



MITSUI BUSSAN WOODCHIP OCEANIA PTY LTD

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Shire of Boyup Brook
Abel St
Boyup Brook, WA
6244

To whom it may concern,

Re Application for development approval

Mitsui are submitting a Development Approval for the planting of an agricultural property into Radiata pine.

Please find below pertinent information contained within the planning application for 352 Evans Siding Road's conversion to plantation, also known as "Yondara".

- The applicant sees no evidence that establishing a pine plantation at the above-named property will have negative socio economic impacts;
- The house and sheds on the property will be maintained and leased;
- The applicant commits to operating in compliance with the Code of Practice for Timber Plantations in Western Australia, the council's firebreak order and FESA's Guidelines for Plantation Fire Protection;
- The applicant remains a member of the Plantation Managers Fire Cooperative Agreement (PMFA);
- Yondara proposed plantation is in close proximity to Mitsui's Condinup Road Plantations which will have firefighting appliances based in the area, Mitsui will also have access to other appliances via the PMFA;
- 50,000L of water in tanks will be installed and kept full at all times during the fire season;
- The applicant sees no evidence that establishing radiata pine to this site will negatively impact the amenity of the area;
- Management of harvest impacts on roads will be handled in compliance with the shire's requirements, consistent with how such matters are handled by BFE currently.

Best regards,

Rayna Barr

Rayna Barr
Forester



PLANTATION MANAGEMENT PLAN

Yondara
352 Evans Siding Road PROPERTY

P 2025

Prepared by

BUNBURY FIBRE EXPORTS

Last updated 22.10.2024

Bunbury Fibre Exports Plantation Management Plan

Introduction

Mitsui Bussan Woodchips Oceania Pty Ltd (MWO) is in the process of purchasing a property in the district of Benjinup. This property is ex-cropping and pasture with an area of approximately 306 hectares to be established with pine softwood (*P radiata*).

Establishment and maintenance of the pine plantation will be conducted by Bunbury Fibre Exports Ptd Ltd.) as MWO's appointed property management company.

Situated in the Boyup Brook Shire, the property is located approximately 20km north of Boyup Brook.

This document outlines the following in relation to this plantation –

1. Property summary
2. Land information
3. Plantation Establishment Plan
4. Plantation Tending Plan
5. Fire Management Plan
6. Timber Harvesting Plan

All relevant maps and plans are attached.

Proposed Planting Map

BAL Assessment Report

References:

- *Code of Practice for Timber Plantations in Western Australia*
- *Guidelines for Plantation Fire Protection*
- *Local Shire Council Firebreak Orders*
- *Plantation Managers Fire Agreement*

1 PROPERTY SUMMARY

Plantation Name:	Yondara
Landowner:	Mitsui Bussan Woodchip Oceania Pty Ltd
Planting Year:	2025
Total Property Area:	382 ha
Plantable Area:	Approximately 306 ha (<i>Pinus radiata</i>)
Location Number:	Lot 11804 on DP133337 Lot 3942 on DP 133337 Lot 11327 on DP 144345 Lot 8213 on DP 140644 Lot 7477 on DP 82354 Lot 7447 on DP 82287
Catchment:	Blackwood River
Avg Annual Rainfall:	650 mm
Landscape Position:	Lower to upper slopes.
Topography:	Flat to moderate. Total elevation change, 30 metres
Aspect:	Mostly southerly with some northerly

2 LAND INFORMATION

2.1 Area

The general area is zoned for the purpose of agriculture/plantations. The area is currently under pasture for sheep farming, with areas of native remnant vegetation within the property boundary.

A change from pasture to a pine sawlog plantation is proposed.

A total land area of 382 hectares is on multiple certificate of titles, of which approximately 306 hectares is considered arable, excluding some non-arable areas defined below.

2.2 Locality plan and access roads

A location plan is attached. Access to the property is from Evans Siding Road.

2.3 Natural features

2.3.1 Principle soil types:

The soils are predominantly a clayey loam ranging to gravelly loams.

2.3.2 Areas of native vegetation:

This property includes areas of native vegetation and paddock trees.

These areas will be maintained and excluded from the plantation establishment area.

Fuel reduction burns of native vegetation areas will be planned as part of maintaining a low fuel load over the plantation area. All Shire guidelines and restrictions will be followed.

No information is available on a time from last fuel reduction burn of these native areas, however, stock have been present in this property, and as such the fuel load in native vegetation areas is low due to browsing.

Determination of actual fuel loads present in remanent vegetation will occur as part of the plantation establishment and any fuel reduction planning will be in consultation with Boyup Brook CBFCO.

2.3.3 Significant landscape, cultural and heritage values:

BFE, and the property manager for Mistui, engage an independent third party to review proposed plantation areas for Cultural Heritage Values and Higher Conservation Values, flora and fauna.

Searches of the Yondara property show no areas of Cultural or Heritage significance exist within the property boundary.

2.4 Improvements

2.4.1 Buildings

A house and farm sheds exist within the property boundary. These are no current plans to remove these structures. It is the intent of BFE to ensure the house on the Yondara plantation is leased.

The house and sheds have been excluded from the plantation area and will have setbacks in place as per the FESA Guidelines for Plantation Fire Protection.

A Bushfire Attack Level (BAL) Assessment has been carried out for these structures. The rating has been issued as BAL- 19 based on the existing vegetation within 100m of the house.

2.4.2 Roads, bridges, creek crossings

Current roading is restricted to the firebreaks. Internal roads will be established at time of plantation establishment. These roads will also act as firebreaks between compartments and will comply with the Shire of Boyup Brook firebreak notices and FESA Guidelines for Plantation Fire Protection.

New roads and any upgraded roads will have erosion barriers in place to direct and significant rainfall back into the plantation area, minimising the impact of water runoff into existing water courses.

One crossing of an internal creek identified. Indicated on attached Proposed Plantation Map.

2.4.3 Fences, gates and dams

External and internal fences are in fair condition. Internal fences will be removed as part of the plantation establishment.

There are dams on the property which hold water throughout the year. These are accessed via gates to the property from Evans Siding Road.

2.4.4 Powerlines, Telstra cables etc.

There is a main power line running from Evans Siding Road into the established house.

All setback from this powerline where it is within the property boundary will be adhered to.

3 PLANTATION ESTABLISHMENT PLAN – (Summary)

3.1 Areas of native vegetation, including paddock trees to be cleared

There is no native vegetation that requires removal as part of the establishment.

3.2 Management of harvest residue (cropping)

This may involve the burning of paddock stubble by BFE.

All Shire guidelines will be followed.

3.3 Control of vermin and declared weeds

BFE will take all reasonable steps to control rabbits and other pests.

Vermin control in the form of licenced shooter and baiting will take place. Where possible, BFE will work with any programs that are taking place at neighbouring properties to increase effectiveness.

They will also be responsible for the control of declared plants within the property. The site has been checked for the presence of declared weeds with none currently present. Monitoring will be ongoing.

BFE will participate in any community/neighbour based joint fox control.

3.4 Areas to be planted, compartment sizes

The plan attached shows the plantation area; the area has been divided into compartments according to the Guidelines for Plantation Protection.

One compartment will be larger than 30ha. This compartment will have a 10-metre firebreak between neighbouring compartments. All other compartments are under 30 ha and will have a six-metre fire break between neighbouring compartments.

3.5 Species to be planted and source of seedlings

The site will be planted with *Pinus radiata* sourced from Tree Breeding Australia seed orchards and grown Southwest nurseries.

3.6 Direction of planting lines in relation to contours and natural drainage

The direction of the planting lines will take into account the existing cropping areas, most favourable aspect, and potential for sediment runoff into water ways. Barriers and other methods will be established if necessary to ensure waterways are protected.

3.7 Description of soil preparation methods

The site will be ripped or mounded where necessary using a tractor / plough configuration at 3 metre rowing spacing with a view to plant 1111 stems per hectare.

Weed control will follow the ripping/mounding operations prior to and/or post planting.

3.8 Description of weed control methods, including herbicide application rates and buffer zones

Pre-planting Broad Spray

The presence of difficult weeds will determine the requirement for a broad spray pre ripping of the plantable area.

Broad spray using 1 litre per hectare of Glyphosate mixed with 10 grams of Metsulfuron-methyl and 20g of Sulformeturon-methyl and 300ml of Hasten per hectare with a wetting agent in a minimum of 50 litres per hectare of water.

Strip spraying

To control the occurrence of annual grasses across the site, a post-plant strip spray prescription for mounds/rips is 2 litres per hectare of Amitrole – T, 3kg per hectare of Atrizne and 20g per hectare of Sulfometuron Methyl in 100 litres of water per hectare.

Post-plant strip spray may take place as the only weed control, or in conjunction with a pre-plant spray. This will depend of the vigour of the weeds on site.

Appropriate buffer zones, in line with label requirements and Code of Practice for Timber Plantations in Western Australia will be observed in order to prevent contamination of waterways. All operations will be carried out in accordance with the weed control guidelines stated in the Code of Practice for Timber Plantations in Western Australia and be carried out by licensed contractors.

3.9 Planting technique

Trees will be planted using a hand-held tree planter. Planting contractors will carry plants from a central plant dump from within the property to sections within the proposed planting area by 4x4 utilities and 4x4 ATV motorbikes.

The proposed plantation is to be planted at 1111 stems per hectare in a 3m x 3m configuration.

3.10 Access roads and firebreaks

The plantation entry will be from Evans Siding Road and will have a plantation sign in place. This will details the plantation name and 24 hour BFE monitored phone number.

Access roads and firebreaks are shown on the plans attached. External firebreaks are 15 metres wide with 6-metre or 10-metre wide access roads / firebreaks internally. Width of access road/firebreak will be determined by the compartment size for internal access.

Firebreak maintenance to Local Authority guidelines is the responsibility of BFE on behalf of the landowner.

Firebreaks will not exceed a grade of one in eight and cross fall will not exceed one in thirty-three as per the FESA Guidelines for Plantation Fire Protection. Water barriers will be added into access tracks/firebreaks to assist with water run off as necessary when firebreaks and roads are established and maintained throughout the life of the plantation. Any water runoff will be directed back into the plantation area.

4 PLANTATION TENDING PLAN

4.1 Grazing strategy

The planting area is suitable for grazing by livestock, however the pine trees are required to be minimum three years old prior to the introduction of stock.

The aim of grazing is to reduce the amount of grass present on fire breaks and under the tree canopy, thus reducing the fire risk. This will be done by offering neighbouring landowners the opportunity to graze livestock on appropriate areas within the property once the trees have reached a required height.

4.2 Pruning and thinning schedule

Tree branches that intrude onto designated firebreaks will be mechanically pruned to meet Local Authority guidelines and FESA Guidelines for Plantation Fire Protection.

Crop trees will be thinned twice before the final harvest, but no other pruning is scheduled.

4.3 Fertilising schedule

There will be an initial fertiliser application, ideally in the year of planting, to raise soil conditions to an appropriate nutrient level for tree establishment. Type and rates of fertiliser used will be determined following nutrient analysis of soil samples.

The method for fertiliser delivery post planting is by hand using a tree planter and delivering the required amount of fertiliser to each individual seedling.

Fertiliser applications to sustain tree vigour and health will be applied at 15 years of age or post first thinning. The fertiliser will be applied by ground or air post thinning operation. Rates and types of fertilisers will be dependent on results from soil and folia sample analysis.

4.4 Weed management

As part of the ongoing maintenance to the tree crop area, a second weed control application will occur during the next winter of the year following planting. (ie winter of year 2026 if planting occurs in 2025) if required. Weed types will determine the weed control prescription.

4.5 Monitoring and contingencies for diseases and pests

Early Growth Monitoring will occur weekly from the end of planting through to the end of February in the following year. It is not envisaged that any diseases will be found that will affect the plantation or surrounding native vegetation. Upon detection of any pest found to be causing damage to the plantation, an appropriate bait and/or spray will be applied where required.

4.6 Road and break maintenance

Access roads and firebreaks are shown on the plans attached. External firebreaks are 15 metres wide with 6 metre or 10 metre wide access roads / firebreaks internally. Firebreak maintenance to Local Authority guidelines is the responsibility of BFE on behalf of the landowner.

Maintenance of firebreaks will initially occur post planting using mechanical means, i.e. grader, and be maintained from this point with yearly, or as required, using chemical weed control. Fire breaks will not have a grade greater than 1 in 8 to allow sufficient access to all fire appliances and infrastructure.

If further grading is required as identified in plantation inspections, this will be the responsibility of BFE to ensure compliance.

Summary Table Site Establishment

Operation	Details	Likely timing
Access tracks	Maintenance of access tracks for firebreaks and plantation access.	October - Dec
Pasture planting preparation	Removal of pasture stubble through burning if required	April / May In line with restricted burning periods and weather conditions
Cultivation	Ripping and/or mounding	Feb – June
Planting	Target stems per hectare 1111 in 3m x 3m configuration with Radiata pine	June - August
Fertilising	Delivered into ground next to seedling by hand. Product determination upon soil analysis Post first thinning, by air or ground as required. Product determination upon soil analysis	August – September August – September
Weed Control	Site dependent if both operations or only one. Pre-plant spray Post-plant strip overspray 2 nd year strip overspray if required	May – June July – August May – June

Firebreaks	Maintaining clear of vegetation with unimpeded access for firefighting. Spraying and/or grading as required.	August – October
Pest Control	During monitoring review of plantation for any pest identified and treat accordingly. Pests include but are not limited to: insects, rabbits, kangaroos and pigs	Ongoing as required
Fencing	External fence repair	Ongoing as required

5 FIRE MANAGEMENT PLAN

5.1 Landowner property details

NAME	Mitsui Bussan Woodchip Oceania Pty Ltd
ADDRESS	Level 15, 101 Collins Street, Melbourne VIC 3000
PHONE NUMBER	MEL: 03 9605 8800 Bunbury: 08 9781 4500
24 HOUR FIRELINE NUMBER	08 9721 5963
PLANTATION MANAGER	Rayna Barr 0402 067 664
LOCATION NUMBER(S)	Lot 11804 on DP 133337 Lot 3942 on DP 133337 Lot 11327 on DP 144345 Lot 8213 on DP 140644 Lot 7477 on DP 82354 Lot 7477 on DP 82287
SPECIES OF TREES PLANTED	<i>P radiata</i>
TOTAL AREA PLANTED	306 hectares pines plus any native plantings
PREVIOUS LAND USE AND CONDITION (ie pasture, ex bush)	Pasture

5.2 Property details of neighbouring locations

NAME	Phone Number	LOCATION NUMBER(S)
D.W Inglis & W.T Inglis		Lot 2411 on DP126590 Lot 5253 on DP 137285
Shire of Boyup Brook	(08) 9765 1200	Lot F144 on DP 25
Department of Biodiversity Conservation and Attractions	(08) 9219 9000	State Forest

5.3 Local fire agencies

AGENCY	ADDRESS	PHONE NUMBER	CONTACT PERSON
DBCA Blackwood District	Kirup	9731 6232	Duty Officer
BFE Pty Ltd	Berth 8 Leschenault Drive Bunbury WA 6230	9781 4500	Manager
Boyup Brook Shire Office	Abel Street Boyup Brook WA 6244	9765 1200	Reception
Chief Bush Fire Control Officer Boyup Brook	Abel Street Boyup Brook WA 6244	0427 673 072	Ben Thompson
Deputy Chief Fire Control Officer Boyup Brook	Abel Street Boyup Brook WA 6244	0497 671 340	Tristan Mead
FCO Benjinup Brigade	Abel Street Boyup Brook WA 6244	0428 899 049	Rob Imrie
Deputy Bush Fire Control Officer Benjinup	Abel Street Boyup Brook WA 6244	0427 661 097	Clinton Westphal

5.4 Risk of ignition

Potential ignition sources are mainly restricted to lightning strikes, adjoining roads and escapes from burning operations on surrounding land plus machinery caused fires from both plantation and cereal harvesting operations.

