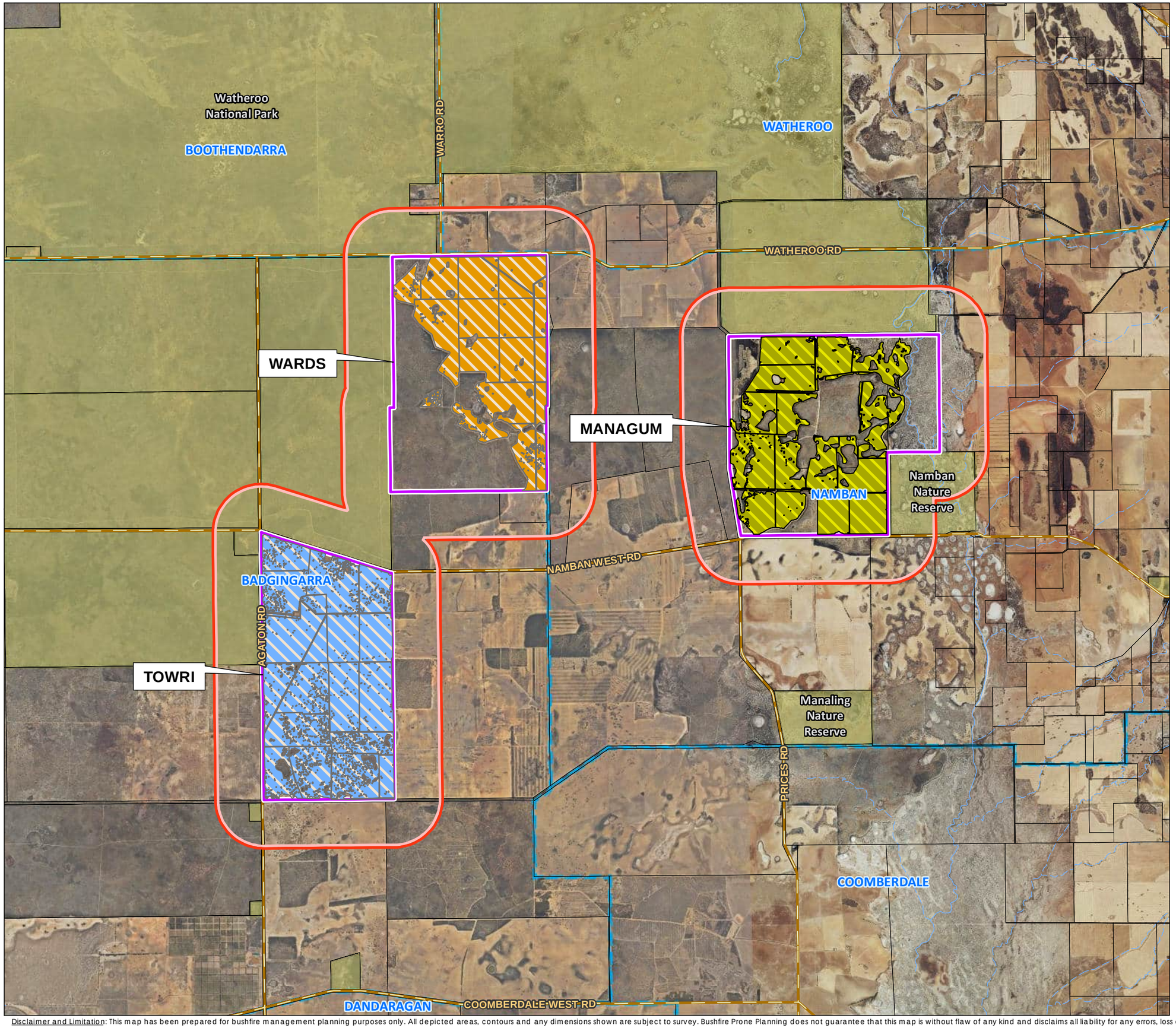
Total 100m

Refer to 'Appendix B' for advice on the asset protection zone minimal fuel condition standards.

Figure 1.2

Surrounding Land Use

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA



------ LEGEND -----

- Plantation Areas
- Other Lots
- 1 km Assessment Area
- Locality / Suburb

Property

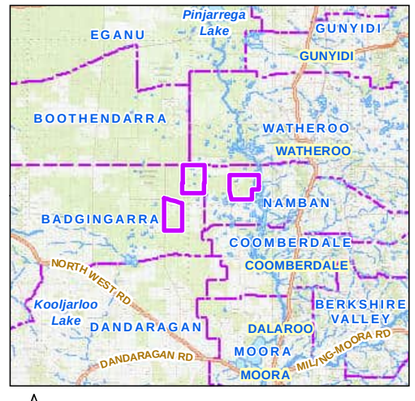
- Managum
- Towri
- Wards

Reserves

- Reserves

0 1 2 3 4 5
Kilometres

------ LOCALITY ------



Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 21/10/2024
Map updated by: Ian Ross 21/10/2024
A3 Scale 1:75,000

BUSHFIRE PRONE PLANNING

Map Document Path / Name: K:\Projects\Jobs 2024\240583 - (W'SIDE) Lot 3596 Watheroo Road Watheroo (BMP) (Parent Folder)\Mapping_Master\Mapping_IR\MXD\240583_Fig1-2_LAND_Overall.mxd

Figure 1.3

Bushfire Prone Area

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

BOOTHENDARRA
WARRO RD
WATHEROO
WATHEROO RD
WARDS
MANAGUM
NAMBAN
BADGINGARRA
NAMBAN WEST RD
AGATON RD
TOWRI
PRICES RD
COOMBERDALE
DANDARAGAN
COOMBERDALE WEST RD

------ LEGEND -----

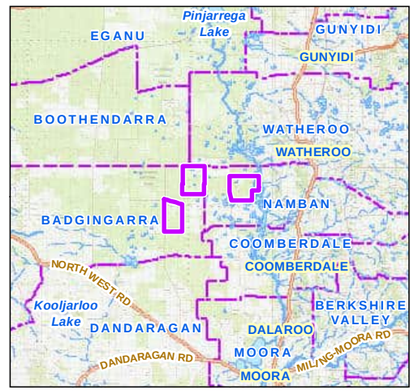
- Plantation Areas
- Other Lots
- Locality / Suburb

Bush Fire Prone

- Bushfire Prone Areas (2024)

0 1 2 3 4 5
Kilometres

------ LOCALITY ------



Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 21/10/2024
Map updated by: Ian Ross 21/10/2024
A3 Scale 1:75,000

BUSHFIRE PRONE PLANNING

Map Document Path / Name: K:\Projects\Jobs 2024\240583 - (W'SIDE) Lot 3596 Watheroo Road Watheroo (BMP) (Parent Folder)\Mapping_Master\Mapping_IR\MXD\240583_Fig1-3_BPA_Overall.mxd

2.1 Fuel Reduction

Hazardous fuel management considers the range of fire protection strategies and practices available and adopts those which best meet both fire protection objectives and the principles of environmental management. These may include use of fire in a controlled environment. Consideration will be given to:

- At an overall property scale, excluding the use of fire to sensitive areas on sites;
- A means to achieve ecological outcomes by altering habitat structure and composition of flora and fauna species;
- To protect or enhance water catchment on the site, historical, Indigenous and other cultural values;
- Accommodating fire protection objectives outlined in the Shire of Dandaragan Fire Break and Fuel Hazard Reduction Notice and Shire of Moora Fire Break Requirements (Notice).

Hazardous fuel management should consider rolling targets for seasonal prescribed burning subject to weather conditions or seasonal mechanical methods of hazardous fuel reduction areas within the site, including weed management by slashing, ploughing or other environmentally approved techniques.

The Preparedness and Response Plan will include the following:

- A developed planned burning program which plans for low-intensity burns, during autumn or late spring, that create a mosaic of fuels and will not scorch the canopy or kill trees so they can regenerate.
- Implementation of good hygiene measures to minimise the risk of dieback spread during activities.
- Planning for post-fire weed control to assist regeneration after fire.
- Consideration of burning intervals which will be influenced by fuel loads. Where possible and without compromising any bushfire mitigation requirements, extend the period between burns to assist in maintaining vegetation health.
- The planned fire regime will be developed to consider the frequency, season, intensity and pattern characteristics of fire. These can be influenced by decisions including how, when and under which conditions fires are lit.
- Consider fire exclusion, which can also be classed as a fire regime as plant and animal compositions will continue to change in the absence of fire.

Planned Burning

This bushfire management plan provides an overview of the suite of measures that will be undertaken to ensure carbon remains sequestered in the project area. This includes management actions that have or will be undertaken to prevent the risk of fire starting and spreading within the project site, including the frequency and scale of these actions. The management of accumulative fuel loads to reduce the intensity and spread of fires includes hazard-reduction burning (prescribed/planned burning). Ensuring managed burning will have a far lower impact on the site over the life of the project than an uncontrolled bushfire. All planned burns will have an approved operational plan prior to the commencement of burning. Safety and environmental considerations and potential impacts on other stakeholders are assessed as part of the planning process (due diligence).

Operational burn plans include:

- Burn objectives;
- An operational map;
- Environmental approvals;
- Burn area details;
- Resources required;
- Standards to be met;
- Checks and notifications to be undertaken;
- Authorisations to be obtained; and
- Post burn appraisals to be conducted.

A strategic burn plan will be developed with an annual review, to identify target areas and address changes to risk profile and other events that may influence bushfire on the site.

Approving Planned Burning

All site-specific burn plans must be approved by Woodside designated officer, or their delegate, and all burns must be authorized prior to commencement of burning. All planned burning is to be undertaken in accordance with State Legislation and Local Government requirements pursuant to provisions of the Bush Fires Act 1954.

Fuel Reduction planning components will include:

Geographical Information System Mapping (GIS)

- GIS analysis of spatial information such as the planning area, fire history, built, natural and cultural assets and values.
- Layers will be periodically reviewed and updated to incorporate new data and fire history, or site detail as required.
- Map layers are to be stored in the Corporate GIS database.

The Aggregation will have a series of 'Response' based maps which identify the following:

Assets at risk

- This map identifies fire-vulnerable asset location.
- Settlements/townships adjoining State Forest.
- Plantations high-value young regrowth areas.
- Land tenure boundaries.
- Probable high-intensity fire paths to plantation areas and fire-vulnerable assets on site.

Hazard reduction constraints

- Identify areas that are hazard reduction treatable and non-treatable land/ vegetation classification map.
- Non-burnable area categories (such as hazardous areas or areas such as peatlands).
- Land excluded from planned burning by environmental regulations.
- Plantation high value young regrowth areas.
- Fire sensitive area types in which mechanical fuel reduction is preferred to burning as a fuel management treatment *(Note: Grazing may also be a suitable option)*.
- Land not tenable for hazard reduction burning due to operational constraints (neighbour fencing/assets not feasible to protect, no reliable burn boundaries, access issues etc.).

3.0 Fire Management Plan

Woodside is to ensure capability for bushfire response within the plantation site to be defined and established in accordance with Woodside's risk-minimisation approach. The approach should incorporate daily readiness and preparedness which is informed by the Australian Fire Danger Rating (AFDR) and the status of fire activity in the surrounding areas on any given day.

The "Prevention, Preparedness, Response, Recovery model" is suggested as the framework for the delivery of bushfire management planning and programs undertaken by Woodside on plantation sites.

Preparedness should include:

A pre-incident readiness for the bushfire season, which considers resources and procedures for daily activities and requirements for fire preparedness and response or to assist local bushfire brigades with bushfire operations such as 'mop up'.

Hazardous fuel load reduction mitigation works, revised annually, with scheduled mitigation activities that reduce the risk of bushfire ignition and impact or support operational activities in terms of the ability to respond effectively to extinguishment of bushfire on the Plantation site.

Woodside (Plantation Management) will establish a relationship and maintain communication with local brigades on local bushfire issues. Firefighting capabilities include equipment on the plantation sites, water available for firefighting activities at strategic locations near roadways and central to the plantings, maintained accessways, maps at key entrances for fire and equipment information on the property.

3.1 Fire Management Plan

The requirement for the Bushfire Management Plan for the Development Application planning purposes also includes additional requirements to manage the risks associated with the new activities on the Plantation site, which considers the plantation forestry methods being undertaken. The requirements for the subsequent plantation documentation will differ depending on which activity or activities the project is undertaking.

Management plans to be developed in conjunction with this bushfire management plan are:

Plantation Management Plan: The Plantation Management Plan sets out the management actions and activities, as well as disturbance events and other relevant information for this project. The PMP intends to set out how the project will be run ('the management regime'). Where relevant, set out other information about how the project will be managed, including the management activities that have been or will be implemented to address identified risks.

Bushfire Preparedness and Response Plan: An operational document presenting prevention, preparedness, response, and recovery procedures and associated actions. As necessary, supporting information to justify determinations is included.

The area covered by these bushfire management plans will include the 3 proposed sites and 2 previously approved sites:

Manalling: 2947 Prices Road, Namban WA

Linscott: 4369 Watheroo Rd, Watheroo

Managum: Namban West Rd, Badgingarra, WA

Towri: 2248 Agaton Rd, Badgingarra, WA

Wards: Lot 3596 Watheroo Rd, Badgingarra, WA

Bushfire Prevention

The objective for Woodside plantation management is to work cooperatively with Department of Biodiversity, Conservation and Attractions (DCBA), Department of Fire and Emergency Service (DFES), local government authorities and other stakeholders on programs to prevent the occurrence of unplanned fires.

Measures for bushfire prevention are determined and implemented at a Management Area/Plantation Protection Area level. Measures applied are:

- Compliance with the Shire of Dandaragan Fire Break and Fuel Hazard Reduction Notice and Shire of Moora Fire Break Requirements (Notice) and DEFS declared Total Fire Ban days to prevent ignition by machinery and enforce fire use restrictions to reduce accidental ignition.
- Policy and process for ceasing plantation operations during extreme fire weather to reduce accidental ignitions.
- Stop/regulate access into the plantation or other areas of the property during adverse conditions.
- Undertaking fuel reduction planned burning programs. (This should be undertaken in accordance with state fire legislation and local fire permit requirements.

