1 Purpose

This report has been undertaken on behalf of Scott Colvin (the proponent) to support an application for visitor accommodation at 157 Blackwood Creek Road, Blackwood Creek TAS 7301.

The document provides an agricultural assessment of the property in question and reports on how the proposal complies with provisions of the Northern Midlands Interim Planning Scheme 2013. This report reviews the current agricultural usage of the property and the surrounding area in relation to the Land Capability and Land Classification. This includes soils, aspect, topography, water resource, economic feasibility, and impact of the proposed development in relation to agricultural activities.

It is noted that the visitor accommodation (dwelling) area and setback distances referred to in this report is an approximation only (based on available data and information received) and is subject to survey.

1.1 General Overview

1.1.1 Land capability

The currently recognised reference for identifying land capability is based on the class definitions and methodology described in the Land Classification Handbook, Second Edition, C.J Grose, 1999, Department of Primary Industries, Water and Environment, Tasmania.

Most agricultural land in Tasmania has been classified by the Department of Primary Industries and Water at a scale of 1:100,000, according to its ability to withstand degradation. A scale of 1 to 7 has been developed with Class 1 being the most productive for agriculture and resilient to degradation and Class 7 the least suitable to agriculture. Class 1, 2 and 3 are collectively termed “prime agricultural land”. For planning purposes, a scale of 1:100,000 is often unsuitable and a re-assessment is required at a scale of 1:25,000 or 1:10,000. Factors influencing capability include elevation, slope, climate, soil type, rooting depth, salinity, rockiness and susceptibility to wind, water erosion and flooding.

1.1.2 Report author(s)

In providing the opinion enclosed here, it is to be noted that Faruq Shahriar Isu, holds a Master of Applied Science (Agricultural Science) and has over two years’ experience in agribusiness and agricultural research in Tasmania. Faruq is trained to carry out land capability and suitability assessments. He has previously used these skills to select trial sites for agricultural research and more recently engaged to undertake agricultural assessment within several municipalities in northern Tasmania.

1.1.3 Northern Midlands Interim Planning Scheme 2013

The Northern Midlands Interim Planning Scheme 2013 sets out the requirements for use and development of land in the Devonport municipality in accordance with the *Land Use and Approvals Act 1993*.

2 Property Details

2.1 Location

The "Nosswick" property at 157 Blackwood Creek Road, Blackwood Creek TAS 7301, is owned by Nosswick Pty. Ltd. (Figure 1).

Table 1 Property location identification details

Address	Property ID	Title Reference	Hectares *(Approx.)*
157 Blackwood Creek Road, Blackwood Creek TAS 7301	2928830	109824/1	651.5ha

The property (title reference 109824/1) is located north of the Blackwood Creek locality and Brumbys Creek flows along the southern boundary of the property. The topography varies from flat and undulating plains to low hills formed on Jurassic dolerite, trending in a northwest/southeast direction (Figure 2). Minor tributaries and streams intercept the property through the eastern, western and northern boundaries and Brumbys Creek flows along the southern property boundary. The property is accessed from Blackwood Creek Road.

The property is held as private freehold land and immediately surrounded by the same, with a patch of conservation covenant in the south (Figure 3).

The property is zoned Rural Resource under the Northern Midlands Interim Planning Scheme 2013 and immediately surrounded by the same (Figure 4).

The property is in the Whitemore Irrigation District.

The vegetation present on the property is predominantly improved pastures, with seasonal cropping (as per grass seeds and peas) grown on the land. There are patches of native vegetation (described below) and established shelterbelts of trees and shrubs.

There are Threatened Native Vegetation Communities (TNVC 2020) of *Eucalyptus viminalis* wet forest and Riparian scrub along the southern boundary and *Eucalyptus amygdalina* inland forest and woodland along the northeast boundary of the property (Figure 5).

There are Tasmanian Reserve Estate (Management Agreement) within the north and Conservation Covenant land along the southern boundary of the property (Figure 6).