5.5 Detection of fires

The landowner, neighbours and passersby, and the existing brigade system will undertake fire detection.

On days identified as extreme fire danger BFE will ensure increased monitoring of plantations.

In addition, Department of Biodiversity, Conservation and Attractions (DBCA) spotter aircraft regularly fly within smoke spotting distance of the area and will report all smokes sighted. In the event of a fire, 000 should be immediately called, then the Shire Chief Fire Control Officer should be notified. The CFCO should in turn contact Bunbury Fibre Exports.

BFE as plantation managers and all contractors engaged by BFE will abide by all harvest, vehicle movement and fire bans as issued by the Boyup Brook Shire.

5.6 Training

BFE staff have undertaken DFES Bushfire Safety Awareness and DFES Firefighting Skills or equivalent, as a minimum requirement.

All contractors engaged for fire suppression activities will also hold these minimum requirements or equivalent.

5.7 Location Of Fire Control Equipment.

Fire units that may be available are both privately owned, and volunteer brigade units derived from neighbouring properties and central depots, as well as plantation industry firefighting resources.

In addition, the plantation industry as a whole has recognised the importance of a unified approach to the control and management of fires within or close to its plantation estate and has developed the Plantation Managers Fire Agreement to ensure the most efficient and effective responses are made to fire events. BFE are one of nine plantation industry signatories to this Agreement. The combined resources of the industry in terms of both manpower and equipment are extensive and are strategically located both in major centres and on or near plantations throughout the South West and Great Southern Regions. In the event of a fire on or threatening these properties BFE can call on the combined resources of the plantation industry in accordance with the protocols laid out in the Agreement. Information relating to suppression resources at an industry level are also tabled below.

Location and capacity of Brigade fire appliances:

Location	Light Units Min. 450L	Med. Duty Units Min. 1900L	HD Units Min. 2700L
Benjinup	High season vehicle, size determined by what is available		

Location and capacity of fire appliances:

Location	Light Units Min. 450L	Med. Duty Units Min. 1900L	HD Units Min. 2700L
BFE Bunbury	3		1
BFE Collie	2		2
ENTS Forestry Bunbury	1		1
PF Olsen Bunbury	1		1
WAPES Bunbury and Manjimup	2		2
FPC Mcalinden			1

Note: WAPRES also have a 950 loader and 10,000 litre water truck located at Manjimup

Location and capacity of DBCA fire appliances:

Location	Light Units Min. 450L	Med. Duty Units Min. 1900L	HD Units Min. 2700L
DBCA Blackwood & Wellington Districts Collie and Kirup	8	2	8

5.8 Initial attacks on fires

In the event that BFE becomes aware of a fire within, adjacent to or approaching the property, staff must first alert the relevant authorities by calling triple zero.

Staff should then identify the most appropriate and available fire attack options, which are likely to be those in closest proximity to the fire, being those located in Boyup Brook or Mcalinden (both within 30 minutes of the plantation). The most appropriate attack option must also consider the suitability of the equipment and personnel in the context of the particular incident.

As the land manager, Bunbury Fibre Exports will be the primary firefighting source supported by other plantation industry operators through its plantation industry agreement and utilising the BFE based fire appliance near a location close to Boyup Brook.

Initial attack on fires will be via the Bush Fire Brigade system coordinated by the local Fire Control Officer, Boyup Brook Shire and FESA. The Boyup Brook Shire have advised that they will not enter plantations or forests on private land but are likely to attend the boundary of the property to assist with fire which is burning in adjacent grassland. BFE and the plantation industry will also supply units for fire suppression, mop-up and control.

Initial attack on a fire will be dependent on head fire rates of spread and fire intensities. It is proposed experienced personnel will assess each fire, in response to the following values in order of priority.

1. Human Life.
2. Community assets, property or special values (including environmental values).
3. Cost of suppression in relation to values threatened.

With fire behaviour and values in mind response strategies should follow this order of priority as a guide -

- 1 Direct attack on head fires where (Head Fire Forward Rate of spread) HFROS allows.
- 2 Indirect attack on head fire by extinguishing flank fire working towards the head fire.
- 3 Limit fire spread to pre-determined internal strategic firebreaks.
- 4 Limit fire spread to compartment breaks.
- 5 Limit fire spread to property boundary firebreaks where property is block planted.
- 6 Fall back to neighbouring properties, roads or where fire can be safely extinguished.

5.9 Access in and around plantation

Access to the plantation is via Boyup Brook Road as well as Boyup Brook – Kojonup Road. Access points will be sign posted with Plantation name and BFE contact phone number.

The plantation will have trafficable firebreaks in and around the perimeter in accordance with Shire by laws and Guidelines for Plantation Fire Protection. External breaks will be 15 metres wide, internal 6 metres. Access will also be maintained to water supplies. (See map for details).

5.10 Method of road, track and firebreak maintenance

Most firebreaks will be sprayed in early spring to ensure the appropriate width of mineral earth break is obtained prior to the fire season. Appropriate buffer zones will be observed in order to prevent contamination of waterways.

Grading will be used if required to improve trafficability on the roads and firebreaks and to construct water barriers if required to manage water-flow on the firebreaks and to minimise the potential for erosion.

5.11 Measures to protect powerlines and gas pipelines

A power line runs from west to east across the entire length of the property and will have the required setbacks as per Western Power guidelines of 20m either side of line. No gas pipelines exist within the property.

5.12 Direction indicators of water points, road signs and other features

Water points will be marked on the fire control plan and will be sign posted in the field regarding direction and position.

Copies of the maps will also be placed in a waterproof canister at the access to the property on Condinup Road.

5.13 Water supplies

During establishment of the plantation, a 50,000L water tank at the entry gates will be dedicated to firefighting water supply and will be always kept full during summer.

The water points on the property will be maintained to provide permanent water supplies throughout the summer months for fire control purposes.

Portable pumps may be required to access water during dry seasons.

5.14 Surrounding fuels

Fuel types surrounding the proposed plantation are predominately State Forest, with areas of pastured paddocks and cropping. There are no plans, at this stage, to carry out a fuel reduction program on adjoining property.

However, if neighbouring owners wish to conduct fuel reduction burns, BFE as the property manager, are open to assisting.

5.15 Fire breaks

Firebreaks will be maintained in accordance with Shire regulations and the Guidelines for Plantation Fire Protection, as shown on the attached map by the landowner. All firebreak Notices issued by the Shire will be complied with.

5.16 Existing plantations in the area

This proposed plantation is approximately 3km south-east of existing PF Olsen Plantation Lucknow, and FPC Moore Plantation. It is also approximately 3km north of FPC Lovells plantation.

One further property managed by Ents is 1.7km from the western boundary.

5.17 Surrounding values

Two neighbouring homesteads exist within approximately 2 kilometres from the property boundary.

One to the south-east accessed from Greenfields Road, and the second due east and accessed from the Donnybrook-Boyup Brook Road.

The properties closest point to the Shire Boundary is approximately 3 kilometres due West.

5.18 Proximity to townsites

The plantation is approximately 13 km south of Wilga township via Donnybrook-Boyup Brook and Wilga East Road. It is also 20 North-west of the Boyup Brook town. Via the Donnybrook-Boyup Brook Road.

6. TIMBER HARVESTING PLAN

6.1 Location of harvesting operation

The first and second harvesting or thinning operations on this proposed plantation will take place over the entire area of the plantation as shown on the attached map and will be based on a harvesting plan to be developed closer to the time of harvesting which will be approximately in the year 2040. Haulage route will be via;

Evans Siding Road
Meredith Road
Donnybrook-Boyup Brook Road

BFE will liaise with the Shire when submitting application for Shire Endorsement to use Multi Combination Vehicle (MCV) for road haulage.

Evans Siding Road and Meredith Road are currently on the Main Roads WA HVS RAV Network as Network 2 vehicles with conditions. The Donnybrook-Boyup Brook Road is currently on the Main Roads WA HVS RAV Network for Network 3 and Network 4 Vehicles without conditions.

6.2 Timetable

Thinning will occur when the plantation is approximately 15 years of age, and a further thinning at 22 years of age with the final harvest at approximately 30 years of age.

6.3 Harvesting operations

Harvesting will be carried out using conventional plantation harvesting equipment. This currently consists of track mounted harvesters fitted with a felling / debarking head which leave processed logs in the plantation to be picked up by an all-wheel drive rubber tyred forwarder which are later loaded on to trucks. The operation will be a clear fall, which means all standing trees will be removed.

6.4 Machinery and transport

Transport will be by truck configurations, which are legal and permitted by Main Roads and Local Authorities as determined by Main Roads network restrictions and local governments permits.

6.5 Environmental safeguards

The extraction of timber will be carried out using appropriate equipment for the plantation and soil conditions and competent personnel to achieve the standards of safety, environmental care and economic efficiency.

BFE as plantation managers and all contractors will abide by all harvest, vehicle movement and fire bans as issued by the Boyup Brook Shire.

6.6 Safety

Plantation operations will be as safe as possible and comply with occupational health and safety legislation, and the Safety Code for Western Australian Logging Operations must be observed.

Note: A DRAFT map including areas to be planted, fire breaks, water points, initial access points and other protective measures will accompany the plan.

Updated by: Rayna Barr

22nd October 2024

Approved by Plantation Manager:

R. Barr



22nd October 2024

Proposed Planting Map - Yondara

Plantation Details

















Address: 352 Evans Siding Road
Wilga WA 6243
Title: Lot 8213/11327/11804/7477/3942
Title Area: 382.5ha
Plantation Manager: Bunbury Fibre Exports
Contacts: Rayna Barr – 0402 067 664
Brett Scott – 0458 824 780
Shire: BOYUP BROOK

Plantation Area

-  Pine Plantation Area = 305.5ha
-  Non-planted Area = 2.5 ha

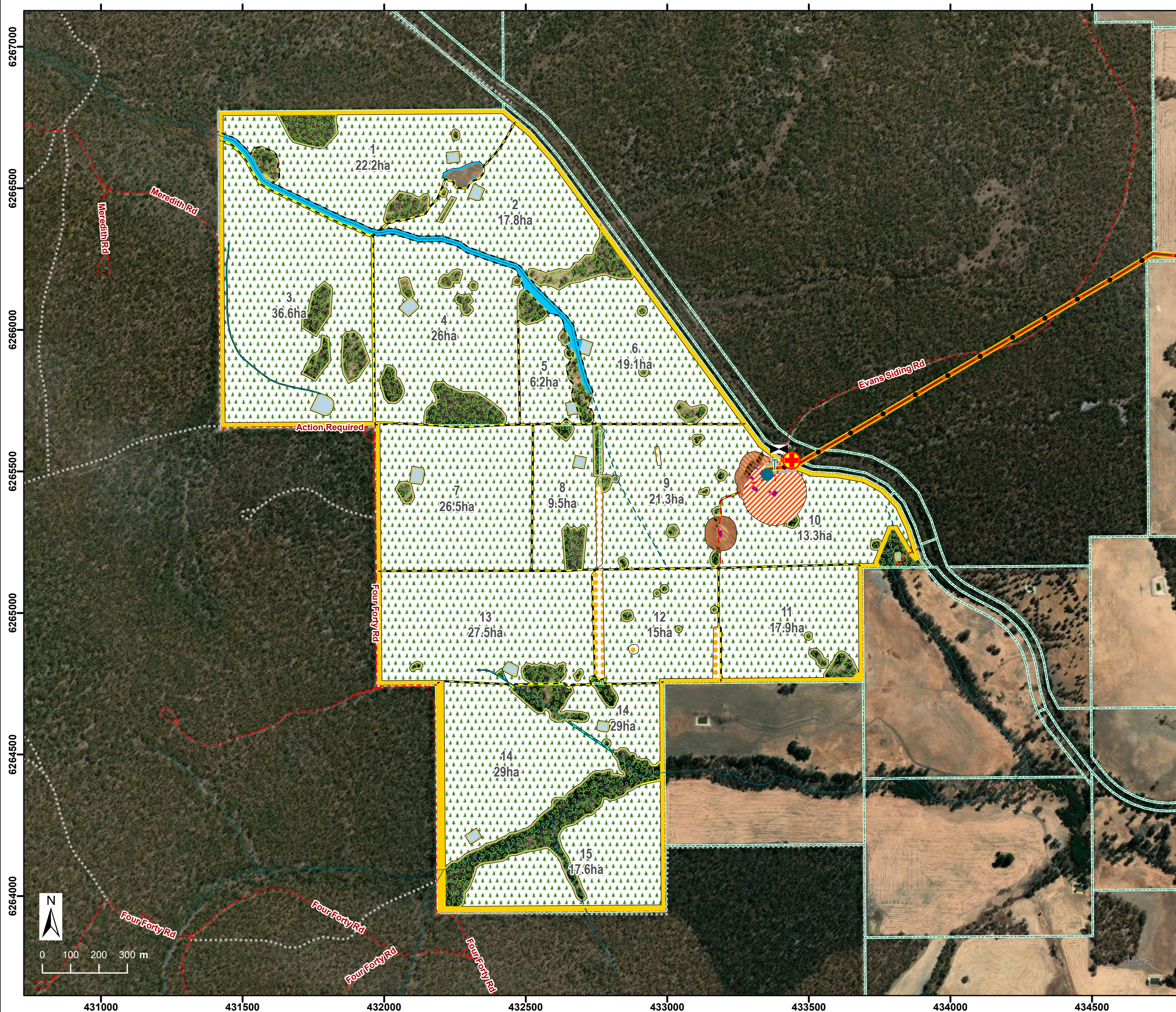
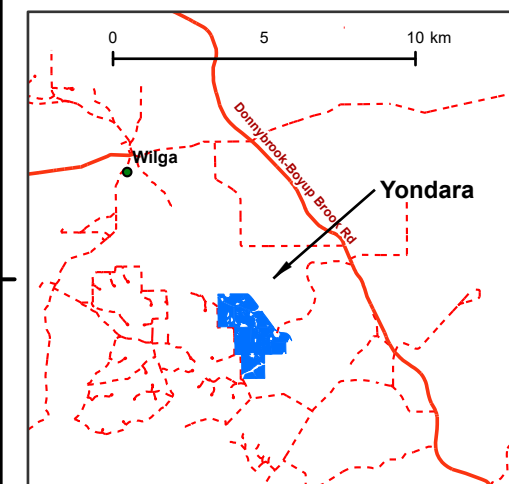
Total Plantation Area: 308.9ha

Legend

- | | |
|--|---|
|  Emergency Assembly |  Native Vegetation - 31.3ha |
|  Main Access Gate |  Soak - 0.7ha |
|  Tank |  Strategic Fire Break - 16.4ha |
|  Track |  Fire Access Track - 5.2ha |
|  Fire Access Track |  Watercourse - 3.8ha |
|  Transmission Line 32kv or less |  Drain - 0.5ha |
|  Transmission Line 132 to 330kv |  Dam - 1.5ha |
|  Watercourse (Undefined) |  House Buffer - 3.4ha |
|  Drain/Drainage Line |  Shed Buffer - 2ha |
|  Unsealed Road - 2 Lanes |  Building/Dwelling - 0.1ha |
|  Unsealed Track - 1 Lane |  Powerline Easement - 0.3ha |
| |  Unproductive - 9.3ha |

Note: External firebreaks are a minimum of 15m wide and internal breaks are a minimum 6m wide, with a minimum 6m trafficable and 4.5m vertically. All breaks do not exceed a maximum grade of 1 in 8, or a maximum cross fall of 1 in 33. Internal tracks are a minimum 3m clearance on either side of the pavement with (total 6m) have a minimum 4m vertical clearance and a minimum load limit of 15 tonnes. Turnarounds have a minimum inner radius of 12m.