Planning and Preparedness

Woodside will aim to undertake fire prevention and preparedness activities in a planned and cohesive manner, delivering the best possible level of bushfire protection, as required by legislation, while simultaneously maximising ecological and other land management outcomes.

Measures applied are:

- Annual pre-readiness for the bushfire season, fire suppression strategies and priorities, and
- Annual hazardous fuel mitigation works, to mitigate the risk of bushfires on its managed land.

This provides for a consistent and cohesive approach for both suppression and fuel management activities.

Management activities must:

- Include an assessment of risk to life and property, economic risk to commercial assets, and risks to rare and threatened species and communities
- Describe the priorities for fire protection works as part of the annual review.

Pre-Incident Plans

Prior to fire season commencement each year, pre-incident preparedness is undertaken, to ensure effective response to bushfires on the site. Levels of preparedness and defined numbers of personnel and equipment required for initial attack are determined in accordance to predicted fire danger rating.

Pre-incident preparedness is to consider the following information:

- Fire preparedness guidelines and fire danger information (AFDR);
- Response arrangements (communication with local brigades and the local government);
- Local emergency services (volunteer bush fire brigades) contact information;
- Links to weather information; and
- Reviewed annually any recommendations or current strategies, prior to the commencement of the fire season.

4.0 Plantation Fire Protection Specifications

Local governments may add to or modify the acceptable solutions to recognise special local or regional circumstances (e.g., topography/vegetation/climate). These are to be endorsed by both the WAPC and DFES before they can be considered in planning assessments if being assessed under the (Guidelines DPLH 2021v1.4). The Local Government may consider variations to their Fire Break Notice. In these circumstances, the owner/occupier must request a variation. This BMP details the variation from the Fire Break Notice for consideration by the Shire/s.	
Do endorsed regional or local variations to the acceptable solutions apply to the assessments against the Bushfire Protection Criteria for the proposed development /use?	Yes
Existing Local Government Requirements	
Shire of Dandaragan: Plantations larger than 10 hectares Plantations established after 30 November 1984 that exceed 3 hectares in total area shall have a 10 metre wide fire break completely surrounding the perimeter of planted trees. Each compartment of a plantation is limited to an area of less than 30 hectares in size. Each 30 hectare compartment shall have a 10 metre wide fire break surrounding the planted trees. Furthermore all plantations shall comply with requirements contained in the Department of Fire and Emergency Services guidelines or standards for Plantation Fire Protection.	
Shire of Moora: Plantations as of 1 January 2020: Plantations 3 hectares or less • Require a 6-metre-wide by 4-metre-height clearance fire break around the entirety. Plantations over 3 hectares • 15-metre-wide by 4-metre-height clearance fire break around the entirety • 6-metre-wide by 4-metre-height clearance internal fire breaks a minimum of every 30 hectares • Minimum of 25,000L water supply and hard stand for every 50 hectares no further than 20 minutes turnaround.	
Summary Statement: To better suit the Carbon Farming Initiative, the proposed compartment size and layout consider the suite of management measures proposed for the subject site/s and the environmental benefits of reforestation for carbon capture. Along with curbing greenhouse gas emissions, CCS benefits the environment by preserving biodiversity and improving air quality. It captures and stores CO2, protecting ecosystems vulnerable to climate change impacts. The proposed compartment size and layout are detailed in the following table.	

4.1 Compartment Size and Layout

Carbon farming is proposed to be conducted by WEC(S) using the Carbon Farming Initiative (CFI) Act - Reforestation by Environmental or Mallee Plantings-FullCAM 2020 method. (Refer to Plantation Management Plan).

Table 1: Compartment Size and Layout

Compartment Size (Cell)	Up to ~100 hectares each 'Cell' based on local conditions (sandy and gravel soils, moderate rainfall, existing remnant vegetation, plantation species (scrub) and density of the proposed planting (~470 stems per hectare). Plantation mapping is indicative of the final established planting area available. For the whole property, the average expected planted vegetation height at maturity will be 5.8 meters.

Figure 1.4

Planting Cells, Limited to Areas Under 100 ha

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

BOOTHENDARRA
WATHEROO
WATHEROO RD
WARDS
MANAGUM
BADGINGARRA
NAMBAN
NAMBAN WEST RD
AGATON RD
TOWRI
PRICES RD
COOMBERDALE

4 ha, 49.2 ha, 65 ha, 55.6 ha, 27.2 ha, 22.6 ha, 8.4 ha, 18.8 ha, 64.2 ha, 56.1 ha, 91.1 ha, 63.1 ha, 59.7 ha, 20.6 ha, 6.7 ha, 79 ha, 17.8 ha, 31.6 ha, 42.3 ha, 21.2 ha

62.6 ha, 55 ha, 52.5 ha, 65.9 ha, 3.3 ha, 2.9 ha, 48.3 ha, 40.4 ha, 44.6 ha, 10 ha, 21.5 ha, 52.2 ha, 48.9 ha, 87.1 ha, 55.6 ha, 37 ha, 55.2 ha, 54.8 ha, 64 ha

55 ha, 55.8 ha, 68.1 ha, 14.5 ha, 97.8 ha, 3 ha, 63.9 ha, 101.7 ha, 25.2 ha, 65.7 ha, 49.9 ha, 81.6 ha, 86 ha, 95.6 ha, 77.3 ha, 49 ha, 70.1 ha, 73.7 ha, 26 ha, 49.1 ha

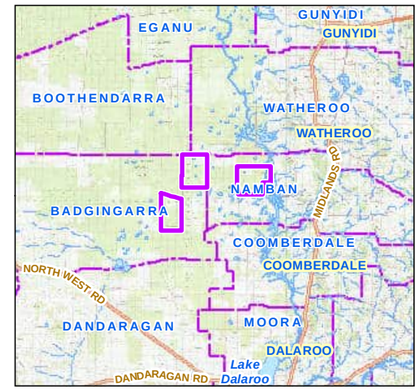
------ LEGEND -----

- Plantation Areas
- Other Lots
- Proposed Plantation
- Firebreak 10m
- Firebreak 20m
- Add Firebreak 10m
- Add Firebreak 20m
- Main Access Gate
- Access Gate
- Dam Centre
- House
- Solar Pump
- Water Tank
- Above Ground Water Pipe
- Access and Fire Tracks
- Below Ground Water Pipe
- Fence Line
- Overhead Powerlines
- Locality / Suburb

Total planting area approx 2880 ha

0 1 2 3
Kilometres

------ LOCALITY ------



Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:50,000

BUSHFIRE PRONE PLANNING

Map Document Path / Name: K:\Projects\Jobs 2024\240583 - (W'SIDE) Lot 3596 Watheroo Road Watheroo (BMP) (Parent Folder)\Mapping_Master\Mapping_IR\MXD\240583_Fig1-4_CELLS_Overall.mxd

Table 2: Planting Management Guide – Canopy >2m tall and aim for cover of 20% at maturity over the planting area

Lifecycle situation	Fuel Description	Bushfire Hazard
e.g. Young plantation up to 2 years after planting	Grassy fuels dominate. Fuel load: <5 tonnes per hectare. Vulnerable to grass fires. Grass and weed control required.	Low Hazard
e.g. Developing plantation 3 to 6 years after planting	Grassy fuel cover. Fuel rates depend on site location and will be a mixture of grass and some leaf litter and fine limbs. Fuel load: <5 tonnes per hectare.	Moderate Hazard
e.g. Plantation 6 to 10 years after planting	Continuous fuel cover, primarily of grass and leaf litter. Leaf litter will be around 2 to 3 tonnes per hectare. Grass fuels will be around 5 tonnes per hectare unless harvested/slashed.	Moderate Hazard unless fuel loads are reduced
	Planting format will result in canopy closure within plantation.	
	Continuous fuel cover, primarily of grass and leaf litter. Leaf litter will be greater than 3 tonnes per hectare. Grass fuels will be around 5 tonnes per hectare unless harvested/slashed. When combined available grass fuels and leaf litter exceed 10 tonnes per hectare, hazard reduction work must be undertaken. It is acceptable for between 20 to 40 percent of the area to be > 8t/ha in any year, but the fuel load must be < 5t/ha in the 300 metres adjacent to any external compartment boundary.	
	Planting format will permit canopy closure across the site. When this occurs the fuel accumulation rate will increase.	
e.g. Plantation greater than 10 years after planting		Moderate to High

4.2 Fire Breaks and Access

Install and maintain external perimeter and internal firebreaks that form compartment cells and engage in hazard reduction measures that reduce fuel loads so as to protect neighbouring communities and essential infrastructure, including any additional requirements by the Local Government.

Table 3: Fire Break and Access

Firebreaks & Access	A minimum 10 metre to 20 metre bare earth immediately inside all external boundaries of the plantation areas. (The 20 metre perimeter firebreak will comprise a low fuel zone/low threat buffer (no planting) incorporating a mineral earth firebreak of not less than 10 metres where soil erosion issues are problematic, up to 20 metres in width where soil conditions are suitable for mineral earth firebreak construction. A minimum width of 6 metres of bare earth for all internal firebreaks for compartments (Cells) not larger than ~100 hectares. (Internal firebreaks will be 6 metre mineral earth with some areas having up to 14 metre additional low fuel zone/low threat buffer.) Maintained in a trafficable condition for emergency vehicles (fire appliances) with a vertical axis clearance of 4 metres for all firebreaks. Firebreaks must be maintained in line with the annual firebreak notice developed by the Local Government. Access to meet the technical requirements as detailed in 'Appendix C'		
Dwellings and assets of value	Habitable Buildings:100 metre hazard separation zone incorporating 6 metre firebreak. Non-Habitable Buildings/Sheds: 50 metre hazard separation zone incorporating 6 metre firebreak.		
Western Power – Both sides from centreline	Power – Single pole support up to 33kV	Horizontal Clearance 7 metres	Vertical Clearance 3 metres around lines
	Power – Double pole support up to 66 - 132kV	Horizontal Clearance 7 metres	Vertical Clearance 4 metres around lines
	Power – Steel pylon support up to 330kV	Contact service provider	Vertical Clearance Contact service provider
Telstra (No heavy machinery to turn around on lines)	Telephone (Copper)	5 metres both sides or 6 metres total if accurately line marked	
	Telephone (Fibre optic)	10 metres both sides	
Water/sewer pipelines (Water Corporation)	6 metres		
Gas pipeline	30 metres easement plus additional setbacks as required by the WAPC Planning Bulletin 87 and the Department of Planning Land Use Guidelines in pipeline corridors or subsequent versions of these documents.		

*All clearance/separation distances may be subject to changes and must be confirmed with the relevant agency

4.3 Water Supply

The plantation sites, Managum, Towri and Wards, will incorporate strategic water supply points which will be audited by the plantation management before the start of the fire season. The water points will provide sufficient water supply for firefighting and site operations.

Table 4: Water Supply Requirements

Water Supplies	Minimum Requirement: Maintain a strategic water supply of minimum 50,000ltrs (tank/s) dedicated to fire fighting on site. Woodside has pre-ordered six 25kL Polyethylene tanks which will be installed at strategic locations across the new properties for a total of 150kL. The existing properties, Manalling and Linscott, have three 110kL water tanks for a total of 330kL. The provisional location of these new tanks is indicated in 'Appendix D'. Water sources are required to be positioned to provide a maximum 20-minute refill turnaround from anywhere within the plantation. The water source point must have a hardstand area for heavy trucks to park on whilst drawing water. Suitable metal fittings must be available on the water tank for fire appliance connection.

5.0 Equipment and training

The Landowner has a legal responsibility to prevent fire from escaping their land in accordance with the Bush Fire Act 1954. It must be possible for Woodside personnel and the Landowner (or appropriate representatives) to attend a bushfire on the plantation site and respond with appropriate resources to the bushfire.

5.1 Equipment

Maintain bushfire management resources according to that defined in the site Plantation preparedness and Response Plan which is formulated around daily Australian Fire Danger Ratings – AFDR and pre-determined responses to conditions conducive to bushfires.

Woodside (WEC(S)) owns 4 vehicle mounted firefighting units, one water truck and one firefighting trailer, dedicated to plantation sites.

As a minimum for the plantation site, Woodside is to ensure 2 x suitably constructed 4WD vehicle-mounted 'slip-on' units and 1 x trailer-mounted fire pump/water tank unit, to ensure sufficient mobile water capacities and fire-fighting ability, are available for responding to bushfire within the plantation site boundaries. This equipment will be on-site whilst Woodside personnel/workers are undertaking activities conducive to the ignition of a bushfire and available during the bushfire season.

Plantation management should have access to, own, or contract light and heavy machinery that can be used in firefighting. Additional Heavy plant such as front-end loaders (FEL) may be specifically stood-up and ready for deployment, particularly during periods of increased fire danger.

Heavy plant to be fit for purpose, that is Roll Over Protection (ROP's), Falling Object Protection (FOP's) and (OPG) Operator Protection Guarding compliant, which meets the relevant Australian or International Standard. Personnel (Heavy Plant Operators) must be trained and highly experienced in operating and supervising heavy plant. To the greatest extent possible, site managers should always provide a heavy Plant Supervisor (machine supervisor) to direct and work with heavy plant on the fire ground to ensure communications with the plant operator and to also provide fire protection for plant working on fire lines.

- Firefighting equipment must be in good working order and well maintained;
- All machinery is to be fitted with approved, serviceable fire extinguisher in line with Australian Standards (This is a requirement of the Bush Fires Act 1954 and Bush Fires Regulations 1954);
- Refueling of machinery and equipment will not occur in the planted area. Refueling must be undertaken on a hardstand area, free from flammable material;
- Vehicles and machinery operating in the plantation during the bushfire season must comply with the Bush Fires Act 1954 and must adhere to the requirements of Harvest and Vehicle Movement Bans and Total Fire Bans when set by the Local Government and/or Fire and Emergency Services Commissioner.