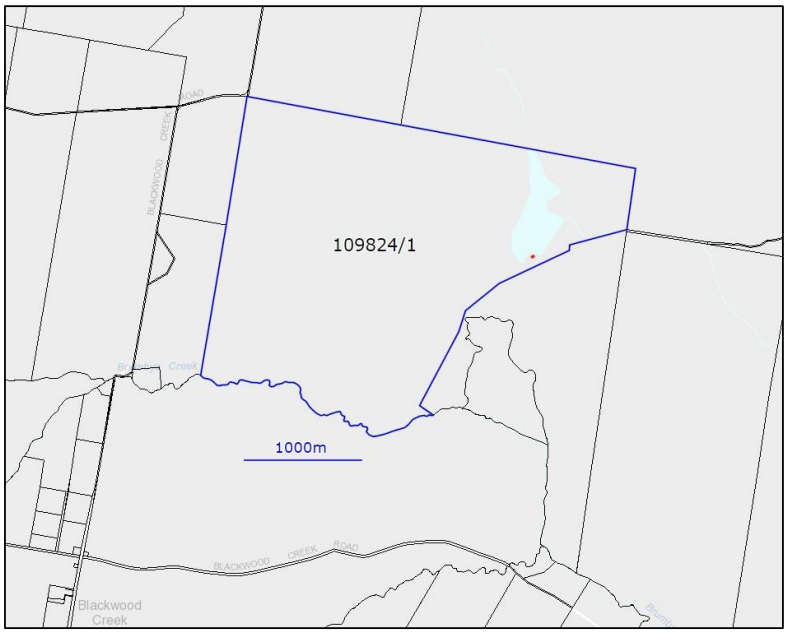

Figure 1. Location of the property, outlined in blue. Red area indicates approximate location of proposed visitor accommodation at the property (Source: The LISTMap).

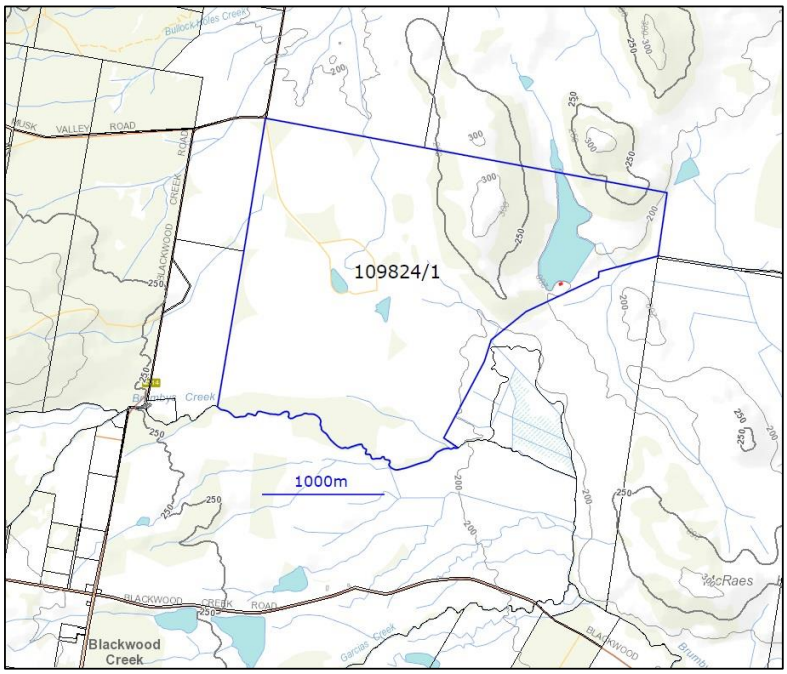

Figure 2. Topographic map of the property (Source: The LISTMap).