Map Scale: 1:12,500@ A3
Projection: GDA94 Zone 50
Author: J. Wilson, Esk Spatial
Date: 24/10/2024



Bushfire Attack Level Assessment Report

Prepared by a BPAD
Accredited Practitioner



Fire Protection Association Australia Life Property Environment



Bushfire Attack Level (BAL) Assessment Report

This report has been prepared by an Accredited BPAD Practitioner using the Simplified Procedure (Method 1) as detailed in Section 2 of AS 3959:2018. All enquiries related to the information and conclusions presented in this report must be made to the BPAD Accredited Practitioner.

Property Details and Description of Works

Job Details	Unit no	Street no	Lot no	Street name / Plan Reference		
		352	11804	Evans Siding Road		
Local government area	Suburb			State	Postcode	
	Benjinup			WA	6255	
Main BCA class of the building	Shire / City					
	Shire of Boyup Brook					
Description of the building or works	Class 1a	Use(s) of the building		Private dwelling		
	Assessment of existing residence.					

Report Details

Report / Job Number	Report Version	Assessment Date	Report Date
20240926	1.0	3 October 2024	4 October 2024

BPAD Accredited Practitioner Details

Name: Greg Voigt 0409 272 666	Authorised Practitioner Stamp
Company Details  BushFire Works ABN 945 23123 843 PO Box 1249, Bibra Lake DC, WA 6965 enquire@bushfireworks.com.au www.bushfireworks.com.au	 I hereby declare that I am a BPAD accredited bushfire practitioner. Accreditation No. 41413 Signature  Date 4/10/2024

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

Site Assessment & Site Plans - The assessment of this site was undertaken on **3 October 2024** by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959:2018 Simplified Procedure (Method 1).

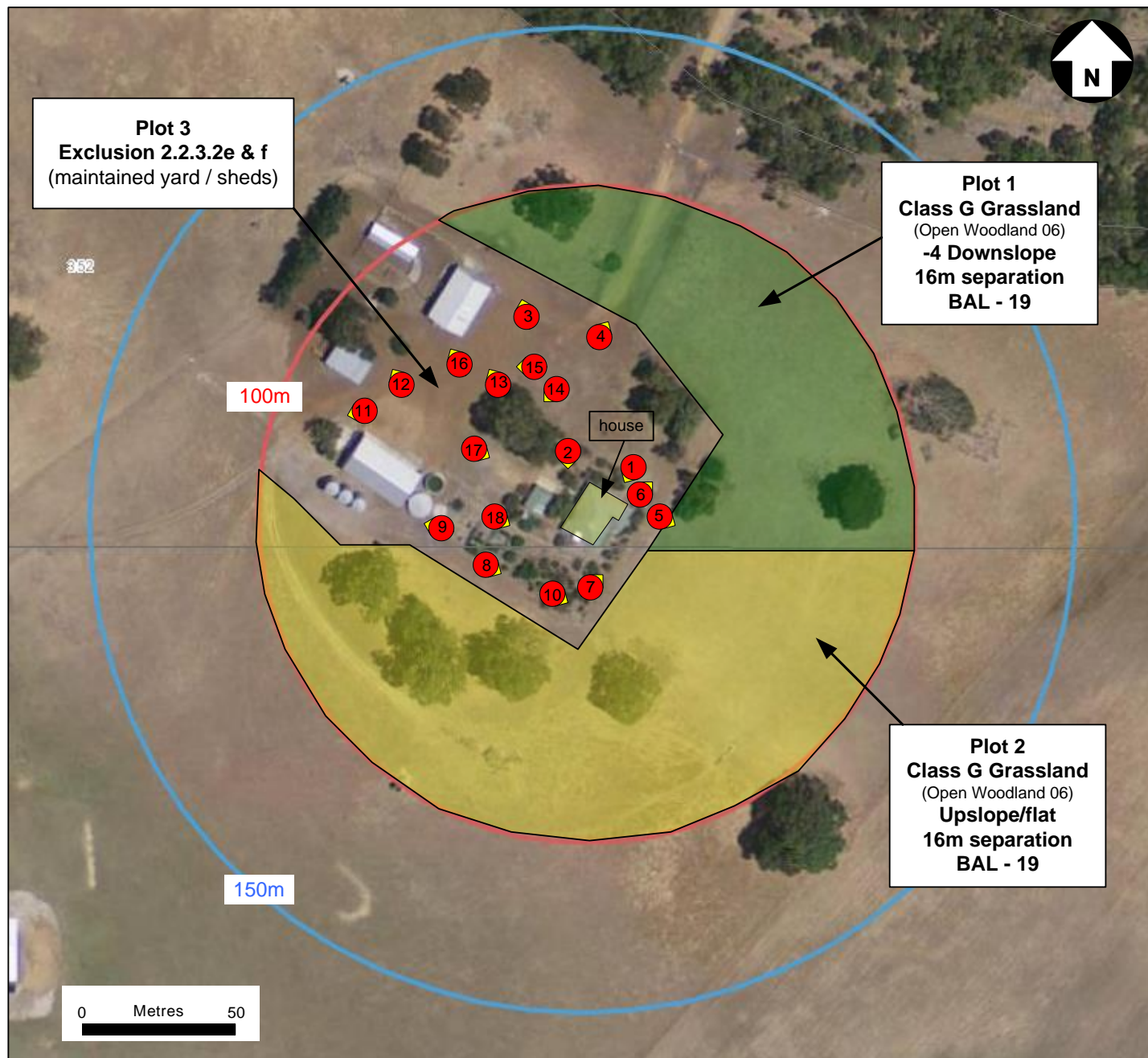


Figure 1: Classified Vegetation

Note: All diagrams are indicative only. They are not intended to represent a building's shape or scale.

Vegetation Classification All vegetation within 150 m of the site was classified in accordance with Clause 2.2.3 of AS 3959:2018. Each distinguishable vegetation plot determining the Bushfire Attack Level is identified below.

Photo ID: 1 Plot: Site	
Vegetation Classification or Exclusion Clause	
Site	
Description / Justification for Classification	
352 Evans Siding Road, Benjinup.	
Photo ID: 2 Plot: Site	
Vegetation Classification or Exclusion Clause	
Site	
Description / Justification for Classification	
352 Evans Siding Road, Benjinup.	
Photo ID: 3 Plot: 1	
Vegetation Classification or Exclusion Clause	
Class G Grassland - Open woodland B-06	
Description / Justification for Classification	
All forms including situations with shrubs and trees, if overstorey foliage cover is less than 10%. Includes pasture and cropland.	




Photo ID: 4 Plot: 1	
Vegetation Classification or Exclusion Clause Class G Grassland - Open woodland B-06	
Description / Justification for Classification Maintained yard in foreground (very well maintained!). Plot 1 either side of entrance road.	
Photo ID: 5 Plot: 1	
Vegetation Classification or Exclusion Clause Class G Grassland - Open woodland B-06	
Description / Justification for Classification Plot 1 to the left (slope); Plot 2 to the right (upslope). All forms including situations with shrubs and trees, if overstorey foliage cover is less than 10%. Includes pasture and cropland.	
Photo ID: 6 Plot: 1	
Vegetation Classification or Exclusion Clause Class G Grassland - Open woodland B-06	
Description / Justification for Classification All forms including situations with shrubs and trees, if overstorey foliage cover is less than 10%. Includes pasture and cropland.	

Photo ID: 7 Plot: 1	
Vegetation Classification or Exclusion Clause	
Class G Grassland - Open woodland B-06	
Description / Justification for Classification	
All forms including situations with shrubs and trees, if overstorey foliage cover is less than 10%. Includes pasture and cropland.	
Photo ID: 8 Plot: 2	
Vegetation Classification or Exclusion Clause	
Class G Grassland - Open woodland B-06	
Description / Justification for Classification	
All forms including situations with shrubs and trees, if overstorey foliage cover is less than 10%. Includes pasture and cropland.	
Photo ID: 9 Plot: 2	
Vegetation Classification or Exclusion Clause	
Class G Grassland - Open woodland B-06	
Description / Justification for Classification	
All forms including situations with shrubs and trees, if overstorey foliage cover is less than 10%. Includes pasture and cropland.	




Photo ID:	10	Plot:	2
Vegetation Classification or Exclusion Clause			
Class G Grassland - Open woodland B-06			
Description / Justification for Classification			
Plot 1 to the left (downslope).			
Plot 2 to the right (upslope).			
			
Photo ID:	11	Plot:	2
Vegetation Classification or Exclusion Clause			
Class G Grassland - Open woodland B-06			
Description / Justification for Classification			
Maintained yard in foreground.			
(G Grassland in background.)			
			
Photo ID:	12	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
Maintained yard.			
			


Photo ID: 13	Plot: 3	
Vegetation Classification or Exclusion Clause		
Excludable - 2.2.3.2(e) Non-Vegetated Areas		
Description / Justification for Classification		
Maintained yard.		
Photo ID: 14	Plot: 3	
Vegetation Classification or Exclusion Clause		
Excludable - 2.2.3.2(f) Low Threat Vegetation		
Description / Justification for Classification		
Very well maintained area.		
Photo ID: 15	Plot: 3	
Vegetation Classification or Exclusion Clause		
Excludable - 2.2.3.2(e) Non Vegetated Areas		
Description / Justification for Classification		
Maintained yard.		

Photo ID: 16 Plot: 3	
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2(e) Non Vegetated Areas	
Description / Justification for Classification Maintained yard.	
Photo ID: 17 Plot: 3	
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2(f) Low Threat Vegetation	
Description / Justification for Classification Maintained yard.	
Photo ID: 18 Plot: 3	
Vegetation Classification or Exclusion Clause Excludable - 2.2.3.2(f) Low Threat Vegetation	
Description / Justification for Classification Maintained yard / fruit trees.	

Relevant Fire Danger Index The fire danger index for this site has been determined in accordance with Table 2.1 or otherwise determined in accordance with a jurisdictional variation applicable to the site.

Fire Danger Index

FDI 40 ☐

Table 2.4.5

FDI 50 ☐

Table 2.4.4

FDI 80 ☒

Table 2.4.3

FDI 100 ☐

Table 2.4.2

Potential Bushfire Impacts

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below.

Table 1: BAL Analysis

Plot	Vegetation Classification	Effective Slope °	Separation (m)	BAL
1	Class G Grassland	-4	16	BAL – 19
2	Class G Grassland	Upslope/Flat	16	BAL – 19
3	Excludable – Clause 2.2.3.2(e & f)	N/A	-	BAL – LOW

Determined Bushfire Attack Level (BAL)

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS 3959:2018 using the above analysis.

Determined Bushfire Attack Level

BAL – 19

DISCLAIMER

The determinations and recommendations in this report are based on the requirements of Australian Standards 3959 – 2018, (Construction of Buildings in Bushfire prone Areas) and State Planning Policy 3.7, (Planning in Bushfire Prone Areas and appendices). This assessment has been undertaken in good faith and has been based on the site conditions apparent at the time of inspection, and other information provided by the client or their agents. Construction of the dwelling to the prescribed BAL level will not on its own guarantee that a building will not be destroyed or damaged by a bushfire. The consultant has no control over the subsequent actions of the home owner in the construction, development and maintenance of a property, which in the event of a bushfire may contribute to loss or damage. Accordingly the consultant, local government authority, their servants or agents shall not be held accountable for any damage to property, loss or other consequence as a result of the services provided or determinations in this report.

N/A THINNING RECOMMENDATIONS N/A

There may be an opportunity for the client to conduct vegetation thinning to achieve a lower BAL rating where this is recommended. Thinning is the modification of vegetation by minimising or removing ground fuels, understory species and trees; the intention is to maintain the aesthetic values and natural habitats whilst minimising fire risk. **Approval for vegetation modification must be sought from the responsible authorities, and can only be conducted within the boundary of the property.**

The following table indicates the vegetation modification distances (IN BLUE) required from the edge of the proposed building to achieve the specified BAL. Use in conjunction with attached diagram on page __:

Plot	Vegetation classification	Effective slope °	Current separation (m)	Current rating	Achievable rating	Total separation required (m)
1	Select Classification	---		---	---	
2	Select Classification	---		---	---	
3	Select Classification	---		---	---	
4	Select Classification	---		---	---	
5	Select Classification	---		---	---	
6	Select Classification	---		---	---	
7	Select Classification	---		---	---	
8	Select Classification	---		---	---	

NOTE: If the option of vegetation management is exercised and completed by the client, another BAL Assessment will be required at extra cost, prior to construction commencing.