Radio Communications and Technology

Woodside is to maintain its own radio network which can be used in bushfire control situations and daily operational requirements. Liaison with local fire agencies is required to develop a working relationship to ensure that during a bushfire incident plantation personnel can communicate effectively with other agencies to ensure inter-operability. Procedures relating to appropriate radio installation, upkeep and maintenance should be developed.

DFES has implemented the WAERN (Western Australian Emergency Response Network) throughout the Wheatbelt and southern Western Australia provide bushfire appliances the ability to communicate with UHF (CB) radios (these dual band radios allow communications on both the UHF and VHF band and can be setup as a repeater if required).

In addition, Telstra GO Repeaters are network coverage extension devices that maximise mobile signal in areas of low coverage. Telstra GO Repeaters receive a signal from a nearby Telstra mobile base station before amplifying and distributing this improved mobile signal to the desired area via an antenna. Mobile & Vehicle Cel Fi Go Repeater Kit can be installed in site vehicles as appropriate.

The availability of options such as 'StarLink' mobility can also provide high-speed, low-latency broadband internet in the most rural and remote locations.

5.2 Training

Capability requirements for the plantation site should define the number of fire operations and support personnel that are necessary to undertake programmed mitigation works and provide assistance at fires on-site at any given time. Woodside personnel are expected to be bushfire trained where required to respond directly or to support the firefighting effort in other ways. Seasonal personnel may be necessary to supplement firefighting capacity to meet the seasonal operational requirement numbers.

It is recommended that Personnel are to be trained in a range of competencies to enable plantation resources to assist with the management of fires, with roles ranging from on ground basic fire fighters through to senior management roles. Once fires go beyond Woodside capability, local government and DFES resources are likely to take over operational control of an incident.

Bushfire training is an essential component of safe, efficient and effective fire management operations. Woodside are to:

- Apply national standards as the basis of competency definition, or where these do not exist, accepted industry standards;
- Define competency requirements;
- Review the competencies of personnel according to established currency requirements;
- Provide and/or facilitate training programs and competency assessments for skills acquisition, maintenance and personal and professional development to ensure personnel have the required competencies.
- Maintain systems to record training and competency for all fire management activities.
- Training requirements and review/expiry dates are to be tracked and monitored through an appropriate system for all operational Plantation firefighting personnel.

Personal Protective Equipment (PPE)/Personal Protective Clothing (PPC)

All plantation personnel involved in fire prevention and fire operations are to be supplied with, and expected to wear or carry, standard firefighting PPE/ PPC. PPE/ PPC is to meet Australian Standards and it is the responsibility of the wearer to ensure it is maintained and worn or carried in accordance with plantation policy and protocols.

Currency and competency

Personnel who participate in fire related operational activities including both bushfire and prescribed burning should log the details of their hours and operational roles in an appropriate system. This enables capture of activity for maintenance of currency and competency against fire qualifications.

Post Incident and End-Of-Season Debriefs and Reports

Major fire suppression events undertaken by Plantation personnel may be subject to a post incident debrief.

End of season debriefs are also undertaken and actions or 'lessons learnt' identified and addressed in training, procedure review and/or development or communicated out to all firefighting personnel.

The format and scope of the post incident debrief depends on the incident level and the nature of events during the incident. The style of debriefing can range from an informal discussion between plantation manager and personnel on a small incident, to a formal debriefing with relevant agencies on a complex incident.

6.0 Harvesting and Post Plantation Management

The mixed-species environmental planting consists of a mix of tree species native to the local area. The local mixed-species and the planting location determine how much carbon is stored. This methodology provides for crediting emission reductions via establishing permanent (non-harvest) forests. As part of the Emissions Reduction Fund (ERF) Scheme, crediting is based on carbon sequestered in the trees as they grow.

6.1 Harvesting

The environmental plantings at this location are intended to be permanent and will not be harvested.

6.2 Post Plantation Management

Under the Emissions Reduction Fund (ERF) scheme, the plantings from this project will be subject to a 100-year permanence period. During this time, an obligation remains to maintain carbon stores in the project area.

The landowner is responsible for the ongoing management of the plantation site. Future responsibilities for implementation and management of the bushfire protection measures may be established through mutual agreement and contracted obligations for the project duration, in line with the project activity timelines schedule. As such, on formal cessation of the project by either party, the responsibilities for the continued management of the bushfire protection measures detailed within the bushfire management plan for the site is the responsibility of the landowner.

Bushfire Recovery

Directly, or assist other agencies to undertake recovery activities of bushfire affected areas on site in reconstruction of the physical infrastructure and restoration of plantation areas.

Other bushfire recovery actions may include operations to salvage, repair, rehabilitate or replace fire damaged assets and sites disturbed by fire control operations.

All recovery operations and actions post bushfire should be carried out in accordance with an Incident Action Plan for the bushfire.

Further significant recovery operations may include salvage operations for recoverable vegetation and replanting of plantation or silvicultural operations to facilitate regeneration.

Rehabilitation

Undertake rehabilitation of disturbance resulting from firefighting operations as soon as practical after the bushfire is contained. Where substantial rehabilitation works are or will be required, a rehabilitation plan is prepared and implemented. In some circumstances, the bushfire may be declared a natural disaster and funding for rehabilitation and recovery works may be available under the Natural Disasters Recovery Fund. Where possible, rehabilitation activities such as erosion control measures should be undertaken in conjunction with control activities when they allow for such works.

Monitoring and Recording

All data, such as fire histories, prescribed burning and results of management programs to be recorded on a regular basis to update GIS layers and to inform annual planning and reporting.

Requirements for additional records or reporting, such as a fire investigation, planning developments, training and Quality Assurance Audits/Operational Inspection Reports will be maintained in a format that complies with the Woodside Records Management Policy.

Evidence to support any claims must be kept ensuring these records provide details of land management actions with respect to activities that reduce bushfire risk on the site. This might include copies of prescribed burn permits, date stamped photos of fire hazard reduction activities or receipts from service providers.

Details for each individual bushfire including situation reports, communication, mapping, photos, video, documents, predictions, and Incident Action Plans (IAP) should be developed and archived.

All details including logs, maps and planning should be captured and stored in case it needs to be produced later, where appropriate.

7.0 Plantation Species

Mixed species composition for long duration non-harvesting carbon stores requires the long term management of fuel loads in these plantings and may be limited due to contract restrictions which needs to be factored. Most plantations have a high grassy fuel understory for the first few years after planting which will require management strategies to be implemented.

It is assumed that plantation areas will be managed to some degree (through fuel load reduction) in a reduced fuel condition in the understory with a predominance of emergent grasses, which will support fragmented wind-driven grassland fire behaviour in the early phases of plant establishment. The vegetation classifications given below assume insufficient management for classification as Low Threat vegetation, and thus classification follows AS3959-2018.

Species with mature heights of maximally ~6m or less, or where heights of >6m are rare, are considered shrubs, and classified to either Class C Shrubland or Class D Scrub depending on predicted mature heights. Species with mature heights are commonly >6m are considered as trees, Class A Forest (AS3959-2018).

7.1 Plantation Species Category

The re-vegetation planting will comprise a mixed species composition (Various Species - With eucalyptus, melaleuca and allocasuarina being the dominant genus) for long-duration non-harvesting carbon stores which requires the long term management of fuel loads in these plantings and may be limited due to contract restrictions which needs to be factored.

The proposed planting density and arrangement are intended to comprise vegetation less than 6m in height and ~20% foliage cover based on local environmental factors and soil types. Although vegetation assessment using AS3959-2018 would indicate this vegetation classification (at maturity and in the absence of shrub understorey) as closer to Class D Scrub rather than typical Class A Forest, the possibility for increased densities and mature tree heights has been considered. Plantation post vegetation mapping for the subject sites is based on a 'worst case scenario' Class A Forest'.

Planting will include a mixture of species built from surveys of the native remnant vegetation on Watheroo and some of the surrounding area. Species mixes will be matched as far as possible with soil types on which different native vegetation systems grow. See below for a complete species list:

Table 5: Plant Species

Acacia blakelyi	*Calothamnus quadrifidus*	*Hakea lissocarpha*
Acacia scirpifolia	*Corymbia calophylla*	*Hakea preissii*
Actinostrobus sp. 'WOODSIDE'	*Corymbia calophylla*	*Hakea prostrata*
Allocasuarina campestris	*Eremaea pauciflora*	*Hakea trifurcata*
Allocasuarina huegeliana	*Eucalyptus camaldulensis x rudis*	*Leptospermum erubescens*
Allocasuarina humilis	*Eucalyptus drummondii*	*Melaleuca atroviridis*
Banksia attenuata	*Eucalyptus eudesmioides*	*Melaleuca hamulosa*
Banksia burdetii	*Eucalyptus gittinsii subsp. lllucida*	*Melaleuca preissiana*
Banksia menziesii	*Eucalyptus opimiflora*	*Melaleuca thyoides*
Banksia prionotes	*Eucalyptus pyriformis*	*Melaleuca viminea*
Banksia sessilis (or local equiv)	*Eucalyptus todtiana*	*Xylomelum angustifolium*
Callistemon phoeniceus	*Grevillea leucopteris*	

Environmental Considerations

Many bushfire prone areas also have high biodiversity values. Consideration of environmental priorities within the boundaries of the land being developed can avoid excessive or unnecessary modification or clearing of vegetation. Approval processes (and exemptions) apply at both Commonwealth and State levels.

Any 'modification' or 'clearing' of vegetation to reduce bushfire risk is considered 'clearing' under the *Environmental Protection Act 1986* (EP Act) and requires a clearing permit under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations) – unless for an exempt purpose.

Clearing native vegetation is an offence, unless done under a clearing permit or the clearing is for an exempt purpose. Exemptions are contained in the EP Act or are prescribed in the Clearing Regulations (note: these do not apply in environmentally sensitive areas).

The *Department of Water and Environmental Regulation* (DWER) is responsible for issuing 'clearing' permits and the framework for the regulation of clearing. Approvals under other legislation, from other agencies, may also be required, dependent on the type of flora or fauna present.

Local Planning Policy or Local Biodiversity Strategy: Natural areas that are not protected by the above Act and Regulation (or any other National or State Acts) may be protected by a local planning policy or local biodiversity strategy. Permission from the local government will be required for any modification or removal of native vegetation in these Local Natural Areas (LNA's). Refer to the relevant local government for detail.

For further Information refer to Guidelines v1.4, the Bushfire and Vegetation Factsheet - WAPC, Dec 2021 and https://www.der.wa.gov.au/our-work/clearing-permits

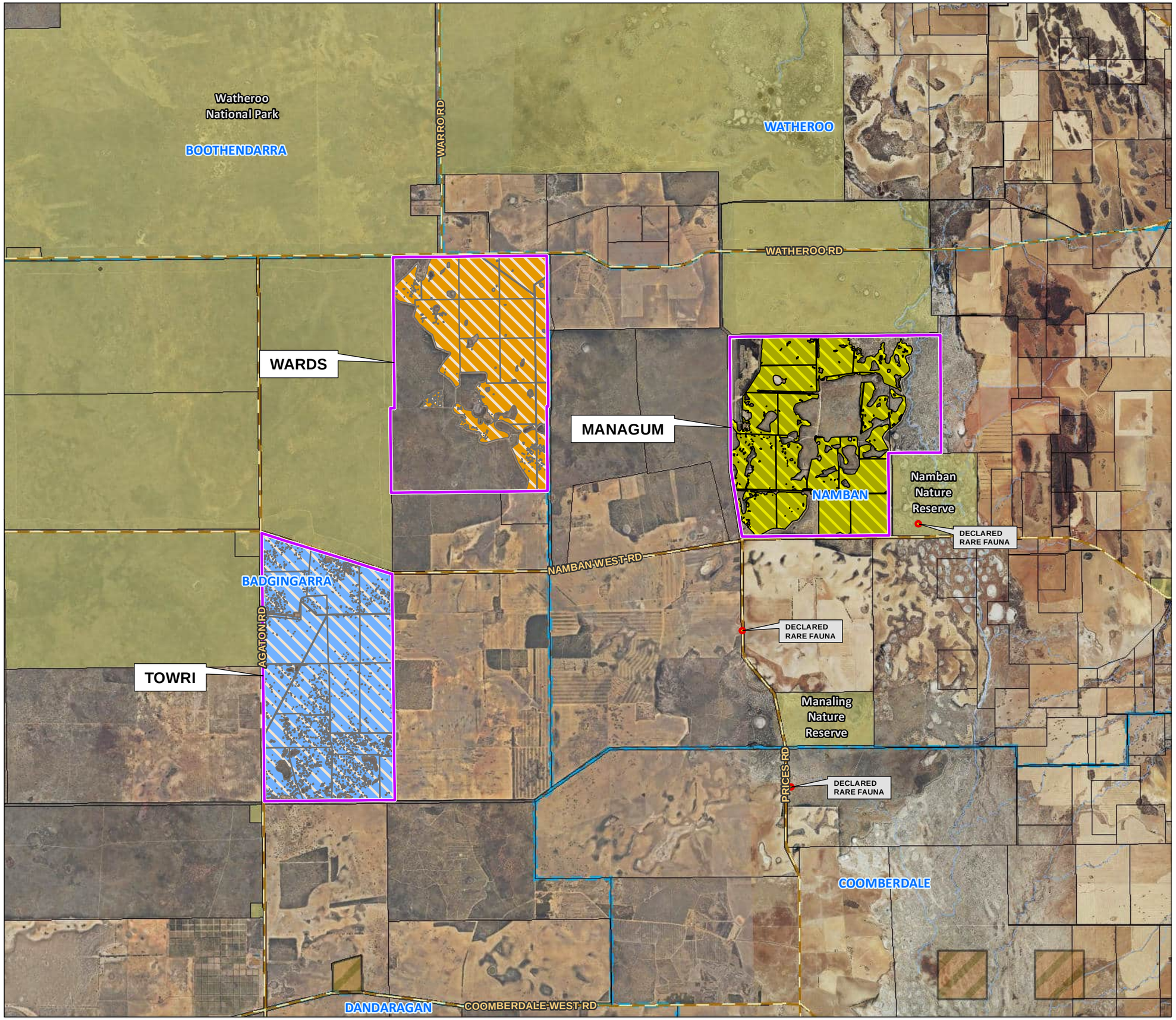
Woodside (and any future landowner/s) are to adopt principles of environmental care when planning and conducting bushfire management activities in line with the following:

- Protect water quality and quantity by implementing measures designed to minimise the impact of bushfire on swampy ground and bodies of standing water, and their physical, chemical, and biological qualities;
- Protect soil to maintain its physical and chemical properties and promote stabilisation of bare or disturbed earth;
- Consider landscape values, geomorphologic features, and cultural and historical sites when planning operations;
- Protect indigenous flora and fauna following bushfire suppression by measures which promote the re-establishment of the ecological processes existing prior to the bushfire;
- Avoid the possible introduction and spread of pest plants and animals, plant diseases, and insect pests;
- Address air quality by measures which diminish the impacts of smoke generated by prescribed burning;
- Maintain the robustness and diversity in WA's indigenous flora and fauna species populations and communities through use of appropriate fire regimes and bushfire mitigation activities.