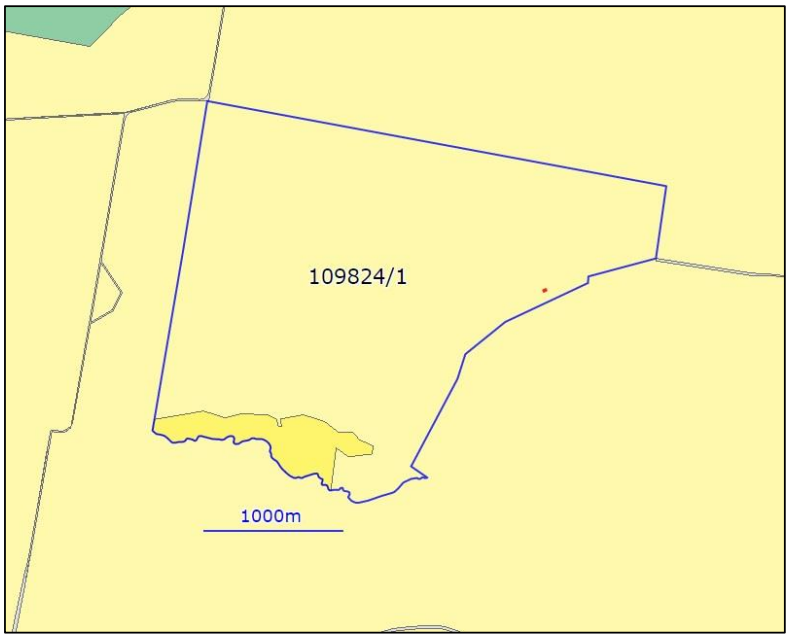

Figure 3. Land tenure of the property is private freehold (pale yellow) and surrounded by the same. There is conservation covenant near southern boundary of the property (dark yellow) (Source: The LISTMap).

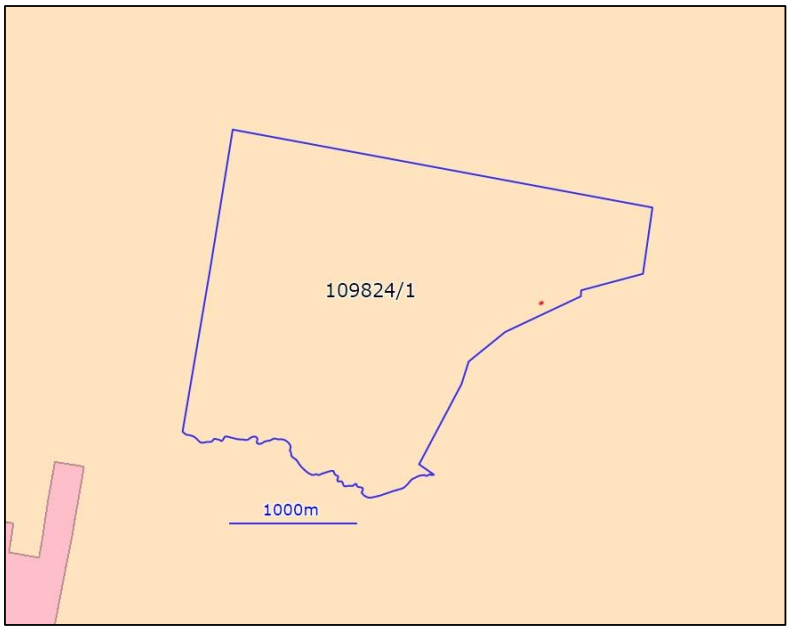

Figure 4. Property is zoned Rural Resource (pale pink) under the Northern Midlands Interim Planning Scheme. Bright pink area at bottom left corner of map indicates Rural Living Zone (Source: The LISTMap).

Figure 5. Threatened Native Vegetation Communities (orange outlines) of *Eucalyptus viminalis* wet forest (25) and Riparian scrub (34) along the southern boundary and *Eucalyptus amygdalina* inland forest and woodland (15) along the northeast boundary of the property (Source: The LISTMap).