ADDITIONAL INFORMATION FOR THE CLIENT

BUSHFIRE ATTACK LEVELS AND CORRESPONDING SECTIONS FROM AS 3959:2018

Bushfire Attack Level (BAL)	Classified vegetation within 100 m of the site and heat flux exposure thresholds	Description of predicted bushfire attack and levels of exposure	Construction Section
BAL-LOW	See Clause 2.2.3.2	There is insufficient risk to warrant any specific construction requirements	4
BAL-12.5	$\leq 12.5 \text{ kW/m}^2$	Ember attack.	3 & 5
BAL-19	$> 12.5 \text{ kW/m}^2$ $\leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by wind-borne embers together with increasing heat flux	3 & 6
BAL-29	$> 19 \text{ kW/m}^2$ $\leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by wind-borne embers together with increasing heat flux	3 & 7
BAL-40	$> 29 \text{ kW/m}^2$ $\leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by wind-borne embers together with increasing heat flux with the increased likelihood of exposure to flames	3 & 8
BAL-FZ	$> 40 \text{ kW/m}^2$	Direct exposure to flames from fire front in addition to heat flux and ember attack	3 & 9

RADIANT HEAT THRESHOLDS OF PAIN AND IGNITION FROM AS 3959:2018

In a bushfire, radiant heat levels may be unsafe for humans and could also ignite combustible materials in the vicinity. Table G1 provides an indication of the potential effects of radiant heat levels on both humans and selected materials to assist the reader in understanding the implications of the different BALs.

TABLE G1 - TYPICAL RADIANT HEAT INTENSITIES FOR VARIOUS PHENOMENA

PHENOMENA	kW/m^2
Pain to humans after 10 s to 20 s	4
Pain to humans after 3 s	10
Ignition of cotton fabric after a long time (piloted) (see Note 2)	13
Ignition of timber after a long time 13 (piloted) (see Note 2)	13
Ignition of cotton fabric after a long time (non-piloted) (see Note 3)	25
Ignition of timber after a long time (non-piloted) (see Note 3)	25
Ignition of gabardine fabric after a long time (non-piloted) (see Note 3)	27
Ignition of black drill fabric after a long time (non-piloted) (see Note 3)	38
Ignition of cotton fabric after 5 s (non-piloted) (see Note 3)	42
Ignition of timber in 20 s (non-piloted) (see Note 3)	45
Ignition of timber in 10 s (non-piloted) (see Note 3)	55

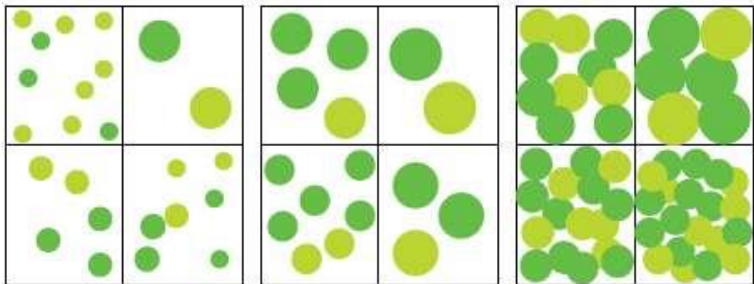
NOTES:

1. Source AS 1530.4—2005.
2. Introduction of a small flame to initiate ignition.
3. Flame not introduced to initiate ignition.

HOW TO PROCEED WITH THIS DOCUMENT

1. If you have been issued with a BAL report that requires **no further clearing / thinning**, this document can be submitted with your application for Development Approval **and** your application for Building Approval with your local authority.
2. If you need to amend the vegetation on your lot to achieve a maximum allowable BAL-29, clearing and thinning of vegetation may be required. In this case all vegetation amendments must be completed and a further site inspection carried out by the bushfire consultant. A **Final BAL Report** can then be issued **at additional cost**. The final BAL report will enable the completion of a compliance certificate by your builder / building inspector. This can then be submitted to your local authority for Building Approval.

Vegetation thinning standards outlined below provide an indication of the requirements for Asset Protection Zones as prescribed in State Planning Policy 3.7. These are the minimum standards required on sites that require vegetation amendments to achieve acceptable BAL levels. **Your Local Authority may prescribe additional or modified standards:**

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES	
OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. <p>Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity</p>  <p>15% 30% 70%</p>

Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> • Should not be located under trees or within three metres of buildings. • Should not be planted in clumps >5 square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> • Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. • Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
Grass	<ul style="list-style-type: none"> • Grass should be maintained at a height of 100 millimetres or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	<ul style="list-style-type: none"> • Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
LP Gas Cylinders	<ul style="list-style-type: none"> • Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.
* Plant flammability, landscaping design and maintenance should be considered – refer to explanatory notes	

Source: WAPC Dec 2021 Guidelines for planning in bushfire prone areas. V1.4

Economic Impact of Yondara Plantation

A report for Bunbury Fibre Exports Pty
Ltd

17 February 2025

Table of contents

Table of contents	ii
Tables	iii
Figures	iii
Abbreviations	v
Document history and status	vi
Executive summary	vii
1. Introduction	10
2. Methods, data and assumptions	11
2.1. Data sources	11
2.2. Model direct economic activity	12
2.2.1. Base case activity	12
2.2.2. Business case activity	13
2.3. Develop the RISE model	15
2.4. Shock the RISE model	16
2.5. Report economic contribution indicators	16
3. Results	17
3.1. Base case	17
3.2. Business case	19
3.3. Comparison of scenarios	21
References	23
Appendix 1 Sector definitions	24

Tables

Table ES-1	Economic contribution of the base case and impact of the business case, yearly average over 30 year rotation period	vii
Table 2-1	Summary of base case and business case data sources	11
Table 2-2	Base case direct economic activity, revenue, typical year	12
Table 2-3	Business case direct economic activity, revenue	14
Table 2-4	Business case direct economic activity, establishment and operating expenditure	14
Table 2-5	Business case direct economic activity, employment and wages	15
Table 3-1	Economic contribution of the base case, yearly average over 30 year rotation period	17
Table 3-2	Economic contribution of the business case, yearly average over 30 year rotation period	19
Appendix Table 1-1	Intermediate sector specifications for the input-output models	24

Figures

Figure ES-1	Cumulative ^a economic contribution of the base case and business case to the Shire economy, 30 year rotation period	viii
Figure ES-2	Cumulative ^a economic contribution of the base case and business case to the WA economy, 30 year rotation period	ix
Figure 2-3	Farm GVP, by expenditure components and value adding \$m, 30 year rotation, base case	13
Figure 2-4	Plantation GVP, by expenditure components and value adding \$m, 30 year rotation, business case	15
Figure 3-1	Base case contribution to Employment (fte) of the base case, direct and flow on, 30 year rotation	18
Figure 3-2	Base case contribution to GRP/GSP \$m, direct and flow on, 30 year rotation	18
Figure 3-3	Business case economic impact to Employment (fte), direct and flow on, 30 year rotation	20
Figure 3-4	Business case economic impact to GRP/GSP, \$m, direct and flow on, 30 year rotation	20

Figure 3-5	Cumulative ^a economic contribution of the base case and business case to the Shire economy, 30 year rotation period	21
Figure 3-6	Cumulative ^a economic contribution of the base case and business case to the WA economy, 30 year rotation period	22

Abbreviations

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
ACCU	Australian carbon credit units
DJTSI	Department of Jobs, Tourism, Science and Innovation
fte	Full-Time Equivalent
FPC	Forest Products Commission
GRP	Gross Regional Product
GSP	Gross State Product
GVP	Gross Value of Production
ha	hectares
IO	Input-Output
IOIG	Input-Output Industry Group
NFTP	Native Forestry Transition Plan
RFI	request for information
RISE	Regional Industry Structure and Employment
WA	Western Australia

Document history and status

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Executive summary

BDO has undertaken an economic impact assessment to demonstrate the economic value of the proposed Yondara Plantation development to Boyup Brook Shire (the Shire) and Western Australia (WA). The proposed location of the development is 352 Evans Siding Road, Benjinup WA, Australia. The economic assessment includes evaluating the economic contribution of a base case (no change to existing land use) and the impact of the business case (the establishment of the Yondara Plantation).

Economic contribution of the base case and impact of the business case

The economic contribution from no change to land use was used as a base case. The base case assumes a typical year for a sheep grazing operation on a 382 ha productive area in the Shire. This scenario includes downstream primary processing activity attributed to sales of livestock. The average yearly economic contribution of the base case is provided in Table ES-1.

We understand the Shire is considering other land uses such as cropping. We note there is no history of undertaking these activities on the property. An economic analysis of alternative uses would require expert insight on the feasibility of such uses. Due to lack of evidence about feasibility, we have excluded other alternate land uses from the base case.

At the Shire level the base case is expected to contribute \$0.2m to Gross Regional Product (GRP) on average per year. At the state level this is expected to be \$1.1m to Gross State Product (GSP). The base case contribution to employment is expected to be 1.1 fte jobs to the Shire and 6.1 fte jobs to WA.

Table ES-1 Economic contribution of the base case and impact of the business case, yearly average over 30 year rotation period

	Employment (fte)	Employment (total)	GRP/GSP (\$m)	Household Income (\$m)
<i>Boyup Brook Shire</i>				
Base case	1.1	1.0	0.2	0.1
Business case	0.6	1.3	0.4	0.0
Difference^a	-0.5	0.3	0.2	-0.0
<i>WA State</i>				
Base case	6.1	5.7	1.1	0.6
Business case	6.2	6.7	1.6	0.6
Difference^a	0.0	1.0	0.5	0.0

^a Economic impact of the business case less the base case contribution

Source: BDO analysis

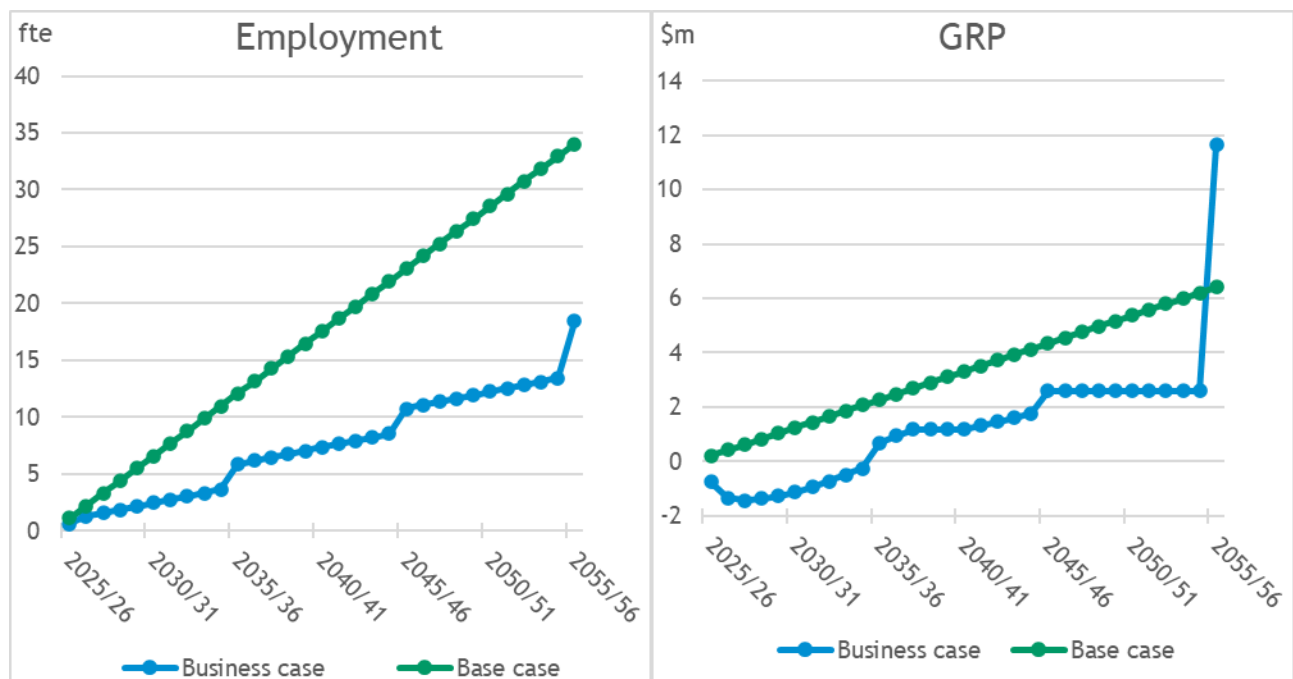
The economic impact of the business case scenario involves the establishment of a 305.5 ha radiata pine plantation in the Shire. The scenario includes downstream primary processing activity, in the form of woodchip and sawlog manufacturing, occurring outside of the Shire in broader WA. The average yearly economic impact of the business case is provided in Table ES-1.

At the Shire level the business case economic impact is expected to contribute \$0.4m to GRP on average per year. At the state level this is expected to be \$1.6m to GSP. The business case impact to employment is expected to be 0.6 fte jobs to the Shire and 6.2 fte jobs to WA.

The average yearly economic impact summarised in Table ES-1 shows the business case is expected to generate 0.5 fte jobs fewer per year than in the base case, at the Shire level. Conversely, the business case is expected to generate \$0.2m more to GRP per year than the base case at the Shire level. At the state level, the business case is expected to generate less than 0.1 fte jobs and \$0.5m GSP per year more than in the base case.

However, unlike the base case, the economic contribution from the business case varies depending on the project's year. Figure ES-1 depicts the cumulative contribution of the base case and business case scenarios to employment (fte) and GRP respectively, over the 30 year rotation period. Figure ES-2 provides a similar depiction at the state level.

Figure ES-1 Cumulative^a economic contribution of the base case and business case to the Shire economy, 30 year rotation period



^a Cumulative employment contributions are in terms of fte job years.

Source: BDO analysis

Figure ES-2 Cumulative^a economic contribution of the base case and business case to the WA economy, 30 year rotation period



^a Cumulative employment contributions are in terms of fte job years.

Source: BDO analysis

1. Introduction

On 8 September 2021, the Western Australian Government made the decision to end native forest logging from January 2024. This decision was made in consideration to climate change, biodiversity and forest health, and for the need of carbon capture and storage. Following this announcement the WA government released its Native Forestry Transition Plan (NFTP). As part of the NFTP, the WA Government is investing \$350 million to expand WA's softwood plantations to support jobs in the state and to create a sustainable, future timber supply (DJTSI 2023).

BDO has been commissioned by Bunbury Fibre Exports Pty Ltd to undertake an economic impact assessment of a the proposed Yondara Plantation Development at 352 Evans Siding Road, Benjinup WA, Australia, in the Boyup Brook Shire (the Shire). The analysis demonstrates the expected economic impact of the Yondara plantation to the Shire and WA State. While the primary audience for this report is the Shire, the expected economic impact to the state is substantial, so this has also been modelled.

This report describes the methods, data and assumptions in Section 2. Results are presented in Section 3.