Figure 2.1

Environmental, Biodiversty and Conservation Value Map

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA



------ LEGEND -----

- Plantation Areas
- Other Lots
- Locality / Suburb

Property

- Managum
- Towri
- Wards

Reserves

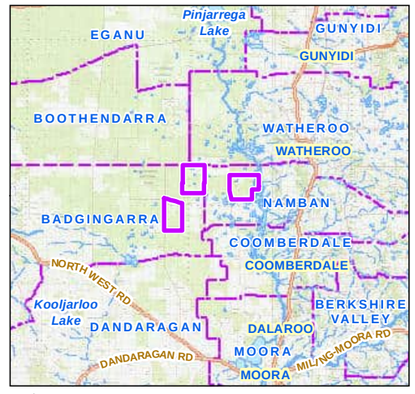
- Reserves

Environmentally Sensitive

- Declared Rare Fauna
- Aboriginal Heritage Place

0 1 2 3 4 5
Kilometres

------ LOCALITY ------



N

BUSHFIRE PRONE PLANNING

Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:75,000

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Figure 3.1.0a

Classified Vegetation & Topography

PLANTATION AREA : TOWRI
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

------ LEGEND -----

- Plantation Areas
- Other Lots
- Photo & Direction
- 150 m Assessment Area

Classified

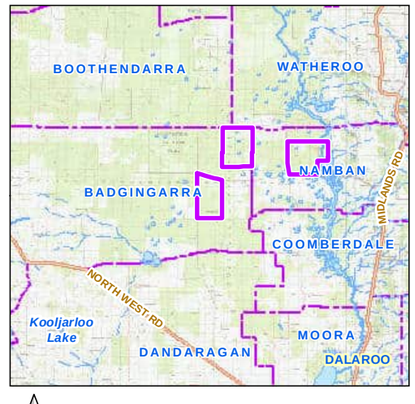
- Class (D) Scrub
- Class (G) Grassland

Infrastructure

- Access Gate
- Solar Pump
- Water Tank
- Access and Fire Tracks
- Fence Line
- Overhead Powerlines

0 200 400 600 800 1,000
Metres

------ LOCALITY ------



Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:25,000

BUSHFIRE PRONE PLANNING

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Figure 3.1.0b

Classified Vegetation & Topography

PLANTATION AREA : WARDS
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

WATHEROO RD

------ LEGEND -----

- Plantation Areas
- Other Lots
- Photo & Direction
- 150 m Assessment Area

Classified

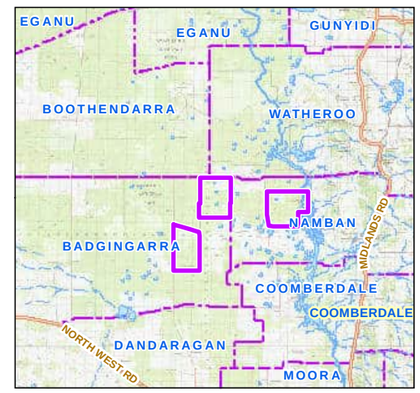
- Class (A) Forest
- Class (D) Scrub
- Class (G) Grassland
- Excluded 2.2.3.2 (e)

Infrastructure

- Access Gate
- Dam Centre
- Solar Pump
- Water Tank
- Below Ground Water Pipe
- Fence Line
- Overhead Powerlines

0 200 400 600 800 1,000
Metres

------ LOCALITY ------



Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:20,000

BUSHFIRE PRONE PLANNING

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Figure 3.1.0c

Classified Vegetation & Topography

PLANTATION AREA : MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

------ LEGEND ------

- Plantation Areas
- Other Lots
- Photo & Direction
- 150 m Assessment Area

Classified Vegetation

- Class (A) Forest
- Class (D) Scrub
- Class (G) Grassland
- Excluded 2.2.3.2 (e)

Infrastructure

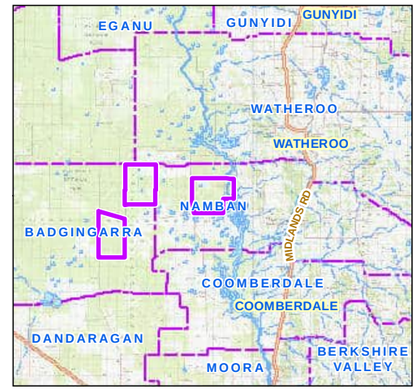
- Dam Centre
- Main Access Gate
- Access and Fire Tracks
- Fence Line

Image
RGB

Red: Band_1
Green: Band_2
Blue: Band_3

0 200 400 600 800 1,000
Metres

------ LOCALITY ------



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Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:20,000

BUSHFIRE PRONE PLANNING

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Figure 3.1.1a

Classified Vegetation & Topography (Post Development)

PLANTATION AREA : TOWRI
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

NAMBAN WEST RD
AGATON RD
NORTH WEST RD

------ LEGEND -----

- Plantation Areas
- Other Lots
- 150 m Assessment Area

Classified

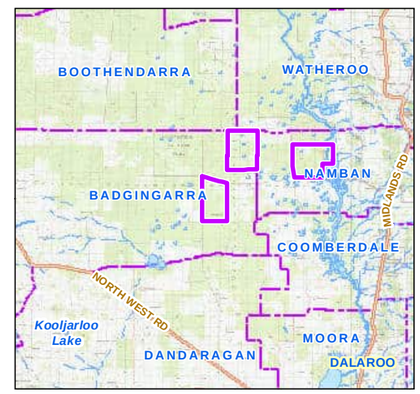
- Class (A) Forest
- Class (D) Scrub
- Class (G) Grassland
- Excluded 2.2.3.2 (e)

Infrastructure

- Access Gate
- Solar Pump
- Water Tank
- Access and Fire Tracks
- Fence Line
- Overhead Powerlines

0 200 400 600 800 1,000
Metres

------ LOCALITY ------



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Coordinate System: GDA 1994 MGA Zone 50
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Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
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BUSHFIRE PRONE PLANNING

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Figure 3.1.1b

Classified Vegetation & Topography (Post Development)

PLANTATION AREA : WARDS
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

WATHEROO RD

------ LEGEND -----

- Plantation Areas
- Other Lots
- 150 m Assessment Area

Classified Vegetation

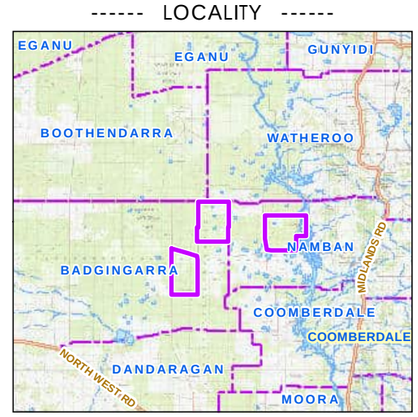
- Class (A) Forest
- Class (D) Scrub
- Class (G) Grassland
- Excluded 2.2.3.2 (e)

Infrastructure

- Access Gate
- Dam Centre
- Solar Pump
- Water Tank
- Below Ground Water Pipe
- Fence Line
- Overhead Powerlines

0 200 400 600 800 1,000
Metres

------ LOCALITY ------



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Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:20,000

BUSHFIRE PRONE PLANNING

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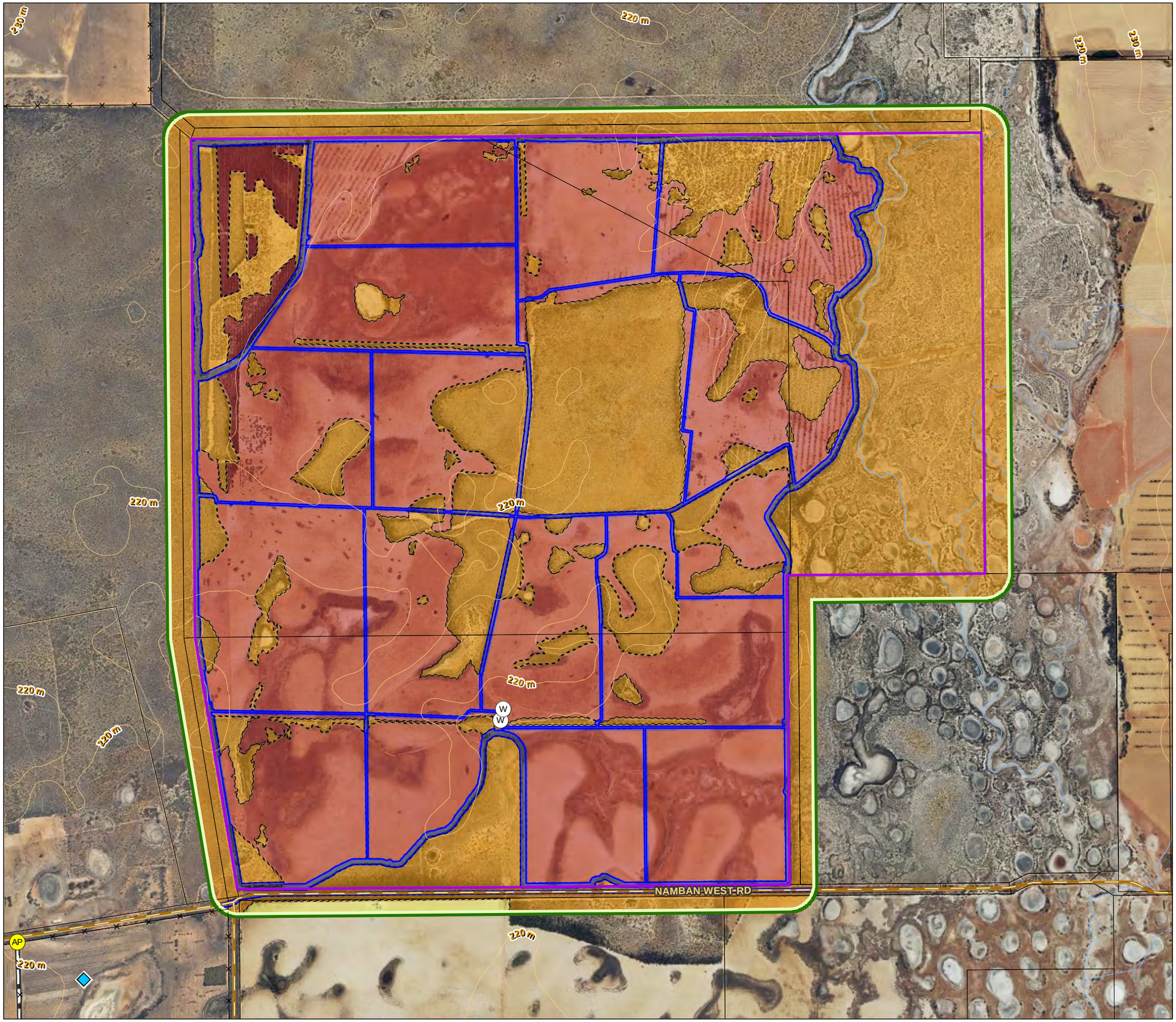
Figure 3.1.1c

Classified Vegetation & Topography (Post Development)

PLANTATION AREA : MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA



------ LEGEND -----

- Plantation Areas
- Other Lots
- 150 m Assessment Area

Classified Vegetation

- Class (A) Forest
- Class (D) Scrub
- Class (G) Grassland
- Excluded 2.2.3.2 (e)

Infrastructure

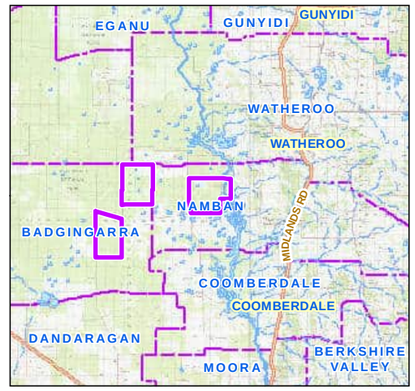
- Dam Centre
- Main Access Gate
- Access and Fire Tracks
- Fence Line