Figure 6. Management Agreement under Tasmanian Reserve Estate (blue) and Conservation Covenant (green) present at the property (Source: The LIST Map).

3 Land Capability

Land capability of the property was assessed according to the Tasmanian Land Capability Classification System (Grose, 1999). Land is ranked according to its ability to sustain a range of agricultural activities without degradation of the land resource. Class 1 land is considered to be prime agricultural land and Class 7 land is unsuitable for agriculture due to severe limitations. A wide range of limitations are considered, and the most significant limitation determines its final classification. Limitations in relation to soils include stoniness, topsoil depth, drainage and erosion hazard. Limitations to topography include slope and associated erosion hazard.

The property consists of Class 4, 4+5 and 5 land according to the LIST (Figure 7). For the purpose of this report, the field check for land capability was focused on the proposed visitor accommodation site. The land surrounding the area was deemed to be Class 5 and 6 (Figure 8). Both land classes are unsuitable for cropping, with moderate limitations for grazing on Class 5 land and severe limitations on Class 6 land.

The land capability of site for the proposed visitor accommodation is Class 6 land. The area is situated on a low hill with abundant rock outcrops and prone to moderate risk of wind and water erosion if soil is left bare. The surrounding low-lying Class 5 land is prone to wetness from surface runoff and watercourses. There is a watercourse to the east on the lower lying area that contributes to localised areas that are susceptible to waterlogging during winter and after periods of heavy rainfall.

The primary limitation of all land classes is erosion, based on topography, landform and soil type.

Class 5 land is defined as:

This land is unsuitable for cropping, although some areas on easier slopes may be cultivated for pasture establishment or renewal and occasional fodder crops may be possible. The land may have slight to moderate limitations for pastoral use. The effects of limitations on the grazing potential may be reduced by applying appropriate soil conservation measures and land management practices.

Class 6 land is defined as:

Land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use. This land should be retained under its natural vegetation cover.

The key land capability limitations associated with this property are:

- Erosion (e): caused by wind and/or water if soils are exposed or left bare. Recommended to keep under pasture or natural vegetation cover.
- Wetness (w): caused by waterlogging along watercourses and drainage channels and surface run offs accumulating in depressions.
- Soil (s): caused by shallow topsoil with presence of course fragments and limiting layer or rocks.

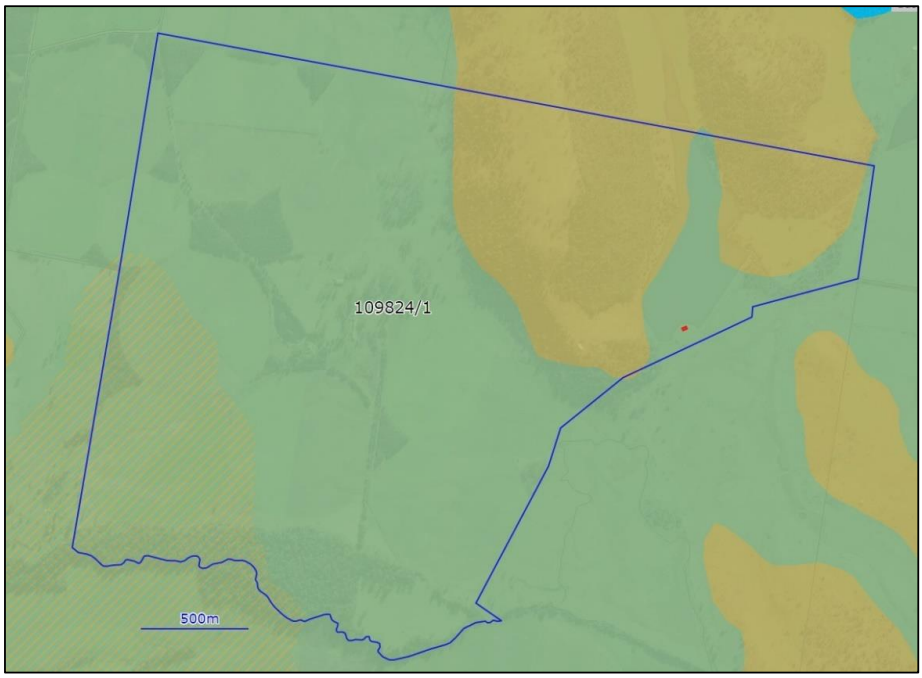

Figure 7. LIST land capability of the property is Class 4 (green), Class 4+5 (green and brown stripe) and Class 5 (brown) (Source: The LISTMap).