2. Methods, data and assumptions

2.1. Data sources

Methods and data sources utilised in this study cover a broad scope of activities occurring in the base case and the proposed Yondara Plantation. These are outlined in Table 2-1 and detailed in the remainder of this section.

Table 2-1 Summary of base case and business case data sources

Description	Methods and data
Base case	Scenario involving no change to land use (382 ha productive area), but it does assume that a new owner is found to restore the farm to normal operation.
Sheep grazing operation	Trading data from 2019/20 to 2024/25 (part year) were received from the landholder. A sheep grazing operation was modelled as the base case. Given the information received, the following assumptions were used to model a typical year of activity on the property: <ul style="list-style-type: none">• 1,400 head of livestock sales per annum• \$182.0/head expected price• Nil sales of pasture cut for hay• Business expenditure (e.g. purchases of local services, utilities, supplementary feed, etc) relative to the level of production are consistent with the industry average of other sheep farming operations in the Shire.
Post farmgate related activity	Processing activity attributed to sheep sales was included in the base case scenario. The value of processing activity was derived from Regional Industry Structure and Employment (RISE) input-output (IO) model data. Activity was modelled by the Meat Processing Manufacturing sector and was assumed to occur outside of the Shire in WA.
Business case	Land use change scenario, involving the establishment of a 305.5 ha radiata pine plantation.
Plantation operation	Economic activity information specific to the proposed plantation were provided by Bunbury Fibre Exports Pty Ltd. Data provided included: <ul style="list-style-type: none">• Establishment and operating costs• Direct economic activity (employment, wages and harvesting)• Indication of the destination and use of wood post-harvest.

Description	Methods and data
Post harvest activity	<p>Primary processing activity attributed to the proposed plantation was derived from information received from Bunbury Fibre Exports Pty Ltd. The following markets for harvested wood were modelled:</p> <ul style="list-style-type: none"> • First thinning harvest (year 10): 100% to woodchip production • Second thinning harvest (year 20): 60% to woodchip and 40% to sawlog production • Harvest at maturity (year 30): 20% to woodchip and 80% to sawlog production <p>All primary processing were modelled to occur outside of the Shire in WA.</p> <p>The value of primary processing was modelled at \$250.7/t for woodchips and \$328.0/m³ for sawlogs. Nil wastage at primary production were modelled as a simplifying assumption. It is accepted there will be minimal wastage as offcuts are generally processed into other products. Activity was modelled by the Sawmill Products Manufacturing sector</p>
Carbon credit revenue	<p>Additional revenue from carbon credits is expected to be generated by the proposed plantation. Bunbury Fibre Exports Pty Ltd expects the property to sequester approximately 106,700 tonnes of carbon dioxide, producing 80,000 Australian Carbon Credit Units (ACCU) over the rotation.</p> <p>Based on a spot price of \$33.75 per ACCU, the plantation is expected to generate almost \$2.7 million in additional revenue. A forecast of ACCUs to be generated over the years 1 to 25 was provided by Bunbury Fibre Exports Pty Ltd. The value of ACCUs were modelled at the \$33.75 spot price.</p>

Source: Bunbury Fibre Exports Pty Ltd, ABARES, BDO analysis

2.2. Model direct economic activity

2.2.1. Base case activity

A scenario of a typical year for a sheep grazing operation on 382 ha in the Shire was formulated as a base case, and reflects no change to land use on the property. The scenario includes downstream primary processing activity attributed to sales of livestock. The base case includes the following value of economic activity occurring.

Table 2-2 Base case direct economic activity, revenue, typical year

	Production		Price received	Gross value of production	Region of activity
	Volume	Units	(\$/unit)	(\$'000)	
Sheep sales	1,400	Head	\$182.0	\$254.8	Boyup Brook
Hay sales	Nil	tonnes	n.a.	n.a.	Boyup Brook
Meat processing	1,400	Head	\$399.4 ^a	\$559.1	Rest of WA

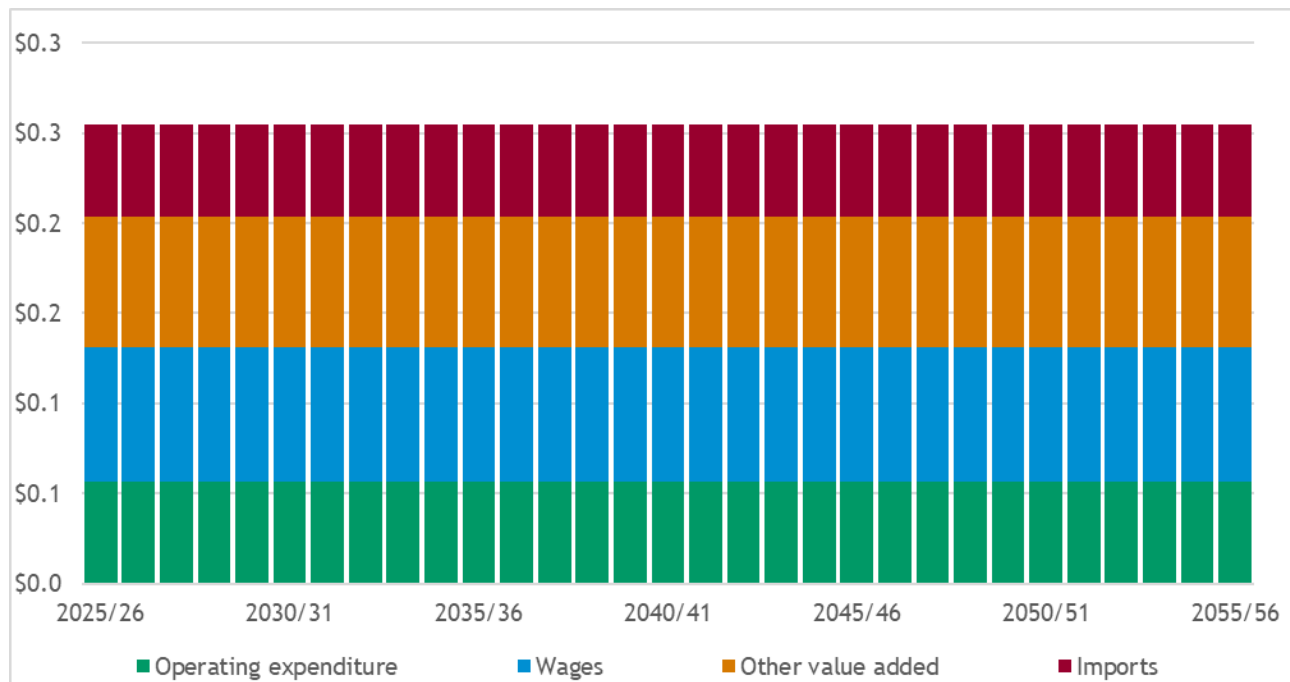
^a The value of meat processed per head of livestock were derived using transaction data from the 2022/23 WA RISE IO model and the modelled farmgate price of livestock (\$182.0/head).

Source: Bunbury Fibre Exports Pty Ltd and BDO analysis

We understand the Shire is considering other land uses such as cropping. We note there is no history of undertaking these activities on the property. An appropriate economic analysis will require expert insight on the feasibility of alternative uses. Due to lack of evidence, we have excluded other alternate land uses from the base case.

Figure 2-3 depicts the on farm gross value of production (GVP) by its components for the base case over the 30 year rotation period¹. Expenditure, wages and employment associated with production were modelled to be consistent with similar businesses in the Shire economy.

Figure 2-3 Farm GVP, by expenditure components and value adding \$m, 30 year rotation, base case



^a Components of GVP are derived from the Boyup Brook Shire RISE IO model transactions data
Source: BDO analysis

2.2.2. Business case activity

A land use change scenario, involving the establishment of a 305.5 ha radiata pine plantation was used to estimate the economic impact of the business case. These impacts were assessed based on the specific attributes of the proposed development. A request for information (RFI) for data specific to the proposed plantation and associated primary processing was made to Bunbury Fibre Exports Pty Ltd. These data were used to evaluate the economic activity directly associated with the proposed plantation. The following revenue, expenditure and employment information was received.

¹ One 30 year rotation period includes an initial year zero, and totals to 31 years of economic activity.

Table 2-3 Business case direct economic activity, revenue

Description	Production / ha (per year)		Price received	GVP	Region of activity	Relevant years of production
	Volume	Units	(\$/unit)	(\$'000)		
On-farm production						
First thinning harvest	100.00	Tonnes	\$65.00	\$1,985.8	Boyup Brook	10
Second thinning harvest	100.00	Tonnes	\$65.00	\$1,985.8	Boyup Brook	20
Harvest at maturity	300.00	Tonnes	\$130.00	\$11,914.5	Boyup Brook	30
Carbon credits	10.44 ^a	ACCU	\$33.75	\$107.6	Boyup Brook	1-25
Woodchip processing						
First thinning	100.00	Tonnes	\$250.70	\$7,658.9	Rest of WA	10
Second thinning	60.00	Tonnes	\$250.70	\$4,595.3	Rest of WA	20
Harvest at maturity	60.00	Tonnes	\$250.70	\$4,595.3	Rest of WA	30
Sawlog processing						
Second thinning	40.00	m ³	\$328.00	\$4,008.2	Rest of WA	20
Harvest at maturity	240.00	m ³	\$328.00	\$24,049.0	Rest of WA	30

^a Annual average of carbon credits generated per hectare. Actual generation of carbon credits are expected to vary for specific years.

Source: Bunbury Fibre Exports Pty Ltd and BDO analysis

Table 2-4 Business case direct economic activity, establishment and operating expenditure

Description	Input Cost	Shire	Rest of WA	Outside of WA	Relevant years of costs incurred
	\$ / ha (per year) or specified if other	% sourced	% sourced	% sourced	
Plants / nursery materials	\$580	0%	76%	24%	0-1
Planting services	\$350	0%	100%	0%	0-1
Buildings / sheds	\$1,000 / year	100%	0%	0%	0-30
Other infrastructure (e.g. roads, fences, earthworks)	\$500	100%	0%	0%	1,10,20,30
Weed control	\$400	0%	100%	0%	0, 1, 2
Thinning harvest	\$5,500	50%	50%	0%	10, 20
Fertilisers and chemicals	\$1,020	30%	70%	0%	0, 10, 20
Harvest at maturity	\$16,500	50%	50%	0%	30
Firebreak maintenance	\$15	0%	100%	0%	0-30
Pest control	\$10	100%	0%	0%	0-1
Declared weeds	\$5	80%	20%	0%	0-30
Other (please specify)	\$320	100%	0%	0%	0-1

Source: Bunbury Fibre Exports Pty Ltd and BDO analysis

Table 2-5 Business case direct economic activity, employment and wages

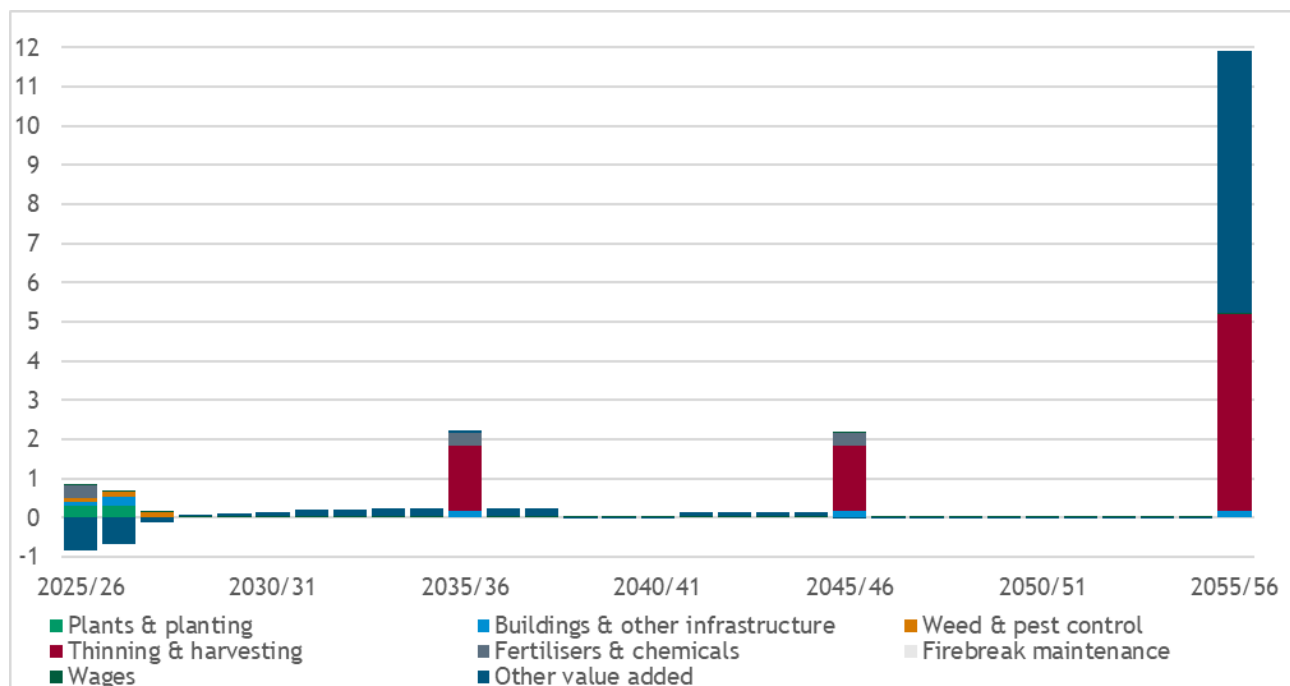
Description	Value (Units in description)	Relevant years
Wages and salaries (\$'000 / year)	\$18.3	0-30
Employment (no. jobs / year)	1	0-30
Average weekly hours worked / job	10.2 ^a	0-30

^a Average weekly hours worked were estimated using the 2022/23 Boyup Brook Shire RISE IO model and wage data received from the RFI (\$18,300 per annum).

Source: Bunbury Fibre Exports Pty Ltd and BDO analysis

Figure 2-4 depicts the GVP of the proposed plantation by its components over the 30 year rotation period.

Figure 2-4 Plantation GVP, by expenditure components and value adding \$m, 30 year rotation, business case



Source: Bunbury Fibre Exports Pty Ltd, and BDO analysis

2.3. Develop the RISE model

BDO has developed the Regional Industry Structure and Employment (RISE) model over the past 20 years as a widely accepted framework for modelling economic contribution and impact based upon the IO framework. IO models are widely used to assess the economic contribution or impact, including employment and GSP, of various economic activities and policies. The RISE model is designed to assist analysts to understand the structure of a regional or state economy and estimate the economic impact to the region or state.

Economic impact analysis based on the IO approach takes into account the direct impact on regional and state economic activity, and some of the effects of the induced demand for goods and services elsewhere in the economy.