Image
RGB

Red: Band_1
Green: Band_2
Blue: Band_3

0 200 400 600 800 1,000
Metres

------ LOCALITY ------



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BUSHFIRE PRONE PLANNING

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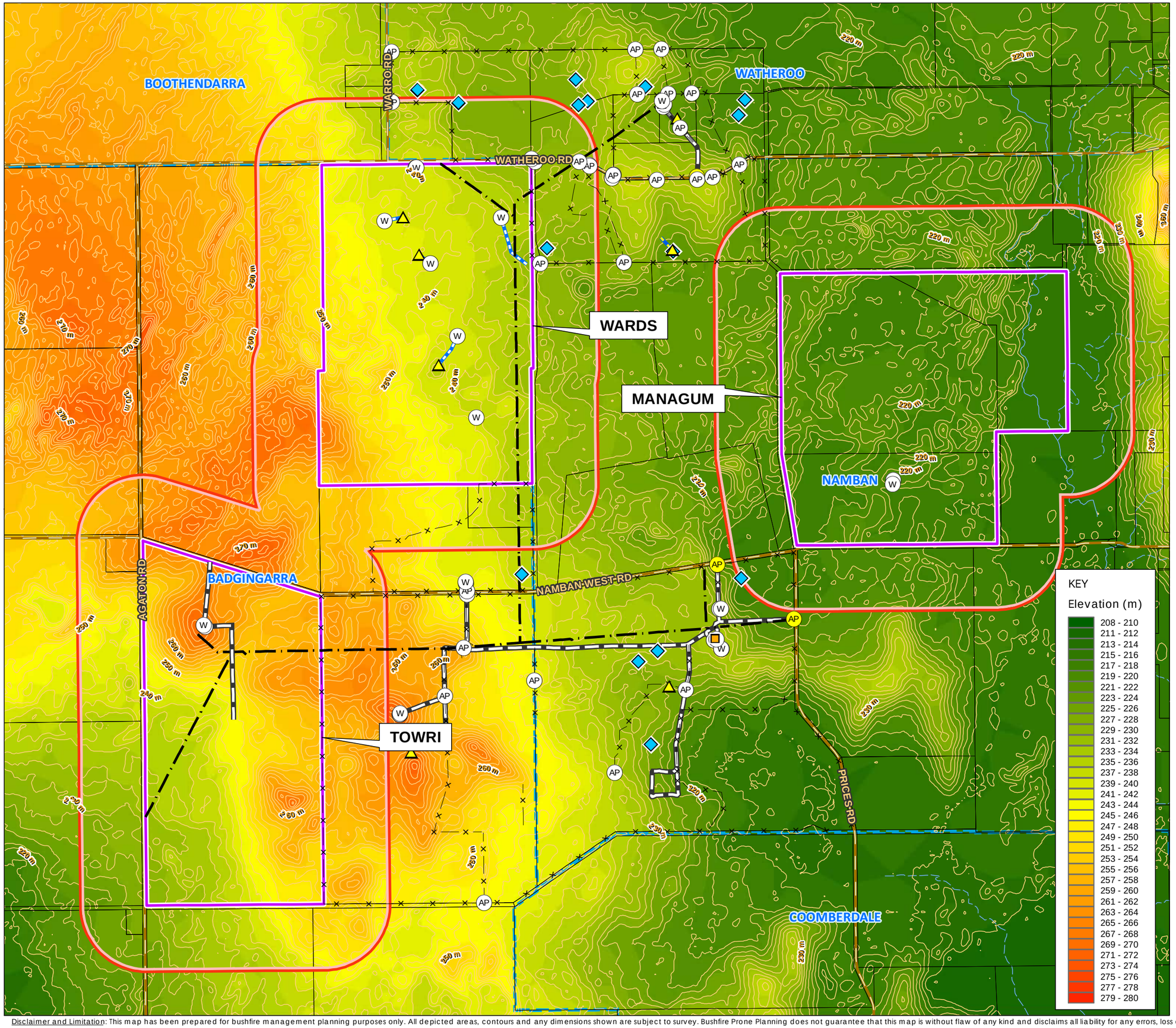
Figure 3.1.2

Terrain Elevation Map

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

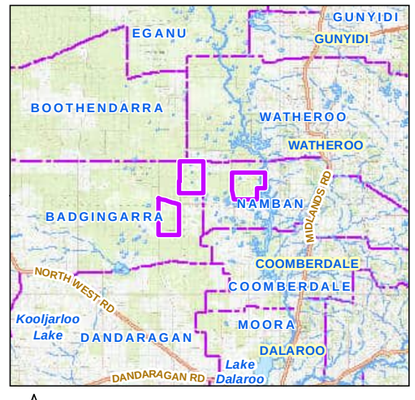


------ LEGEND ------

- Plantation Areas
- Other Lots
- 1 km Assessment Area
- Main Access Gate
- Access Gate
- Dam Centre
- House
- Solar Pump
- Water Tank
- Above Ground Water Pipe
- Access and Fire Tracks
- Below Ground Water Pipe
- Fence Line
- Overhead Powerlines
- Locality / Suburb

0 1 2 3
Kilometres

------ LOCALITY ------



Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:55,000

BUSHFIRE PRONE PLANNING

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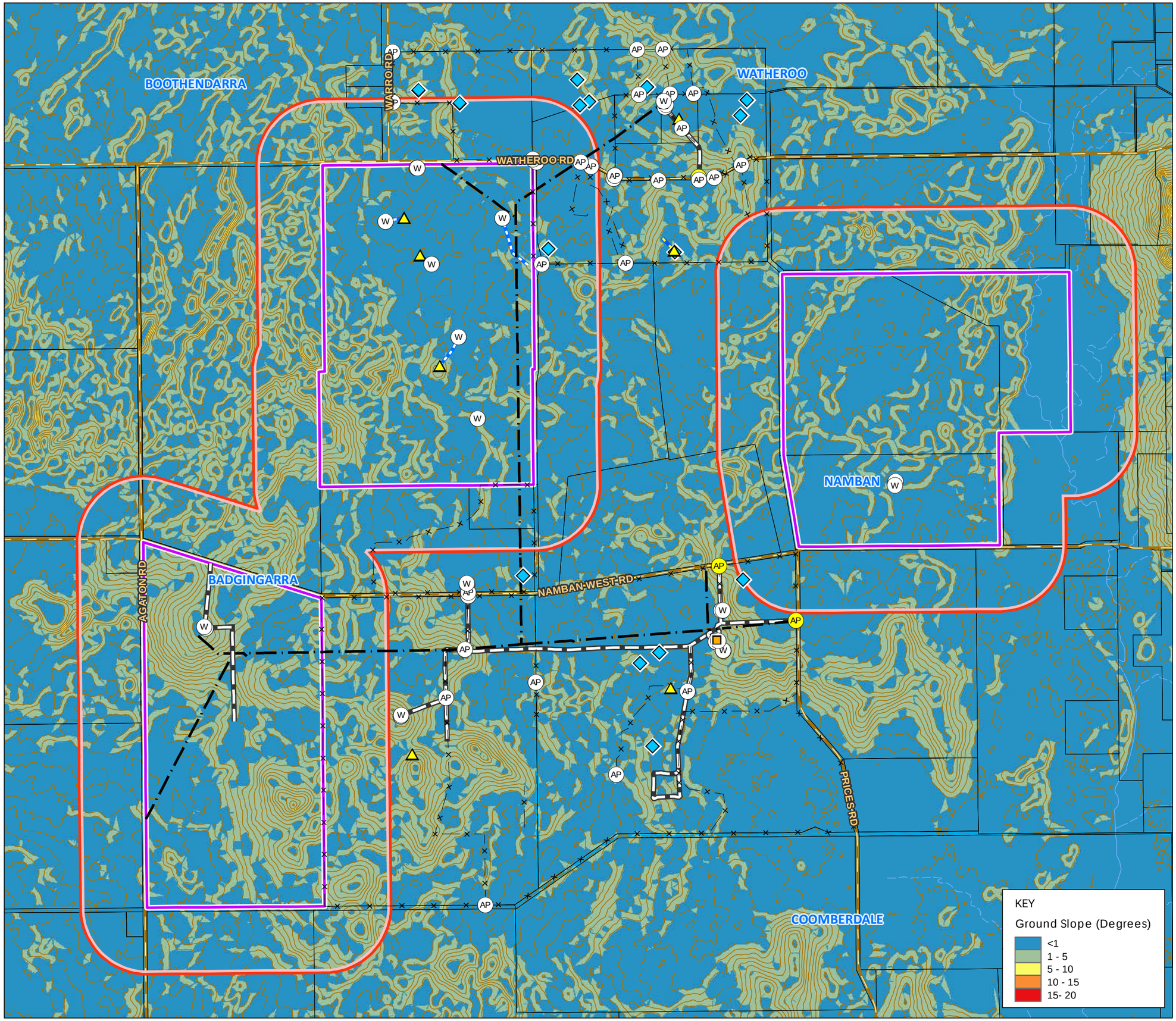
Figure 3.1.3

Terrain Slope Map

PLANTATION AREAS : WARDS, TOWRI, AND MANAGUM
WATHEROO, BADGINGARRA AND NAMBAN
SHIRE OF DANDARAGAN
SHIRE OF MOORA

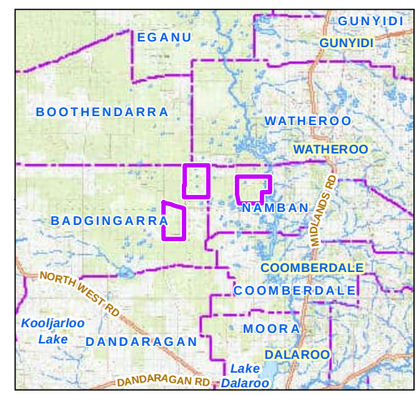


------ LEGEND ------

- Plantation Areas
- Other Lots
- 1 km Assessment Area
- Main Access Gate
- Access Gate
- Dam Centre
- House
- Solar Pump
- Water Tank
- Above Ground Water Pipe
- Access and Fire Tracks
- Below Ground Water Pipe
- Fence Line
- Overhead Powerlines
- Locality / Suburb

0 1 2 3
Kilometres

------ LOCALITY ------



N

BUSHFIRE PRONE PLANNING

Aerial Imagery : Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map compiled by: Ian Ross 23/10/2024
Map updated by: Ian Ross 23/10/2024
A3 Scale 1:55,000

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8.0 Responsibilities for Implementation and Management of the Bushfire Protection Measures

8.1 Landowner/Plantation Manager Responsibilities – Prior to Operation

LANDOWNER/PLANTATION MANAGER RESPONSIBILITIES – PRIOR TO OPERATION	
No.	Implementation Actions
1	The local government may condition a development application approval with a requirement for the landowner/proponent to register a notification onto the certificate of title and deposited plan. This will be done pursuant to Section 70A *Transfer of Land Act 1893* as amended ('Factors affecting use and enjoyment of land, notification on title'). This is to give notice of the bushfire hazard and any restrictions and/or protective measures required to be maintained at the owner's cost. This condition ensures that: 1. Landowners/proponents are aware their lot is in a designated bushfire prone area and of their obligations to apply the stated bushfire risk management measures; and 2. Potential purchasers are alerted to the Bushfire Management Plan so that future landowners/proponents can continue to apply the bushfire risk management measures that have been established in the Plan.
2	The subject lot/s are to be compliant with the current version of the *Shire of Dandaragan Fire Break and Fuel Hazard Reduction Notice and Shire of Moora Fire Break Requirements (Notice)*, issued under s33 of the Bushfires Act 1954.
3	Construct/Maintain vehicular access routes within the subject sites to comply with the technical requirements referenced in the BMP and the relevant local government annual firebreak notice.
4	Install/Maintain the required firefighting static water supply to comply with the technical requirements stated in the BMP.
5	Implement the bushfire protection measures that have been established within this BMP as measures established by the acceptable solutions.
6	Indicate on plantation map and erect signage to show compartment (Cell) name/number, to be prominently displayed within the site that informs those persons onsite the Cell location in the event of a bushfire. This will include evacuation route information.
7	A BAL assessment report may be required for new building works to confirm determined ratings and will be required when ratings are indicative. BAL certificates will need to be issued to accompany building applications. The BMP may also establish, as an additional bushfire protection measure, that construction requirements to be applied will be those corresponding to a specified higher BAL rating. Compliance with the Building Code of Australia (Volumes 1 and 2 of the National Construction Code), will require certain bushfire resistant construction requirements be applied to residential buildings in bushfire prone areas (i.e., Class 1, 2 and 3 and associated Class 10a buildings and decks). Other classes of buildings may also be required to comply with this construction when established by the relevant authority or if identified as an additional bushfire protection measure within the BMP.

	The deemed to satisfy solutions that will meet the relevant bushfire performance requirements are found in AS 3959 – Construction of Building in Bushfire Prone Areas (as amended) and the NASH Standard - Steel Framed Construction in Bushfire Areas (as amended).

8.2 Landowner/Plantation Manager Responsibilities – Ongoing Management

LANDOWNER/PLANTATION MANAGER – ONGOING MANAGEMENT	
No.	Management Actions
1	Comply with the Local Government/s Fire Break and Fuel Hazard Reduction Notice issued under s33 of the Bush Fires Act 1954. Check the notice annually for any changes.
2	Maintain vehicular access routes within the lot to comply with the technical requirements referenced in the BMP and the relevant local government annual firebreak notice.
3	Maintain the signposted 'Cell' indicators.
4	Maintain the static firefighting water supply tanks and associated pipes/fittings and vehicle hardstand in good working condition.
5	Maintain the bushfire protection measures that have been established within this BMP as measures additional to those established by the acceptable solutions.
6	Annually review the Bushfire Preparedness and Response Plan and complete all actions at the appropriate times of the year.
7	The bushfire-specific content of the operation's site emergency plan must be reviewed annually, relevant information updated and all bushfire-related preparation procedures must be carried out.
8	Implement the bushfire protection measures that have been established within this BMP as strategies established by the acceptable solutions.
9	Ensure all future buildings the landowner has responsibility for, are designed and constructed in full compliance with: • The bushfire-resistant construction requirements of the Building Code of Australia (Volumes 1 and 2 of the National Construction Code), as established by the Building Regulations 2012 (WA Building Act 2011); and Any additional bushfire protection measures this Bushfire Management Plan has established are to be implemented.
10	Ensure that builders engaged to construct dwellings/additions and/or other relevant structures on the lot, are aware of the existence of this approved Bushfire Management Plan (BMP). The plan identifies that the development site is within a designated bushfire-prone area and states the indicative (or determined) BAL rating(s) that may (or will) be applied to buildings/structures. A BAL assessment report may be required to confirm determined ratings and will be required when ratings are indicative. BAL certificates will need to be issued to accompany building applications. The BMP may also establish, as an additional bushfire protection measure, that construction requirements to be applied will be those corresponding to a specified higher BAL rating. Compliance with the Building Code of Australia (Volumes 1 and 2 of the National Construction Code), will require certain bushfire-resistant construction requirements to be applied to residential buildings in bushfire-prone areas (i.e., Class 1, 2 and 3 and associated Class 10a buildings and decks). Other classes of buildings may also be required to comply with this construction when established by the relevant authority or if identified as an additional bushfire protection measure within the BMP.