Figure 8. Land capability immediately surrounding proposed visitor accommodation dwelling (red rectangle) is Class 6 (brown). Flatter areas to the south and slope to the east is Class 5 (Olive). Dam area has been excluded from land capability mapping, shown in grey (Source: The LISTMap).

Table 2 Land capability assessment over titles (field checked area mentioned)*.**

Land Capability Class (ha)	Land Characteristics							
	Geology & Soils	**Slope (%)**	**Topography & Elevation**	**Erosion Type & Severity**	**Soil Qualities**	**Agricultural Versatility**	**Main Land Management Requirements**	**Climatic Limitations**
5 (Approx. 5.9ha*)	Shallow. grey-brown loam or sandy loam surface overlying a light grey fine silty sandy loam subsurface. Dolerite fragments and stones common throughout profile. Some dolerite outcrops. Eastfield Association.	0-10%	Undulating plains and low hill slopes. 190-230m above sea level.	Low to moderate sheet erosion. Moderate wind erosion.	Imperfectly drained to moderately well drained and slowly permeable soil.	Unsuitable for cropping. Suitable for pastoral use with moderate limitations.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover. The risk of compaction in winter from machinery and stock increases significantly during periods of water saturation and logging.	Minor climatic limitations. This region experiences cold winter and warm summer conditions. Receives an average of 835mm annual rainfall, can experience 40 frost days annually, 1050 GDD (October – April) and 1130 chill hours (May – August).

Land Capability Class (ha)	Land Characteristics							
	Geology & Soils	**Slope (%)**	**Topography & Elevation**	**Erosion Type & Severity**	**Soil Qualities**	**Agricultural Versatility**	**Main Land Management Requirements**	**Climatic Limitations**
6 (Approx. 2.2ha*)	Shallow, red - reddish brown, loam topsoil over clay, developed on dolerite hills to black sandy loam overlying light grey fine sand subsurface over compacted clay on foothills. Ironstone nodules and stones common throughout profile. Frequent dolerite outcrops. Eastfield Association.	0-5%	Undulating low hills and slopes. 200m above sea level.	Moderate sheet and wind erosion.	Moderately well drained and slowly permeable.	Unsuitable for cropping with severe restrictions to pastoral use.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover. The risk of compaction in winter from machinery and stock increases significantly during periods of water saturation and logging.	Minor climatic limitations. This region experiences cold winter and warm summer conditions. Receives an average of 835mm annual rainfall, can experience 40 frost days annually, 1050 GDD (October – April) and 1130 chill hours (May – August).

3.1 Soils

The soils surrounding the proposed development area on the property are black to reddish brown, sandy loam to loam shallow topsoil, over grey fine sandy to silty sandy loam on subsurface, developed on Jurassic dolerite.

The topography varies from flat and undulating plains to low hills trending in a northwest/southeast direction. The soils are imperfectly drained on depressions, to moderately well drained on hills, and generally slowly permeable.

The soil types are consistent with the geology, topography and elevation of the area. These shallow loam to sandy loam soils generally have low fertility and good drainage. The soils on this area of the property are unsuitable for cropping due to varying sizes of rock present throughout the profile and frequent outcrops of dolerite rocks, creating a limiting layer. Intensive grazing immediately following heavy rainfall, when soils are saturated, can lead to compaction. The soils on depressions and flatter areas, particularly along watercourses and drainage channels, can remain wet for prolonged periods.