The RISE model is a standard IO model with the following extensions: population and unemployment, tourism accounts, price sensitivity and capacity to estimate impacts over time (up to 10 years). A RISE model was developed for the 2022/23 financial year for the Boyup Brook Shire economy. This model and an existing 2022/23 WA RISE model were used to estimate the economic impact of the proposed development.

2.4. Shock the RISE model

In the language of economics, to ‘shock’ a model is to take a description of some direct economic activity and input it into a model of the whole economy of interest to understand how the economic activity interacts with the whole economy.

The expenditures described in section 2.2 were transformed from purchaser’ prices to basic prices to ensure flow-on effects were estimated accurately before they could be input into the RISE models. This transformation ensured margins were allocated to the appropriate industries, transfers along the supply chain were treated appropriately, taxes, subsidies and other forms of surplus transfer were identified, and imports were excluded from the estimation of regional and state flow-on effects.

The transformed expenditure data were then used to shock the RISE model to estimate the flow-on and total economic impact to the regional and state economies.

2.5. Report economic contribution indicators

The results from the economic contribution analysis are presented in terms of the following basic indicators. The indicators are:

- **Gross state product/gross regional product (GSP/GRP):** is a measure of the net contribution of an activity or industry to the state or regional economy. It represents payments to the primary inputs of production (labour, capital and land) and is a regional level equivalent of gross domestic product.
- **Household income:** is income earned by employees of businesses and owner-operators. This is a component of GRP/GSP that describes how much of the GRP/GSP is passed to households, so it is a useful indicator of the welfare of households.
- **Employment:** refers to the number of jobs, expressed in full-time equivalent jobs. Employment is a key indicator of both economic activity and the welfare of households.
 - **Full-time equivalent employment (fte):** is a way to measure a worker’s involvement in a project or industry activity. An fte of 1.0 means that the person is equivalent to a full-time worker, while an fte of 1.5 signals that the worker is employed more than an average full-time worker. Typically, different scales are used to calibrate this number, depending on the type of industry but the basic calculation is the total hours worked divided by average annual hours worked in full-time jobs.

The components of each indicator are:

1. **Direct:** In-scope activity of Yondara Plantation in Boyup Brook and WA (see Section 2.2).
2. **Flow-on:** The sum of Production-Induced and Consumption-Induced activity:
 - **Production-Induced:** Activity occurring in all industries as a result of the expenditures made by businesses represented in the ‘direct’ activity described above
 - **Consumption-Induced:** Activity occurring in all industries as a result of households spending incomes generated through ‘direct’ and ‘production-induced’ activities
3. **Total:** The sum of Direct (1) and Flow-on effects (2).

Results are presented by direct, flow-on, production-induced, consumption-induced, and total effects.

3. Results

3.1. Base case

The economic contribution for the base case was assessed using data and methods discussed in Section 2.2.1. Table 3-1 presents the average yearly economic contribution of the base case to employment, GRP/GSP and household income, over the 30 year rotation period.

Table 3-1 Economic contribution of the base case, yearly average over 30 year rotation period

	Employment (fte)	Employment (total)	GRP/GSP (\$m)	Household Income (\$m)
Boyup Brook Shire				
<i>Direct effects</i>				
Sheep grazing activity	0.9	0.8	0.1	0.1
<i>Flow-on effects</i>				
Services to Ag, Forestry & Fishing	0.0	0.0	0.0	0.0
Ownership of Dwellings	0.0	0.0	0.0	0.0
Personal & Other Services	0.0	0.0	0.0	0.0
Retail Trade	0.0	0.0	0.0	0.0
Wholesale Trade	0.0	0.0	0.0	0.0
Other sectors	0.1	0.1	0.0	0.0
Total local impact	1.1	1.0	0.2	0.1
WA State				
<i>Direct effects</i>				
Sheep grazing activity	0.9	0.8	0.1	0.1
Downstream	0.9	0.8	0.1	0.1
<i>Flow-on effects</i>				
Meat & Meat Products	1.0	0.8	0.1	0.1
Ownership of Dwellings	0.0	0.0	0.1	0.0
Beef Cattle	0.7	0.6	0.1	0.1
Prof Scientific Tech Services	0.3	0.2	0.0	0.0
Sheep	0.3	0.2	0.0	0.0
Other sectors	2.1	2.3	0.4	0.2
Total State impact	6.1	5.7	1.1	0.6

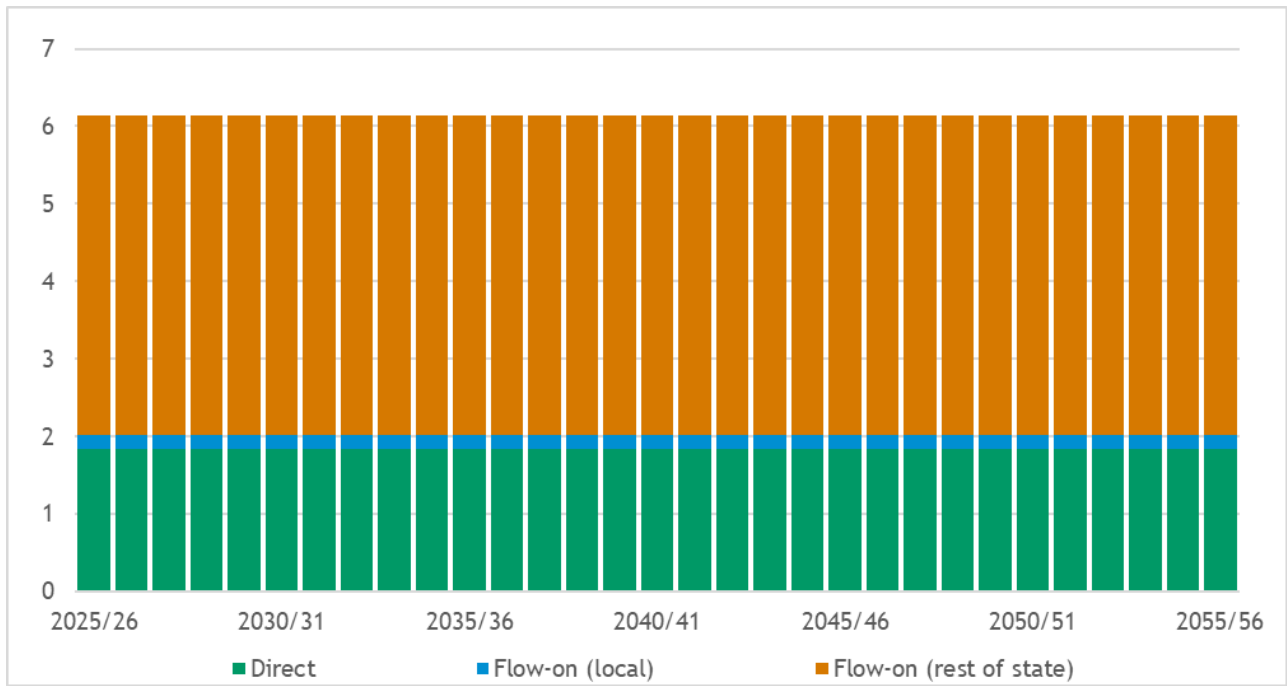
Source: BDO analysis

At the Shire level the base case is expected to contribute \$0.1m directly and \$0.1m flow-on (\$0.2m in total) to GRP on average per year. Across industries, the greatest contributors to flow-on GRP are Services to Ag, Forestry & Fishing, Ownership of Dwellings and Personal & Other Services (less than \$0.1m combined). For WA the base case is expected to contribute \$0.3m directly and \$0.8m flow-on (\$1.1m in total) to GSP on average per year. Across industries, the largest contributors to flow-on GSP are Meat & Meat Products (\$0.1m), Ownership of Dwellings (\$0.1m), Beef Cattle (\$0.1m).

The base case contribution to local employment is expected to be 0.9 fte jobs directly and 0.2 fte jobs flow-on (1.1 fte jobs in total). At the state level, the contribution to employment is expected to be 1.8 fte jobs directly and 4.3 fte jobs flow-on (6.1 fte jobs in total).

Figure 3-1 and Figure 3-2 present the economic contribution of the base case to employment (fte) and GRP/GSP respectively. Although the economic contribution is the same across all years, they are presented for years 2025/26 to 2035 to allow comparison with the business case scenario.

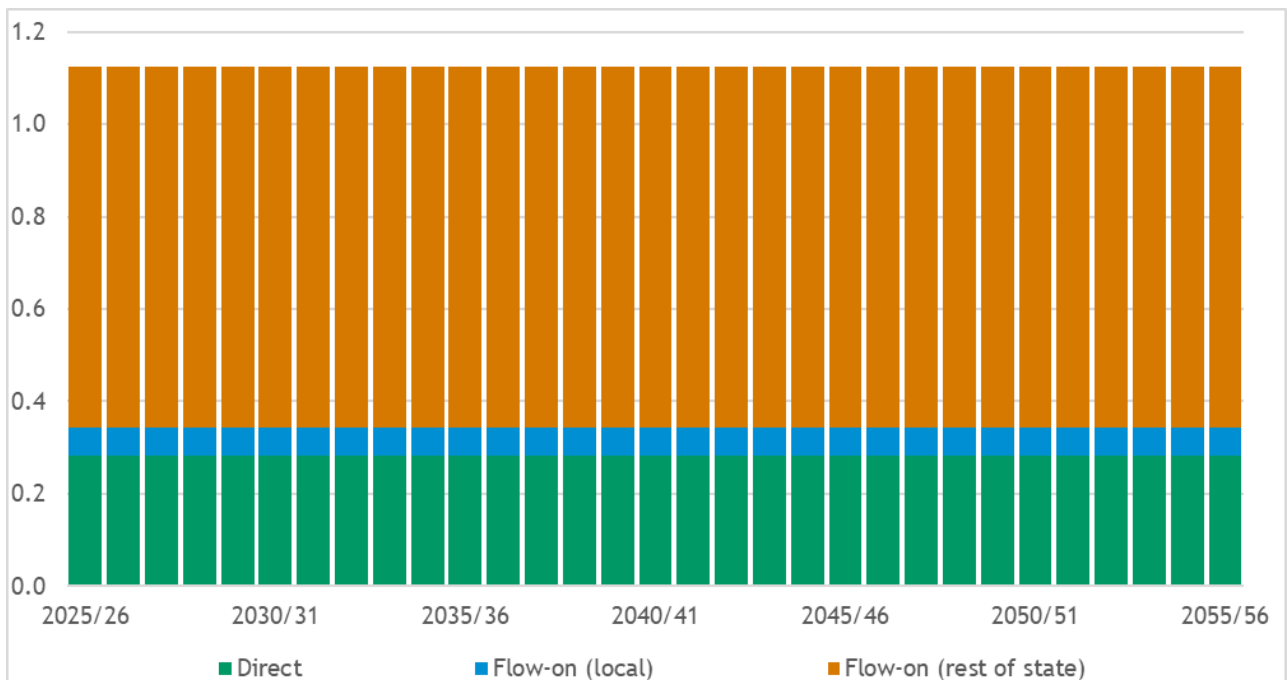
Figure 3-1 Base case contribution to Employment (fte) of the base case, direct and flow on, 30 year rotation



^a Rest of state flow-on contributions include direct employment (fte) in processing activity

Source: BDO analysis

Figure 3-2 Base case contribution to GRP/GSP \$m, direct and flow on, 30 year rotation



^a Rest of state flow-on contributions include direct contributions to GSP from processing activity

Source: BDO analysis

3.2. Business case

The economic impact for the business case was assessed using data and methods discussed in Section 2.2.2. Table 3-2 presents the average economic impact from the business case to employment, GRP/GSP and household income, over the 30 year rotation period.

Table 3-2 Economic contribution of the business case, yearly average over 30 year rotation period

	Employment (fte)	Employment (total)	GRP/GSP (\$m)	Household Income (\$m)
Boyup Brook Shire				
<i>Direct effects</i>				
Plantation	0.3	1.0	0.2	0.0
<i>Flow-on effects</i>				
Forestry and Logging	0.2	0.1	0.1	0.0
Services to Ag, Forestry & Fishing	0.0	0.0	0.0	0.0
Ownership of Dwellings	0.0	0.0	0.0	0.0
Wholesale Trade	0.0	0.0	0.0	0.0
Construction Services	0.0	0.0	0.0	0.0
Other sectors	0.1	0.1	0.0	0.0
Total local impact	0.6	1.3	0.4	0.0
WA State				
<i>Direct effects</i>				
Plantation	0.3	1.0	0.2	0.0
Downstream	1.2	1.2	0.1	0.1
<i>Flow-on effects</i>				
Forestry and Logging	1.1	0.9	0.5	0.1
Ownership of Dwellings	0.0	0.0	0.1	0.0
Road Transport	0.6	0.5	0.1	0.1
Wholesale Trade	0.2	0.2	0.1	0.0
Prof Scientific Tech Services	0.3	0.3	0.1	0.1
Other sectors	2.4	2.6	0.4	0.2
Total State impact	6.2	6.7	1.6	0.6

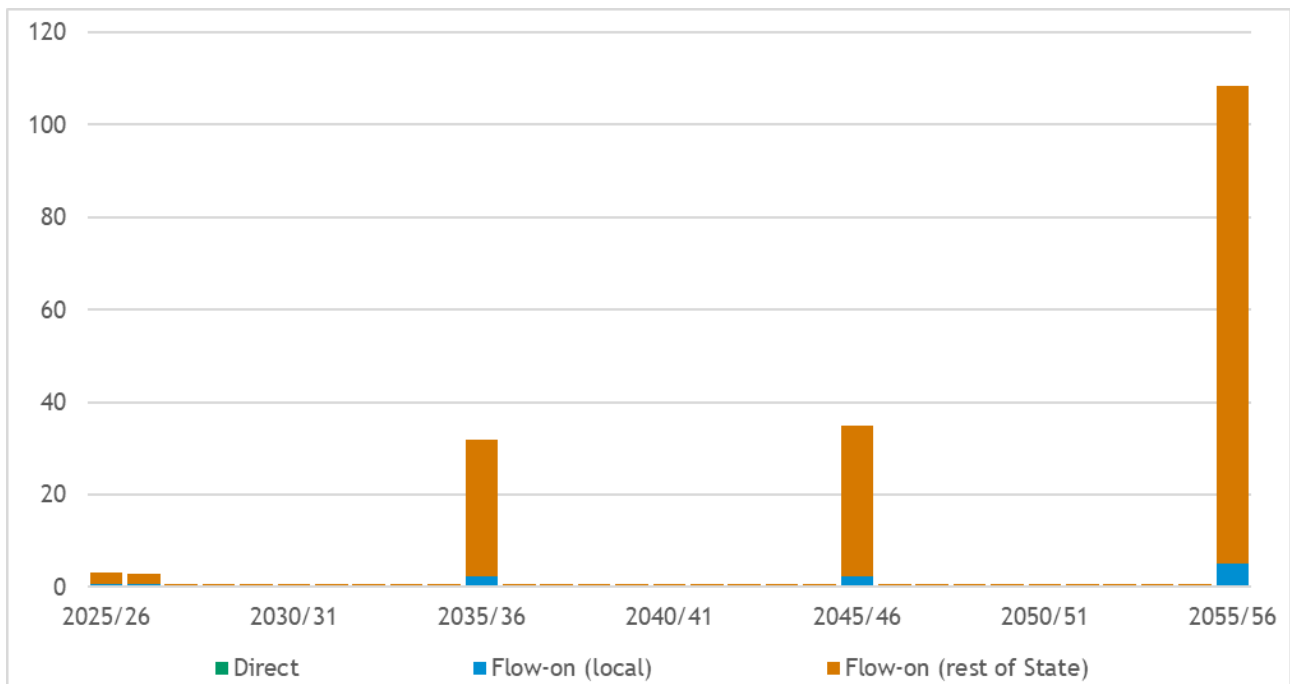
Source: BDO analysis

At the Shire level the business case economic impact is expected to contribute \$0.2m directly and \$0.2m flow-on (\$0.4m in total) to GRP on average per year. Across industries, the greatest contributors to flow-on GRP are Forestry and Logging (\$0.1m), Services to Ag, Forestry & Fishing (less than \$0.1m) and Ownership of Dwelling (less than \$0.1m). For WA the business case economic impact is expected to contribute \$0.3m directly and \$1.3m flow-on (\$1.6m in total) to GSP on average per year. Across industries, the largest contributors to flow-on GSP are Forestry and Logging (\$0.5m), Ownership of Dwelling (\$0.1m) and Road Transport (\$0.1m).