	The deemed to satisfy solutions that will meet the relevant bushfire performance requirements are found in AS 3959 – Construction of Building in Bushfire Prone Areas (as amended) and the NASH Standard - Steel Framed Construction in Bushfire Areas (as amended).

APPENDIX A: DETAILED ASSESSMENT DATA AND SUPPORTING INFORMATION

A1: AS3959-2018 Assessment Inputs Common to the Method 1 and Method 2 Procedures

A1.1: FIRE DANGER INDICES (FDI/FDI/GFDI)

When using Method 1 the relevant FDI value required to be applied for each state and region is established by AS 3959:2018, Table 2.1. Each FDI value applied in Tables 2.4 – 2.7 represents both the Forest Fire Danger Index (FFDI) and a deemed equivalent for the Grassland Fire Danger Index (GFDI), as per Table B2 in Appendix B. When using Method 2, the relevant FFDI and GFDI are applied.

The values may be able to be refined within a jurisdiction, where sufficient climatological data is available and in consultation with the relevant authority.

Relevant Jurisdiction:	WA	Region:	Whole State	Method 1	Applied FDI:	80
				Method 2	Applied FFDI:	N/A
					Applied GFDI:	N/A

A1.2: Vegetation Assessment and Classification

Vegetation Types and Classification

In accordance with AS 3959:2018 Clauses 2.2.3 and C2.2.3.1, all vegetation types within 100 metres of the 'site' (defined as "the part of the allotment of land on which a building stands or is to be erected"), are identified and classified. Any vegetation more than 100 metres from the site that has influenced the classification of vegetation within 100 metres of the site, is identified and noted. The maximum excess distance is established by AS 3959: 2018 Clause 2.2.3.2 and is an additional 100 metres.

Classification is also guided by the Visual Guide for Bushfire Risk Assessment in WA (WA Department of Planning February 2016) and any relevant FPA Australia practice notes.

Modified Vegetation

The vegetation types have been assessed as they will be in their natural mature states, rather than what might be observed on the day. Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its expected re-generated mature state. Modified areas of vegetation can be excluded from classification if they consist of low threat vegetation (refer to Appendix B) and that any required active management can be expected to continue in perpetuity, and this can be adequately justified.

The Influence of Ground Slope

Where significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 Clauses 2.2.5 and C2.2.5.

THE INFLUENCE OF VEGETATION GREATER THAN 100 METRES FROM THE SUBJECT SITE	
Vegetation area(s) within 100m of the site whose classification has been influenced by the existence of bushfire prone vegetation from 100m – 200m from the site:	N/A
Assessment Statement:	No vegetation types exist close enough, or to a sufficient extent, within the relevant area to influence the classification of vegetation within 100 metres of the subject site.

<table>
<tr><th colspan="8">VEGETATION CHARACTERISTICS – 'TOWRI'</th></tr>
<tr><td rowspan="5">Classification (Existing)</td><td colspan="2">(D) Scrub</td><td rowspan="5">Plantation sites classification (Post-Development)</td><td colspan="3" rowspan="5">(A) Forest</td></tr>
<tr><td colspan="2">(C) Shrubland</td></tr>
<tr><td colspan="2">(G) Grassland</td></tr>
<tr><td colspan="2">-</td></tr>
<tr><td colspan="2">-</td></tr>
<tr><td rowspan="2">Types Identified</td><td colspan="2">Open scrub D-14</td><td colspan="2">Low open shrubland G-19</td><td colspan="3">Low open shrubland G-19</td></tr>
<tr><td colspan="2">Low shrubland C-12</td><td colspan="2">Sown pasture G-26</td><td colspan="3">Open tussock G-23</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td>N/A</td><td colspan="2">Applied Range (Method 1)</td><td colspan="3">Downslope >0-5 degrees</td></tr>
<tr><td colspan="2">Foliage Cover (all layers)</td><td>>30%</td><td>Shrub/Heath Height</td><td><2m</td><td>Tree Height</td><td>Up to 6m</td></tr>
<tr><td colspan="2" rowspan="3">Additional Justification:</td><td colspan="6">'Towri' site

Areas of mixed vegetation species belonging to Extreme and Moderate Bushfire Hazard Levels vegetation characteristics:</td></tr>
<tr><td colspan="3">Extreme: (D) Scrub.</td><td colspan="3">Moderate: (C) Shrubland & (G) Grassland.</td></tr>
<tr><td colspan="6">Scrub Vegetation includes predominantly areas of open scrub, including Banksia with shrubs of mixed species composition. Shrubs less than 2m in height. Foliage cover for open scrub is >30% within its natural state. Small areas of Low Open Woodland across the plantation sites, interface with Scrub, particularly within road reserves.</td></tr>
<tr><td colspan="2">Post Development Assumptions:</td><td colspan="6">A forest classification has been applied to the plantation areas. Native Mixed Eucalypt Species (trees ~6m in height at maturity)

On-site land will be re-vegetated with eucalyptus, melaleuca and allocasuarina being the dominant genus. Proposed planting densities constitute a 'Forest' vegetation for the Cells. Class G Grassland will be revegetated into Class A Forest and Class D Scrub mix.</td></tr>
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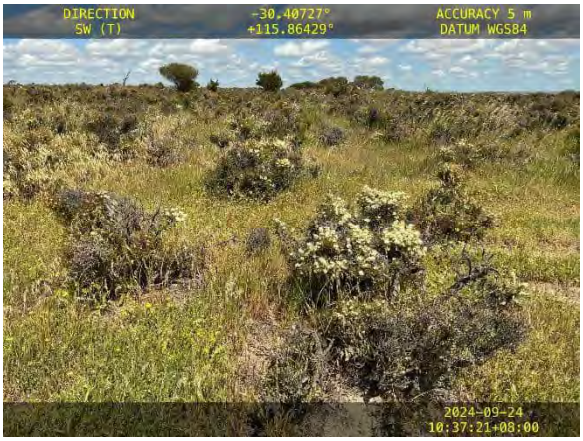

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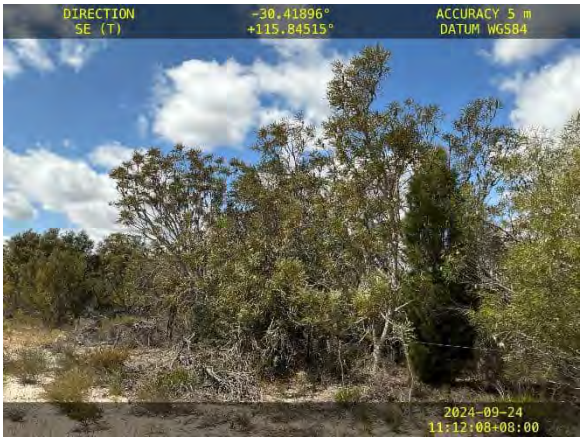

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<tr><td>Classification (Existing)</td><td colspan="2">(G) Grassland</td><td colspan="2">Plantation site classification (Post-development)</td><td colspan="3">(A) Forest</td></tr>
<tr><td rowspan="2">Types Identified</td><td colspan="3">Sown pasture G-26</td><td colspan="2">Open tussock G-23</td><td colspan="2">Low shrubland C-12</td></tr>
<tr><td colspan="7">Low open woodland G-08</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td colspan="2">N/A</td><td colspan="2">Applied Range (Method 1)</td><td colspan="2">Downslope >0-5 degrees</td></tr>
<tr><td colspan="2">Foliage Cover (all layers)</td><td><10%</td><td>Shrub/Heath Height</td><td>N/A</td><td>Tree Height</td><td colspan="2"><10m</td></tr>
<tr><td colspan="2" rowspan="3">Additional Justification:</td><td colspan="6">'Towri' Site

Areas of mixed vegetation species belonging to Moderate Bushfire Hazard Levels vegetation characteristics:</td></tr>
<tr><td colspan="3">-</td><td colspan="3">Moderate: (C) Shrubland & (G) Grassland.</td></tr>
<tr><td colspan="6">Small areas of Low Open Woodland and Low Shrubland pockets across the plantation sites, interface with Grassland.</td></tr>
<tr><td colspan="2">Post Development Assumptions:</td><td colspan="6">A forest classification has been applied to the plantation areas. Native Mixed Eucalypt Species (trees ~6m in height at maturity)

On-site land will be re-vegetated with eucalyptus, melaleuca and allocasuarina being the dominant genus. Proposed planting densities constitute a 'Forest' vegetation for the Cells. Class G Grassland will be revegetated into Class A Forest and Class D Scrub mix.</td></tr>
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<tr><td colspan="2">(C) Shrubland</td></tr>
<tr><td colspan="2">(G) Grassland</td></tr>
<tr><td colspan="2">-</td></tr>
<tr><td colspan="2">-</td></tr>
<tr><td rowspan="2">Types Identified</td><td colspan="2">Open scrub D-14</td><td colspan="2">Low open woodland G-08</td><td>Low open shrubland G-19</td></tr>
<tr><td colspan="2">Low shrubland C-12</td><td colspan="2">Sown pasture G-26</td><td>Tussock grassland G-22</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td>N/A</td><td>Applied Range (Method 1)</td><td colspan="2">Downslope >0-5 degrees</td></tr>
<tr><td colspan="2">Foliage Cover (all layers)</td><td>>30%</td><td>Shrub/Heath Height</td><td><2m</td><td>Tree Height</td><td>Up to 6m</td></tr>
<tr><td colspan="2" rowspan="3">Additional Justification:</td><td colspan="5">'Wards' site

Areas of mixed vegetation species belonging to Extreme and Moderate Bushfire Hazard Levels vegetation characteristics:</td></tr>
<tr><td colspan="3">Extreme: (D) Scrub.</td><td colspan="3">Moderate: (C) Shrubland & (G) Grassland.</td></tr>
<tr><td colspan="6">Scrub Vegetation includes predominantly areas of open scrub, including Banksia with shrubs of mixed species composition. Shrubs less than 2m in height. Foliage cover for open scrub is ~30% within its natural state. Small areas of Low Open Woodland across the plantation sites, interface with Scrub, particularly within road reserves.</td></tr>
<tr><td colspan="2">Post Development Assumptions:</td><td colspan="5">A forest classification has been applied to the plantation areas. Native Mixed Eucalypt Species (trees ~6m in height at maturity)

On-site land will be re-vegetated with eucalyptus, melaleuca and allocasuarina being the dominant genus. Proposed planting densities constitute a 'Forest' vegetation for the Cells. Class G Grassland will be revegetated into Class A Forest and Class D Scrub mix.</td></tr>
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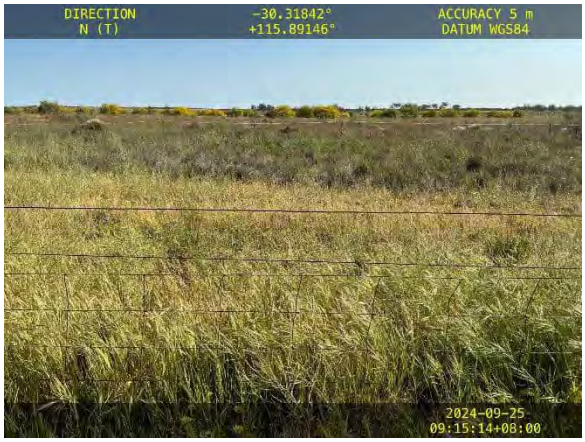

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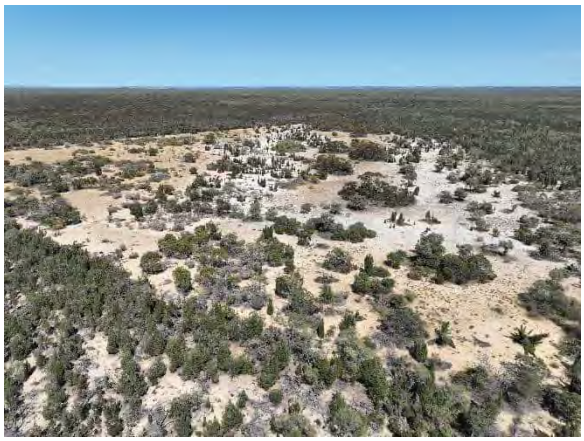

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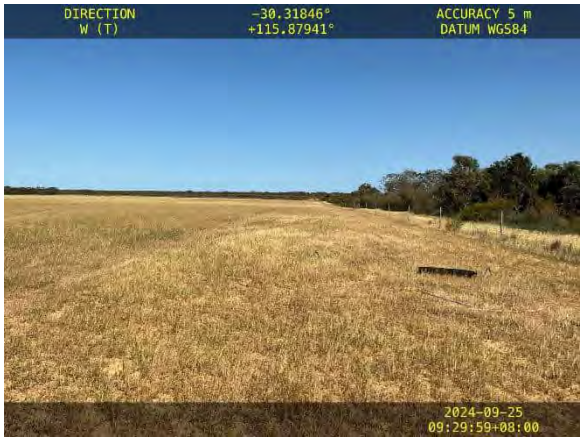

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<tr><td rowspan="2">Types Identified</td><td colspan="7">Sown pasture G-26 Dense sown pasture G-25 -</td></tr>
<tr><td colspan="7">Low open woodland G-08</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td colspan="2">N/A</td><td colspan="2">Applied Range (Method 1)</td><td colspan="2">Downslope >0-5 degrees</td></tr>
<tr><td colspan="2">Foliage Cover (all layers)</td><td><10%</td><td>Shrub/Heath Height</td><td>N/A</td><td>Tree Height</td><td colspan="2"><10m</td></tr>
<tr><td colspan="2" rowspan="3">Additional Justification:</td><td colspan="6">'Wards' Site
Areas of Grassland/Pasture Land
Areas of mixed vegetation species belonging to Moderate Bushfire Hazard Levels vegetation characteristics:</td></tr>
<tr><td colspan="3">-</td><td colspan="3">Moderate: (G) Grassland</td></tr>
<tr><td colspan="6">Small areas of Low Open Woodland pockets across the plantation sites, interface with Grassland.</td></tr>
<tr><td colspan="2">Post Development Assumptions:</td><td colspan="6">A forest classification has been applied to the plantation areas. Native Mixed Eucalypt Species (trees ~6m in height at maturity)

On-site land will be re-vegetated with eucalyptus, melaleuca and allocasuarina being the dominant genus. Proposed planting densities constitute a 'Forest' vegetation for the Cells. Class G Grassland will be revegetated into Class A Forest and Class D Scrub mix.</td></tr>
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<tr><td>Types Identified</td><td colspan="2">Pine plantation</td><td colspan="3">-</td><td>-</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td>N/A</td><td colspan="2">Applied Range (Method 1)</td><td colspan="2">Downslope >0-5 degrees</td></tr>
<tr><td colspan="2">Foliage Cover (all layers)</td><td>30-70%</td><td>Shrub/Heath Height</td><td>N/A</td><td>Tree Height</td><td>Up to 30m</td></tr>
<tr><td colspan="2" rowspan="3">Additional Justification:</td><td colspan="5">'Wards' site
Areas of Pine vegetation species belonging to Extreme Bushfire Hazard Levels vegetation characteristics:</td></tr>
<tr><td colspan="3">Extreme: (A) Forest.</td><td colspan="3">-</td></tr>
<tr><td colspan="6">Pine vegetation with grass understorey across the plantation sites.</td></tr>
<tr><td colspan="2">Post Development Assumptions:</td><td colspan="5">A forest classification has been applied to the plantation areas. Native Mixed Eucalypt Species (trees ~6m in height at maturity)

On-site land will be re-vegetated with eucalyptus, melaleuca and allocasuarina being the dominant genus. Proposed planting densities constitute a 'Forest' vegetation for the Cells. Class G Grassland will be revegetated into Class A Forest and Class D Scrub mix.</td></tr>
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<tr><td colspan="2">(C) Shrubland</td></tr>
<tr><td colspan="2">(G) Grassland</td></tr>
<tr><td colspan="2">-</td></tr>
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<tr><td>Types Identified</td><td colspan="6">Open scrub D-14 Low open woodland G-08 Low open shrubland G-19
Sown pasture G-26 Open tussock G-23</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td>N/A</td><td colspan="2">Applied Range (Method 1)</td><td colspan="2">Downslope >0-5 degrees</td></tr>
<tr><td colspan="2">Foliage Cover (all layers)</td><td>>30%</td><td>Shrub/Heath Height</td><td><2m</td><td>Tree Height</td><td>Up to 6m</td></tr>
<tr><td colspan="2">Additional Justification:</td><td colspan="5">‘Managum’ site

Areas of mixed vegetation species belonging to Extreme and Moderate Bushfire Hazard Levels vegetation characteristics:

Extreme: (D) Scrub. | Moderate: (C) Shrubland & (G) Grassland.

Scrub Vegetation includes predominantly areas of open scrub, including Banksia with shrubs of mixed species composition. Shrubs less than 2m in height. Foliage cover for open scrub is ~30% within its natural state. Small areas of Low Open Woodland across the plantation sites, interface with Scrub, particularly within road reserves.</td></tr>
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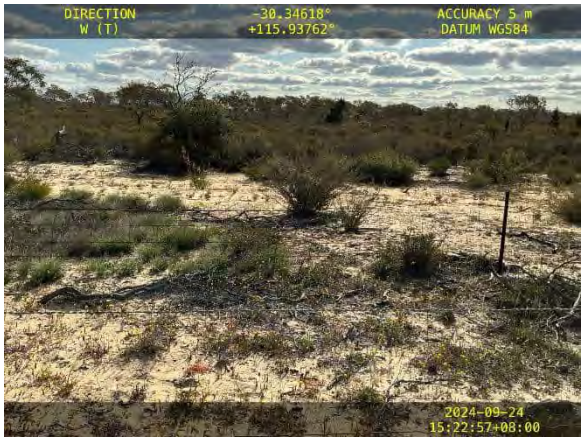

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<tr><td>Classification (Existing)</td><td colspan="2">(G) Grassland</td><td colspan="2">Plantation site classification (Post-development)</td><td colspan="3">(A) Forest</td></tr>
<tr><td>Types Identified</td><td colspan="7">Sown pasture G-26 Open tussock G-23 -</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td colspan="2">N/A</td><td colspan="2">Applied Range (Method 1)</td><td colspan="2">Downslope >0-5 degrees</td></tr>
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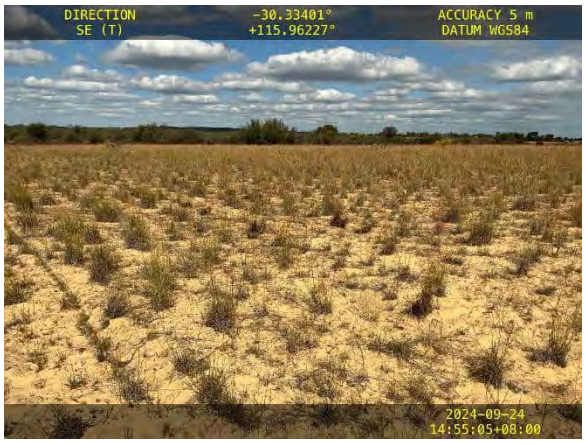
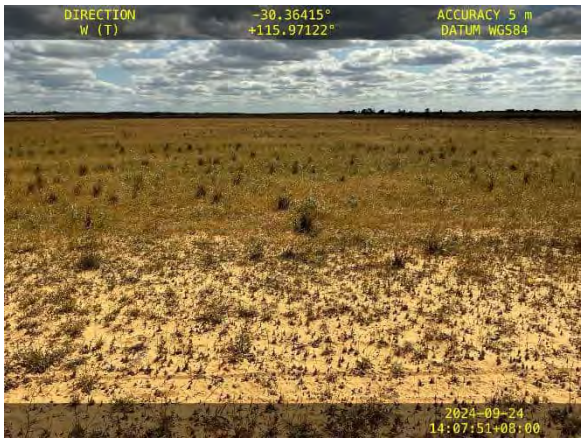
<tr><td colspan="2">Additional Justification:</td><td colspan="6">'Managum' Site

Areas of Grassland/Pasture Land

Areas of mixed vegetation species belonging to Moderate Bushfire Hazard Levels vegetation characteristics:

- | Moderate: (G) Grassland

Large areas of grasses across the plantation sites.</td></tr>
<tr><td colspan="2">Post Development Assumptions:</td><td colspan="6">A forest classification has been applied to the plantation areas. Native Mixed Eucalypt Species (trees ~6m in height at maturity)

On-site land will be re-vegetated with eucalyptus, melaleuca and allocasuarina being the dominant genus. Proposed planting densities constitute a 'Forest' vegetation for the Cells. Class G Grassland will be revegetated into Class A Forest and Class D Scrub mix.</td></tr>
<tr><td colspan="4"> 
</td><td colspan="4"> 
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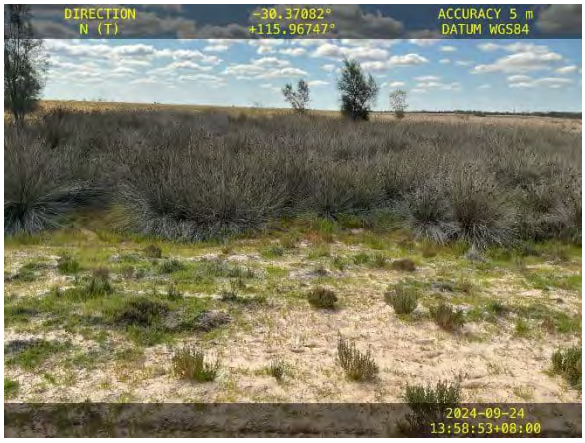
<tr><td colspan="4"> 
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<tr><td>Classification (Existing)</td><td colspan="2">(A) Forest</td><td colspan="2">Plantation site classification (Post-development)</td><td colspan="3">(A) Forest</td></tr>
<tr><td>Types Identified</td><td colspan="2">Pine plantation</td><td colspan="3">Tussock grassland G-22</td><td colspan="2">-</td></tr>
<tr><td>Effective Slope</td><td>Measured</td><td colspan="2">N/A</td><td colspan="2">Applied Range (Method 1)</td><td colspan="2">Downslope >0-5 degrees</td></tr>
<tr><td colspan="2">Foliage Cover (all layers)</td><td>30-70%</td><td>Shrub/Heath Height</td><td>N/A</td><td>Tree Height</td><td colspan="2">Up to 30m</td></tr>
<tr><td colspan="2">Additional Justification:</td><td colspan="6">‘Managum’ site
Areas of Pine vegetation species belonging to Extreme Bushfire Hazard Levels vegetation characteristics:
Extreme: (A) Forest. | -
Pine vegetation with grass understorey across the plantation sites.</td></tr>
<tr><td colspan="2">Post Development Assumptions:</td><td colspan="6">A forest classification has been applied to the plantation areas. Native Mixed Eucalypt Species (trees ~6m in height at maturity)

On-site land will be re-vegetated with eucalyptus, melaleuca and allocasuarina being the dominant genus. Proposed planting densities constitute a ‘Forest’ vegetation for the Cells. Class G Grassland will be revegetated into Class A Forest and Class D Scrub mix.</td></tr>
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APPENDIX B: ADVICE - ONSITE VEGETATION MANAGEMENT - THE APZ

THE ASSET PROTECTION ZONE (APZ) – EXPLANATORY INFORMATION

The APZ is an area surrounding a building/structure in which fire fuels are intensively managed (reducing sources and quantities) to provide localised protection. Any retained or planted vegetation must be able to be considered low threat (due to a range of characteristics) or as being continuously maintained in a minimal fuel condition. The primary objectives of establishing an APZ are:

- Ensure a reduction in the exposure of the building/structure to bushfire direct attack mechanisms (threats) of flame contact, radiant heat transfer and ember attack, by establishing appropriate separation from the bushfire prone vegetation. The required APZ dimensions will be dependent on site specific conditions and the use of the site;
- Ensure a reduction in the exposure of the building/structure to bushfire indirect attack mechanisms (threats) by:
  - Preventing surface fire spreading to the building/structure;
  - Minimising the potential for tree strike; and
  - Limiting the potential for consequential fire to impact the building/structure by eliminating, reducing and/or shielding consequential fire fuels. These fuels include accumulated debris, stored combustible/flammable items and constructed combustible items. Consequential fire, typically ignited by embers, is the primary cause of building loss in a bushfire event; and
- To provide a defendable space for firefighting activities.

The *Guidelines for planning in bushfire prone areas* (WAPC 2021 v1.4) Appendix 4, Element 2 Explanatory Notes and Schedule 1: Standards for APZ, provide an example of how the objectives might be met.

B1: The Asset Protection Zone (APZ) - Dimension and Location Requirements

PLANNING APPLICATION REQUIREMENTS VERSUS LANDOWNER IMPLEMENTATION REQUIREMENTS

THE 'LOCAL GOVERNMENT APZ'

Certain Local Government's state the dimensions of the APZ that must be established surrounding buildings in their annual Firebreak/Hazard Reduction Notice. For certain vegetation/sites, based on environmental considerations, they may also establish a maximum allowable dimension, typically that corresponding to a BAL-29 rating.

THE 'REQUIRED APZ'

The dimensions associated with the 'Required APZ' are to be established and maintained by the landowner within the subject lot and surrounding the subject buildings/structures. The 'Required APZ' will be appropriately depicted in Reports and Plans on the Property Bushfire Management Statement when it is required to be included.

Dimensions: The 'Required APZ' dimensions are the minimum distances away from the subject building/structure that the APZ must extend towards each relevant area of classified vegetation (note: a distance may also be a maximum distance when relevant as an environmental constraint).

The dimensions to implement are determined by:

A. Those associated with the 'Determined BAL APZ' for the subject building(s) when distances are greater than 'B' below (except when 'B' has established a maximum distance); or

B. The 'Local Government' APZ' derived from their Firebreak/Hazard Reduction Notice when distances are greater than 'A' above, other than when a maximum distance is established, in which case this will apply; or

C. A combination of 'A' and 'B' as they may apply to different areas of classified vegetation.

Location: As for the 'Planning BAL-29 APZ'.

Landscaping Design & Construction Principles to Apply

Where initial or renovation landscaping of grounds surrounding buildings and assets of value is being conducted, apply the directions and principles of the following measures to the greatest extent possible.

For additional guidance, refer to:

- The *Guidelines for Planning in Bushfire Prone Areas within the Explanatory Notes for Element 2 of the Bushfire Protection Criteria and Schedule 1: Standards for Asset Protection Zones (WAPC 2021); and*
- The DFES '*Bushfire Preparation Toolkit*' publication. Website: publications.dfes.wa.gov.au/?hazard=Bushfire

☐ Use of Non-Vegetated Areas:

Reduce the exposure of the facility/premises to the direct and indirect threats of bushfire by incorporating low threat uses of land adjoining the facility/premises and/or the bushfire hazard. These uses create robust and easier managed asset protection zones and include:

- Non-vegetated areas e.g. footpaths, paved areas, roads, driveways, parking, drainage.
- Formally managed areas of vegetation (public open space and other recreation areas), including irrigated areas; and
- Services installed in a common section of non-vegetated land.

☐ Landscaping – Non-Combustible Construction: Ensure non-combustible materials are used for fencing and any other landscaping construction, including retaining walls.

☐ Landscaping – Tree and Plant Species Selection

Utilise trees and plants with characteristics that are more resistant to burning. Refer to *Guidelines for Planning in Bushfire Prone Areas, Appendix 4 'Explanatory Notes E2: Plant Flammability' (WAPC 2021) for initial guidance.*

Avoid planting trees with ribbon or stringy barks (ember/firebrand production). Preference for smooth bark.