The business case impact to local employment is expected to be 0.3 fte jobs directly and 0.3 fte jobs flow-on (0.6 fte jobs in total). At the state level, the impact to employment is expected to be 1.5 fte jobs directly and 4.7 fte jobs flow-on (6.2 fte jobs in total).

Figure 3-3 and Figure 3-4 present the economic impact of the business case to employment (fte) and GRP/GSP respectively.

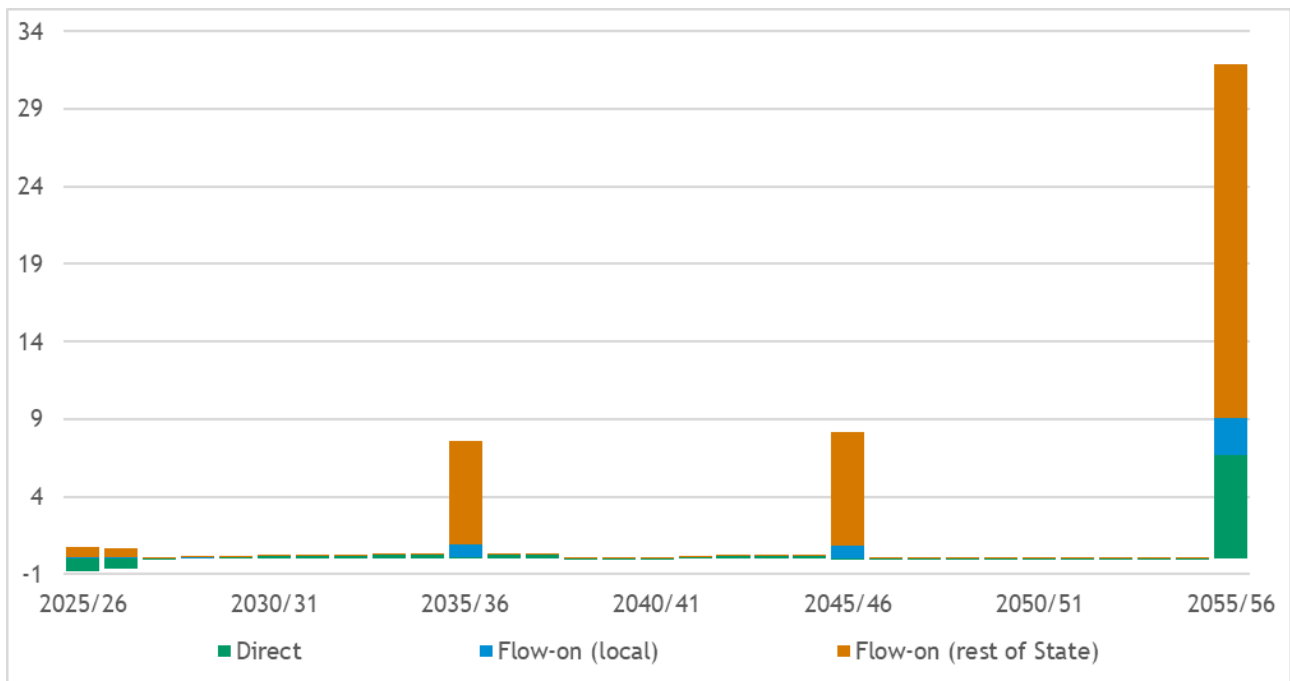
Figure 3-3 Business case economic impact to Employment (fte), direct and flow on, 30 year rotation



^a Rest of state flow-on contributions include direct employment (fte) in processing activity

Source: BDO analysis

Figure 3-4 Business case economic impact to GRP/GSP, \$m, direct and flow on, 30 year rotation



^a Rest of state flow-on impacts include direct contributions to GSP from processing activity

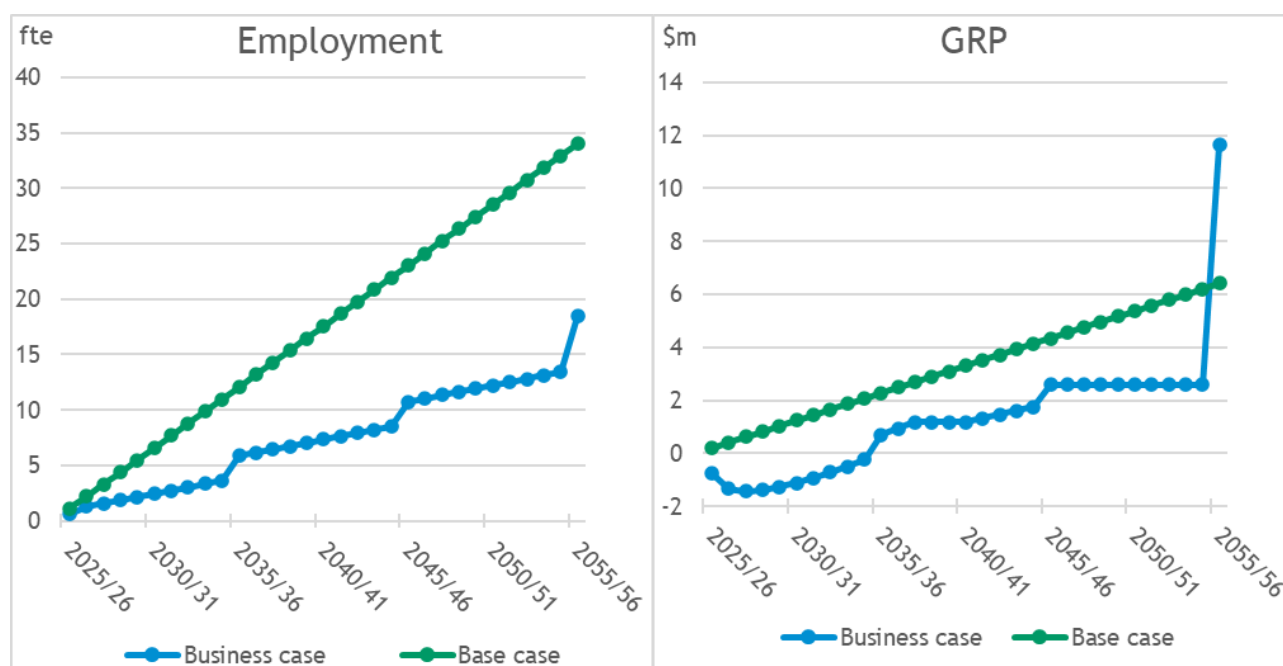
Source: BDO analysis

3.3. Comparison of scenarios

Unlike the base case, the economic contribution from the business case varies depending on the project's year. Figure 3-5 depicts the cumulative contributions of the base case and business case scenarios to employment (fte) and GRP respectively, over the 30 year rotation period. These cumulative effects provide the context needed to compare the business case impact relative to the base case over the project's life.

At the Shire level the business case is expected to contribute less to local employment than the base case by 2055/56 (18.5 fte years vs 34.0 fte years respectively). However, the business case is expected to contribute significantly more to GRP than the base case by 2055/56 (\$11.7m vs \$6.4m respectively).

Figure 3-5 Cumulative^a economic contribution of the base case and business case to the Shire economy, 30 year rotation period

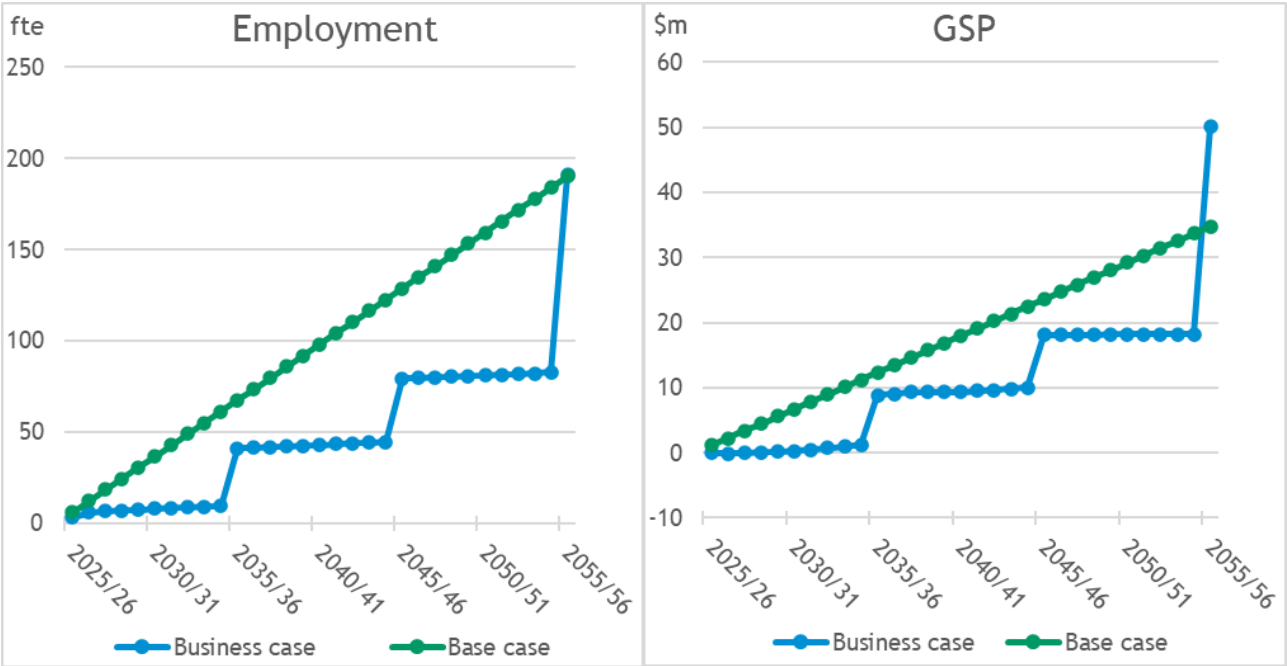


^a Cumulative employment contributions are in terms of fte job years.

Source: BDO analysis

Figure 3-6 provides a similar depiction as Figure 3-5, but at the state level. At the State level the business case is expected to contribute more to employment than the base case by 2055/56 (191.2 fte years vs 190.1 fte years respectively). Similarly, the project is expected to contribute more to GSP than the base case by 2055/56 (\$50.1m vs \$34.8m respectively).

Figure 3-6 Cumulative^a economic contribution of the base case and business case to the WA economy, 30 year rotation period



^a Cumulative employment contributions are in terms of fte job years.

Source: BDO analysis

References

Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) 2024, *Australian forest and wood products statistics - Production to 2022-23*, ABARES series report, Canberra, June

Australian Bureau of Statistics (ABS) 2008, *Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 1.0)*, ABS Cat. No. 1292.0, Canberra.

Department of Jobs, Tourism, Science and Innovation (DJTSI) 2023, *Protecting our native forests - Native Forestry Transition Plan*, Perth

Disclaimer

The assignment is a consulting engagement as outlined in the 'Framework for Assurance Engagements', issued by the Auditing and Assurances Standards Board, Section 17. Consulting engagements employ an assurance practitioner's technical skills, education, observations, experiences and knowledge of the consulting process. The consulting process is an analytical process that typically involves some combination of activities relating to: objective-setting, fact-finding, definition of problems or opportunities, evaluation of alternatives, development of recommendations including actions, communication of results, and sometimes implementation and follow-up.

The nature and scope of work has been determined by agreement between BDO and the Client. This consulting engagement does not meet the definition of an assurance engagement as defined in the 'Framework for Assurance Engagements', issued by the Auditing and Assurances Standards Board, Section 10.

Except as otherwise noted in this report, we have not performed any testing on the information provided to confirm its completeness and accuracy. Accordingly, we do not express such an audit opinion and readers of the report should draw their own conclusions from the results of the review, based on the scope, agreed-upon procedures carried out and findings.