☐ Landscaping – Tree and Plant Separation from Buildings/Assets of Value (Location):

Trees (greater than 6 metres in height: Minimise the potential for tree strike damage (falling or blown) to the buildings/assets of value (allowing flame, radiant heat and ember entry to internal spaces), and debris accumulation on, in and around the facility/premise. Principles to apply are:

- Ideally trees will be separated from buildings/structures by a distance of at least 1.5 times the height of the tallest tree;
- As a minimum, trunks at maturity should be at least 6 metres from all elevations of the building, branches at maturity should not touch or overhang a building or powerlines. Mature tree canopies should be separated at least 5m with total canopy cover not exceeding 15% and not connected to tree canopy outside the APZ;
- Species of trees that produce significant quantities of debris (fine fuels) during the bushfire season should be located a sufficient distance away from vulnerable exposed elements to ensure debris cannot drop and accumulate within at least 4m of buildings/structures or be likely to be relocated by wind to closer than 4m to buildings / structures.

Shrubs and scrub (0.5 metres to 6 metres in height):

- Should not be located under trees or within 3 metres of buildings;
- Should not be planted in clumps greater than 5m^2 in area;
- Clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres (unless they can be classified as low flammability plants); and
- Shrubs greater than 6 metres in height are to be treated as trees.

Ground covers (less than 0.5 metres in height):

- Can be planted under trees but and no closer than two metres from a structure but 3 metres from doors or windows if greater than 100 mm in height; and
- Ground covers greater than 0.5 metres in height are to be treated as shrubs.

Grass: Where possible utilise irrigated perennial species.

Mulches should be non-combustible e.g., stone, gravel and crushed rock. Where wood mulch is used it should be greater than 6mm in thickness.

☐ Separation Between the Buildings/Assets of Value and the Consequential Fire Fuels of Stored Flammable Products (Fuels / Other Hazardous Materials):

If applicable, establish sufficient separation distance between the consequential fire fuels and the facility/premises. The required separation distance will be dependent on the fuel and storage type and will need to be determined.

☐ Separation Between the Buildings/Assets of Value and the Consequential Fire Fuels of Stored and Constructed Combustible Items:

These consequential fire fuels include:

- Stored Combustible Items - Heavy Fuels (greater than 6mm diameter) e.g. building materials, packaging materials, firewood, branches, sporting/playground equipment, outdoor furniture, garbage bins etc:
- Stored Combustible Items – Large Heavy Fuels e.g. vehicles, caravans, boats, trailers and large quantities of dead vegetation materials stored as part of site use.
- Constructed Combustible Items – Heavy Fuels e.g. landscaping structures including fences, screens, walls, plastic water tanks.
- Constructed Combustible Items – Large Heavy Fuels e.g. adjacent buildings/structures including houses, sheds, garages, carports. (Note: If the adjacent structure is constructed to BAL-29 requirements or greater and can implement a significant number of additional bushfire protection measures associated with reducing exposure and vulnerability, these minimum separation distances could be reduced by 30%).

Apply the rule of thumb "assume flames produced from a consequential fire source will be twice as high as the object itself … where the consequential fire source is a structure, then the maximum eave height is a reasonable measure of maximum height".

Apply the following separation distances from the subject building/structure as a multiple of the height of the consequential fire source and dependent on the bushfire construction standard applied to the building/structure:

- At least six times the height when the facility/premises construction incorporates design and materials that is only intended to resist low levels of radiant heat up to 12.5 kW/m^2 and no flame contact (BAL-12.5);
- Between 4 and 6 six times the height when the facility/premises construction incorporates design and materials intended to resist radiant heat up to 29 kW/m^2 and no flame contact (BAL-29).
- Between 2 and 4 times the height when the facility/premises construction incorporates design and materials intended to resist up to 40kW/m^2 and potential flame contact (BAL-40).
- Less than 2 times the height when the facility/premises construction incorporates design and materials intended to resist extreme levels of radiant heat and flame contact (BAL-FZ).
- Zero separation distance is required if the facility/premises is separated by a non-combustible FRL 60/60/60 rated wall, or the potential consequential fire source is fully enclosed by the facility/premises.

☐ Constructed Barriers to Shield Buildings/Assets of Value from Bushfire: Where applicable, install walls, fences and/or landforms to shield the buildings/Assets of Value (or any identified consequential fire fuels – refer to previous item) from direct and indirect bushfire attack mechanisms and reduce the potential impact of these threats.

These barriers should be constructed using appropriate fire resistant / non-combustible construction materials (e.g. masonry, steel, earthworks). These are to withstand the impact of direct bushfire attack mechanisms for the required period.

☐ Constructed Barriers to Shield Buildings/Assets of Value from Consequential Fire: Applicable to all identified consequential fire fuel sources. Install a non-combustible barrier (including complete enclosure when

appropriate), of required robustness, that will reduce the exposure of the buildings/assets of value to the threats of consequential fire.

☐ Planted Vegetation Barrier to Shield Buildings/Assets of Value: Use appropriate species (lower flammability) of hedges and trees strategically to reduce the buildings/assets of value exposure to radiant heat, to filter/trap embers and firebrands, and to lower wind speeds (prevailing synoptic and/or fire driven).

☐ Shield Non-Structural Essential Elements: These are vulnerable elements essential to the continued operation of the buildings/assets of value which are potentially exposed to the fire attack mechanisms of both bushfire and consequential fire. They include electricity cabling and water plumbing and also applies to any installed firefighting equipment / water storage.

When the use of fire rated materials to the degree necessary is not possible or practical, the application of non-combustible shielding can be applied to reduce exposure to the bushfire threats. Shielding includes underground installation.

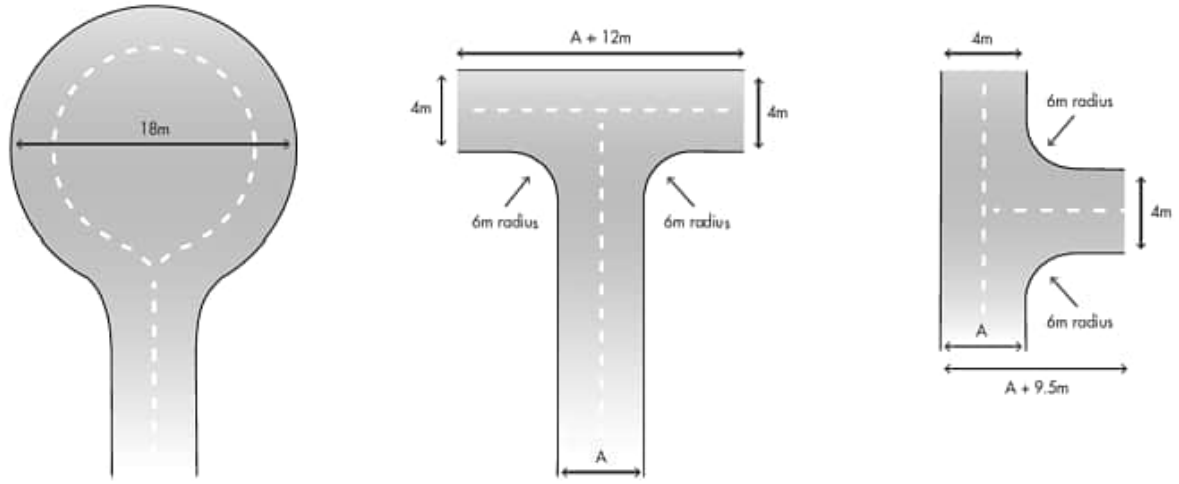
APPENDIX C: TECHNICAL REQUIREMENTS FOR VEHICULAR ACCESS

The design/layout requirements for access are established by the acceptable solutions of the Guidelines (DPLH, 2021 v1.4) Element 3 and vary dependent on the access component, the land use and the presence of 'vulnerable' persons. Consequently, the best reference source are the Guidelines. The technical requirements that are fixed for all components and uses are presented in this appendix.

GUIDELINES TABLE 6, EXPLANATORY NOTES E3.3 & E3.6 AND RELEVANT ACCEPTABLE SOLUTIONS

Technical Component	Vehicular Access Types / Components			
	Public Roads	Emergency Access Way [1]	Fire Service Access Route [1]	Battle-axe and Private Driveways [2]
Minimum trafficable surface (m)	In accordance with A3.1	6	6	4
Minimum Horizontal clearance (m)	N/A	6	6	6
Minimum Vertical clearance (m)	4.5			
Minimum weight capacity (t)	15			
Maximum Grade Unsealed Road [3]	As outlined in the IPWEA Subdivision Guidelines	1:10 (10%)		
Maximum Grade Sealed Road [3]		1:7 (14.3%)		
Maximum Average Grade Sealed Road		1:10 (10%)		
Minimum Inner Radius of Road Curves (m)		8.5		

Turnaround Area Dimensions for No-through Road, Battle-axe Legs and Private Driveways [4]



Passing Bay Requirements for Battle-axe leg and Private Driveway

When the access component length is greater than the stated maximum, passing bays are required every 200m with a minimum length of 20m and a minimum additional trafficable width of 2m (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum 6m).

Emergency Access Way – Additional Requirements

Provide a through connection to a public road, be no more than 500m in length, must be signposted and if gated, gates must be open the whole trafficable width and remain unlocked.

[1] To have crossfalls between 3 and 6%.

[2] Where driveways and battle-axe legs are not required to comply with the widths in A3.5 or A3.6, they are to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision.

[3] Dips must have no more than a 1 in 8 (12.5% or 7.1 degree) entry and exit angle.

[4] The turnaround area should be within 30m of the main habitable building.

APPENDIX D: TECHNICAL REQUIREMENTS FOR FIREFIGHTING WATER SUPPLY

D1: Non-Reticulated Areas – Static Supply

For specified requirements, refer to the Guidelines Element 4: Water – Acceptable Solution A4.2 , Explanatory Notes E4 (that provide water supply establishment detail under the headings of water supply; independent water and power supply; strategic water supplies, alternative water sources and location of water tanks) and the technical requirements established by Schedule 2 (reproduced below).

SCHEDULE 2: WATER SUPPLY DEDICATED FOR BUSHFIRE FIREFIGHTING PURPOSES

2.1 Water supply requirements

Water dedicated for firefighting should be provided in accordance with Table 7 below, and be in addition to water required for drinking purposes.

Table 7: Water supply dedicated for bushfire firefighting purposes

PLANNING APPLICATION	NON-RETICULATED AREAS
Development application	10,000L per habitable building
Structure Plan / Subdivision: Creation of 1 additional lot	10,000L per lot
Structure Plan / Subdivision: Creation of 3 to 24 lots	10,000L tank per lot **or** 50,000L strategic water tank
Structure Plan / Subdivision: Creation of 25 lots or more	50,000L per 25 lots or part thereof Provided as a strategic water tank(s) or 10,000L tank per lot

2.2 Technical requirements

2.2.1 Construction and design

An above-ground tank and associated stand should be constructed of non-combustible material. The tank may need to comply with AS/NZS 3500.1:2018.

Below ground tanks should have a 200mm diameter access hole to allow tankers or emergency service vehicles to refill direct from the tank, with the outlet location clearly marked at the surface. The tank may need to comply with AS/NZS 3500.1:2018. An inspection opening may double as the access hole provided that the inspection opening meets the requirements of AS/NZS 3500.1:2018. If the tank is required under the BCA as part of fire hydrant installation, then the tank will also need to comply with AS 2419.

Where an outlet for an emergency service vehicle is provided, then an unobstructed, hardened ground surface is to be supplied within four metres of any water supply.

2.2.2 Pipes and fittings

All above-ground, exposed water supply pipes and fittings should be metal. Fittings should be located away from the source of bushfire attack and be in accordance with the applicable section below, unless otherwise specified by the local government.

2.2.2.1 Fittings for above-ground water tanks:

- Commercial land uses: 125mm Storz fitting; or
- Strategic water tanks: 50mm or 100mm (where applicable and adapters are available) male camlock coupling with full flow valve; or
- Standalone water tanks: 50mm male camlock coupling with full flow valve; or
- Combined water tanks: 50mm male camlock coupling with full flow valve or a domestic fitting, being a standard household tap that enables an occupant to access the water supply with domestic hoses or buckets for extinguishing minor fires.

2.2.2.2 Remote outlets

In certain circumstances, it may be beneficial to have the outlet located away from the water supply. In such instances in which a remote outlet is to be used, the applicant should consult the local government and DFES on their proposal.

EXAMPLE CONSTRUCTION AND FITTINGS	
	
Strategic 47,000 Litre Concrete Tank & Protected Fittings	
	
10,000 Litre Concrete Tank	Storz and Camlock Couplings
	
Full Flow 50mm Ball Valve	Full Flow 50mm Gate Valve and Male Camlock

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
2162	**640**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

THIS IS A MULTI-LOT TITLE

LAND DESCRIPTION:

LOT 2342 ON DEPOSITED PLAN 89269
LOT 2054 ON DEPOSITED PLAN 143308

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

WOODSIDE ENERGY CARBON (SERVICES) PTY LTD OF 11 MOUNT STREET PERTH WA 6000
(T P903037) REGISTERED 29/2/2024

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. H180949 PROFIT A' PRENDRE. CERTAIN RIGHTS AND INTERESTS TO DEPARTMENT OF CONSERVATION & LAND MANAGEMENT OF CORNER OF HACKETT DRIVE AND AUSTRALIA II DRIVE, CRAWLEY FOR A PERIOD OF 40 YEARS FROM AND INCLUDING 1ST JANUARY 1999. REGISTERED 29/7/1999.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	2162-640 (2342/DP89269), 2162-640 (2054/DP143308)
PREVIOUS TITLE:	1711-31
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF MOORA

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
192	**172A**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

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BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 3598 ON DEPOSITED PLAN 206455

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

WOODSIDE ENERGY CARBON (SERVICES) PTY LTD OF 11 MOUNT STREET PERTH WA 6000
(T P903037) REGISTERED 29/2/2024

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	192-172A (3598/DP206455)
PREVIOUS TITLE:	192-172A
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF MOORA