Appendix 1 Sector definitions

Appendix Table 1-1 Intermediate sector specifications for the input-output models

IOIG Code	National Input-Output Table Description (2021 IOIG) 114 Sectors	WA & Regions, 2022/23 78 Sectors	ANZSIC 1 digit level Description 20 Sectors
0101	Sheep, grains, beef & dairy cattle	1 Sheep	Agriculture,
		2 Grains	Forestry & Fishing
		3 Beef Cattle	
		4 Dairy Cattle	
0102	Poultry & other livestock	5 Poultry	
		6 Pigs	
		7 Other Livestock	
0103	Other agriculture	8 Winegrape	
		9 Vegetables s	
		10 Fruit & Nuts	
		11 Other Agriculture	
0201	Aquaculture	12 Aquaculture	
0301	Forestry & logging	13 Forestry & Logging	
0401	Fishing, hunting & trapping	14 Fishing, Hunting & Trapping	
0501	Agriculture, forestry & fishing support services	15 Agriculture, Forestry & Fishing Support Services	
0601	Coal mining	16 Coal Mining	Mining
0701	Oil & gas extraction	17 Oil & Gas Extraction	
0801	Iron ore mining	18 Iron & Non-ferrous Ore Mining	
0802	Non-ferrous metal ore mining		
0901	Non-metallic mineral mining	19 Non Metallic Mineral Mining	
1001	Exploration & mining support services	20 Exploration & Mining Support Services	
1101	Meat & meat product manufacturing	21 Meat & Meat Product Manufacturing	Manufacturing
1102	Processed seafood manufacturing	22 Processed Seafood Manufacturing	
1103	Dairy product manufacturing	23 Dairy Product Manufacturing	
1104	Fruit & vegetable product manufacturing	24 Fruit & Vegetable Product Manufacturing	
1105	Oils & fats manufacturing	25 Oils & Fats Manufacturing	
1106	Grain mill & cereal product manufacturing	26 Grain Mill & Cereal Product Manufacturing	
1107	Bakery product manufacturing	27 Other Food Product Manufacturing	
1108	Sugar & confectionery manufacturing		
1109	Other food product manufacturing		

IOIG Code	National Input-Output Table Description (2021 IOIG) 114 Sectors	WA & Regions, 2022/23 78 Sectors		ANZSIC 1 digit level Description 20 Sectors
1201	Soft drinks, cordials & syrup manufacturing	28	Other Beverages	<i>Manufacturing (cont.)</i>
1202	Beer manufacturing	29	Beer Manufacturing	
1205	Wine, spirits & tobacco	30	Wine, Spirits & Tobacco Manufacturing	
1301	Textile manufacturing	31	Textiles, Clothing & Footwear Manufacturing	
1302	Tanned leather, dressed fur & leather product manufacturing			
1303	Textile product manufacturing			
1304	Knitted product manufacturing			
1305	Clothing manufacturing			
1306	Footwear manufacturing			
1401	Sawmill product manufacturing	32	Sawmill Product Manufacturing	
1402	Other wood product manufacturing	33	Other Wood Product Manufacturing	
1501	Pulp, paper & paperboard manufacturing	34	Pulp, Paper & Paperboard Manufacturing	
1502	Paper stationery & other converted paper product manufacturing	35	Paper Stationery & Other Converted Paper Product Manufacturing	
1601	Printing (including the reproduction of recorded media)	36	Printing (including the reproduction of recorded media)	
1701	Petroleum & coal product manufacturing	37	Petroleum & Coal Product Manufacturing	
1801	Human pharmaceutical & medicinal product manufacturing	38	Pharmaceutical & Other Chemical Product Manufacturing	
1802	Veterinary pharmaceutical & medicinal product manufacturing			
1803	Basic chemical manufacturing			
1804	Cleaning compounds & toiletry preparation manufacturing			
1901	Polymer product manufacturing			
1902	Natural rubber product manufacturing			
2001	Glass & glass product manufacturing	39	Non-metallic Mineral Product Manufacturing	
2002	Ceramic product manufacturing			
2003	Cement, lime & ready-mixed concrete manufacturing			
2004	Plaster & concrete product manufacturing			
2005	Other non-metallic mineral product manufacturing			

IOIG Code	National Input-Output Table Description (2021 IOIG) 114 Sectors	WA & Regions, 2022/23 78 Sectors		ANZSIC 1 digit level Description 20 Sectors
2101	Iron & steel manufacturing	40	Iron & Steel Manufacturing	Manufacturing (cont.)
2102	Basic non-ferrous metal manufacturing	41	Basic Non-Ferrous Metal Manufacturing	
2201	Forged iron & steel product manufacturing	42	Metal Product Manufacturing	
2202	Structural metal product manufacturing			
2203	Metal containers & other sheet metal product manufacturing			
2204	Other fabricated metal product manufacturing			
2301	Motor vehicles & parts; other transport equipment manufacturing	43	Motor Vehicles & Parts; Other Transport Equipment Manufacturing	
2302	Ships & boat manufacturing	44	Other Machinery & Equipment Manufacturing	
2303	Railway rolling stock manufacturing			
2304	Aircraft manufacturing			
2401	Professional, scientific, computer & electronic equipment manufacturing			
2403	Electrical equipment manufacturing			
2404	Domestic appliance manufacturing			
2405	Specialised & other machinery & equipment manufacturing			
2501	Furniture manufacturing	45	Furniture Manufacturing	
2502	Other manufactured products	46	Other Manufactured Products	
2601	Electricity generation	47	Electricity Generation	Electricity, Gas,
2605	Electricity transmission, distribution, on selling & electricity market operation	48	Electricity Supply	Water & Waste services
2701	Gas supply	49	Gas Supply	
2801	Water supply, sewerage & drainage services	50	Water Supply, Sewerage & Drainage Services	
2901	Waste collection, treatment & disposal services	51	Waste Collection, Treatment & Disposal Services	
3001	Residential building construction	52	Residential Building Construction	Construction
3002	Non-residential building construction	53	Other Construction	
3101	Heavy & civil engineering construction			
3201	Construction services	54	Construction Services	
3301	Wholesale trade	55	Wholesale Trade	Wholesale Trade
3901	Retail trade	56	Retail Trade	Retail Trade

IOIG Code	National Input-Output Table Description (2021 IOIG) 114 Sectors	WA & Regions, 2022/23 78 Sectors	ANZSIC 1 digit level Description 20 Sectors
4401	Accommodation	57 Accommodation	Accommodation &
4501	Food & beverage services	58 Food & Beverage Services	Food Services
4601	Road transport	59 Road Transport	Transport, postal & warehousing
4701	Rail transport	60 Rail Transport	
4801	Water, pipeline & other transport	61 Water, Pipeline & Other Transport	
4901	Air & space transport	62 Air & Space Transport	
5101	Postal & courier pick-up & delivery service	63 Transport Support Services & Storage	
5201	Transport support services & storage		
5401	Publishing (except internet & music publishing)	64 Publishing (except Internet & Music Publishing)	Information, Media & Telecommunications
5501	Motion picture & sound recording	65 Communication Services	
5601	Broadcasting (except internet)		
5701	Internet service providers, internet publishing & broadcasting, websearch portals & data processing		
5801	Telecommunication services		
6001	Library & other information services		
6201	Finance	66 Finance	Finance & Insurance
6301	Insurance & superannuation funds	67 Insurance & Other Financial Services	
6401	Auxiliary finance & insurance services		
6601	Rental & hiring services (except real estate)	68 Rental, Hiring & Real Estate Services	Rental, Hiring & Real Estate Services
6701	Ownership of dwellings	69 Ownership of Dwellings	Ownership of Dwellings
6702	Non-residential property operators & real estate services	68 Rental, Hiring & Real Estate Services (cont.)	Rental, Hiring & Real Estate Services (cont.)
6901	Professional, scientific & technical services	70 Professional, Scientific & Technical Services	Professional, Scientific & Technical Services
7001	Computer systems design & related services		
7210	Employment, travel agency & other administrative services	71 Administrative & Support Services	Administrative & Support Services
7310	Building cleaning, pest control & other support services		
7501	Public administration & regulatory services	72 Public Administration & Regulatory Services	Public Administration & Safety
7601	Defence	73 Defence	
7701	Public order & safety	74 Public Order & Safety	

IOIG Code	National Input-Output Table Description (2021 IOIG) 114 Sectors	WA & Regions, 2022/23 78 Sectors	ANZSIC 1 digit level Description 20 Sectors
8010	Primary & secondary education services	75 Education & Training	Education & Training
8110	Technical, vocational & tertiary education services		
8210	Arts, sports, adult & other education services		
8401	Health care services	76 Health & Community Services	Health & Community
8601	Residential care & social assistance services		Services
8901	Heritage, creative & performing arts	77 Cultural & Recreational Services	Cultural &
9101	Sports & recreation		Recreational Services
9201	Gambling		
9401	Automotive repair & maintenance	78 Personal & Other Services	Personal & Other
9402	Other repair & maintenance		Services
9501	Personal services		
9502	Other services		

Source: BDO analysis and ABS (2008 and 2024e)

1300 138 991

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Visual Landscape Assessment



‘Yondara’

**352 Evans-Siding Road
Benjinup**

**Mitsui Bussan Woodchip
Oceania Pty Ltd
December 2024**

Yondara Visual Landscape Assessment

SCOPE AND CONTEXT

Visual Landscape Assessment

Development Application 'Yondara', 352 Evans-Siding Road, Benjinup

Boyup Brook Shire Council

Proposed Pine Plantation at 352 Evans-Siding Road, Benjinup

This Visual Landscape Assessment has been prepared as part of Development Application submitted to the Boyup Brook Shire Council, concerning the proposed establishment of a pine plantation at 352 Evans-Siding Road, Benjinup.

The purpose of this report is to assess the potential visual impacts of the proposed plantation on the surrounding landscape and to provide an evaluation of the integration with the existing environmental and aesthetic characteristics of the area.

The subject property encompasses 382 hectares, primarily used for pastureland. It features occasional native shelter belts, paddock trees, and watercourses.

Approximately 80% of the property's boundary is adjacent to remnant bushland of the Wilga Reserve, which contributes to the area's natural landscape value.

This assessment considers the visual characteristics of the proposed plantation site and the potential to alter the visual landscape from various viewpoints within and around the property. The evaluation includes an analysis of the alignment with the surrounding land use, visibility, and the potential impact on the local environment and community. The assessment addresses potential mitigation measures to minimise any adverse visual impacts.



Visual Landscape Character Objectives

Figure 1



Due to the topography of the surrounding area, the two roads Yondara is visible from are **Greenfields Road**, a minor gravel road that services a single property in the immediate vicinity, and **Evans Siding Road** (see *Figure 1*). The neighbouring property accessed by Greenfields Road is located approximately 2 km in a direct line from Yondara. The neighbouring property shares a similar elevation to the closest shared boundary on the Yondara property.

The Yondara property is located at the end of Evans Siding Road and shares a boundary with native vegetation. There will not be any impact to visual amenity from Evans Siding Road.

The establishment of a pine plantation on Yondara will have minimal impact on the visual landscape from the neighbouring property. Both Greenfields Road and the properties it services are predominantly bordered by trees that obstruct direct views of Yondara and the proposed plantation area. (See *Figure 2*).

Figure 2



The proposed plantation area on Yondara will not be visible from the **Donnybrook-Boyup Brook Road**. The road is predominantly on the southeastern side of a tree-lined cut batter and vegetated soil-mantled hillslopes that block visibility of the property. (See *Figure 3*).

Existing plantations are located approximate 1 km to the south of the Yondara property. The proposed plantation at Yondara is congruent with the surrounding regional land use for long rotation cropping (see *Figure 4*).

Figure 3

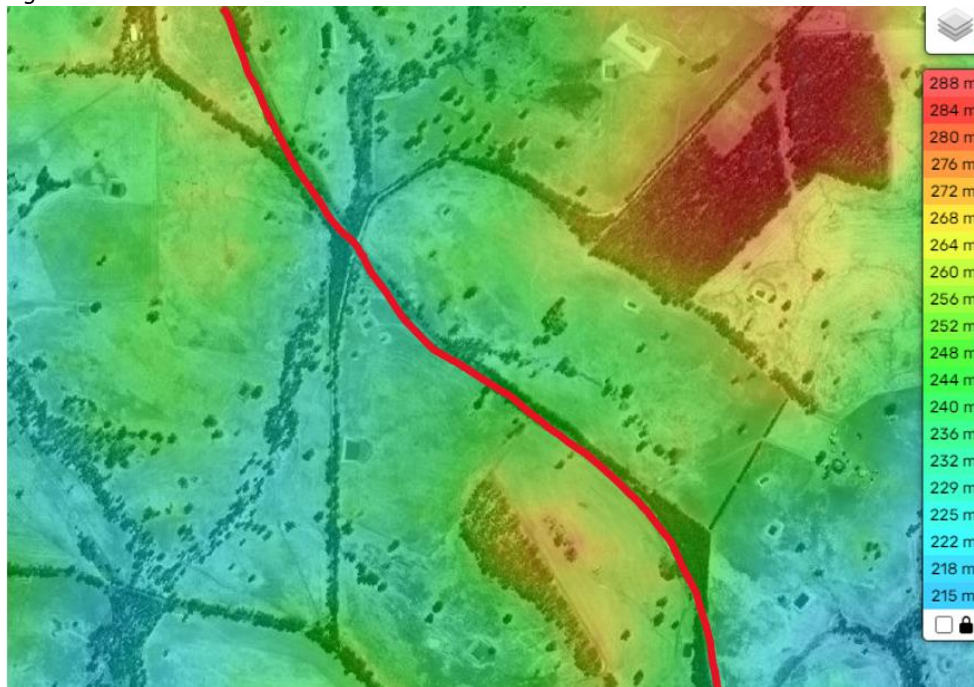


Figure 4



Figure 05: Yondara (red line) property relative to existing plantations to the south (yellow line)



Figure 6



Viewpoints were taken at 5 points around the boundary as shown in Figure 6.



Point A

View from dwelling looking to only neighbouring property to the SE. Pasture and paddock tree in foreground (fg), native trees in middleground (mg) dropping into valley and ridge with native trees and dwelling in background (bg).

**Point B**

Looking SE along the watercourse. Paddock trees and remnant vegetation in mg. Line of surrounding bushland in bg.

**Point B**

Looking S along the watercourse. Paddock trees and remnant vegetation in mg. Line of surrounding Wilga State Forest in bg.



Point C

Looking SE with
shelter belt trees in
bg.



Point C

Looking S along the
remnant Wilga
State Forest
boundary.



Point D

Looking S to native line of trees in mg and Wilga State Forest in bg.



Point D

Looking E to planted shelter break trees.

**Point E**

Looking E to native line of trees in mg and towards Donnybrook-Boyup Brook Rd in bg.

**Point E**

Looking N to native area in the mg and Wilga State Forest in the bg.

Proposed Development

Mitsui Bussan Woodchip Oceania is proposing the development of an approximately 309 hectare pine plantation on the Yondara property. The plantation will include both external and internal firebreaks for safety and management purposes. No new buildings are planned as part of the

Mitigation Measures

To mitigate these potential visual impacts, the following measures are recommended:

- Design the plantation to follow the natural topography, incorporating small, curvilinear coupes that blend harmoniously with the landscape.
- Maintain and enhance biodiversity corridors by preserving existing native vegetation and shelterbelt trees.
- Avoid geometrically shaped harvest areas that contrast sharply with the surrounding natural forms.
- Active management of harvesting operations to protect natural roadside vegetation and road infrastructure.

Findings

The Yondara property's unique location relative to the surrounding native forest and topography ensures that any visual impact from the pine plantation is minimal. Key findings include:

- One neighbouring property, situated on a minor road, will experience some visual impact.
- The plantation and associated harvesting activities will not affect either the main thoroughfare, Donnybrook-Boyup Brook Road, or the prominent views in the area.
- The property's lower elevation relative to the surrounding forest prevents any impact on the skyline. The plantation does not include any ridgelines visible to surrounding areas.
- Existing plantations within a 2-kilometer radius further minimise the perceived visual change to the area.