The key limitations associated with the soil type are:

- Erosion (e): caused by wind and/or water if soils are exposed or left bare. Recommended to keep under pasture or natural vegetation cover.
- Wetness (w): caused by waterlogging along watercourses and drainage channels and surface run offs accumulating in depressions.
- Soil (s): caused by shallow topsoil with presence of course fragments and limiting layer or rocks.

Image 1. Eastfield SPC soil profile 1 on Class 6 land. Shallow (approx. 10cm), red - reddish brown, loam topsoil over clay, developed on dolerite hills. Presence of stones and dolerite fragments throughout profile with limiting layer of rocks (taken at site assessment on 29/04/22).

Image 2. Varying sizes of stone from the shallow soil profile 1 in Class 6 land (taken at site assessment on 29/04/22).

Image 3. Eastfield SPC soil profile 2 on foothills of Class 6 land. Shallow (approx. 10cm), black sandy loam overlying light grey fine sand subsurface on compacted clay. Presence of stones and ironstone nodules throughout profile (taken at site assessment on 29/04/22).

Image 4. Frequent and abundant rocky outcrops on Class 6 land, near proposed development area (taken at site assessment on 29/04/22).

Image 5. Eastfield SPC Soil profile 3 on Class 5 land to the east of proposed development. Shallow, grey-brown sandy loam surface overlying a light grey fine sandy loam subsurface. Presence of stones and dolerite fragments throughout profile with limiting layer of rocks (taken at site assessment on 29/04/22).

Image 6. Class 5 land to the east of proposed development. Overhead powerlines pass through in this section of land (taken at site assessment on 29/04/22).

Image 7. Eastfield SPC Soil profile 4 on Class 5 land to the west of proposed development. Grey-brown loam surface overlying a light grey fine silty, sandy loam subsurface. Presence of course fragments throughout (taken at site assessment on 29/04/22).

Image 8. Class 5 land to the west of proposed development. This area is prone to waterlogging (taken at site assessment on 29/04/22).

Image 9. Overhead powerlines and electric pole near proposed development site (taken at site assessment on 29/04/22).

Image 10. Existing laneway along southern property boundary near proposed development site (taken at site assessment on 29/04/22).

4 Proposed Development

4.1 Visitor accommodation

The proponents propose to build visitor accommodation on the Class 6 land at the southern end of the approximately 1155ML irrigation dam on the property. The area for the proposed development has been strategically selected to avoid any potential conflict with agricultural activities on the property and adjoining property. The location is atop a low hill, approximately 40m south of the dam and away from the existing farm laneway. The area is not utilised for grazing due to presence of powerlines and abundant rocky outcrops.

The proposed dwelling for a farm stay visitor accommodation will allow the proponent to provide lodging to family members or seasonal farm labours to help out with on farm activities during peak times such as sowing and harvesting. During off peak times, the accommodation will be available for visitors in the region to enjoy a farm lifestyle experience, without interfering with on farm activities (Figure 9). The additional income from the visitor accommodation will be used towards maintenance and any surplus will be used to finance farm operations. The proposed area utilised by the dwelling (approx. 0.025ha or less than 0.05%) represents a negligible extent of the total property area (approx. 651.5ha) and is separated from agricultural activities by topographic and vegetative buffers. The proposal does not diminish the productive capacity of the land.

Figure 9. Approximate location of the proposed visitor accommodation at the property shown in red. Blue line indicates property boundary (Source: The LISTMap).

4.2 Setback distances

The setback distance of the proposed visitor accommodation from the southern title boundary is approximately 80m (Figure 10). All other boundaries are more than 800m away and not shown in the figure.

The setback of the proposed dwelling from adjoining agricultural land to the south is further aided by topography and existing farm laneway. This area of the property is not cropped or intensively grazed. Cropping and grazing paddocks to the east and west are separated from the proposed visitor accommodation by topography and vegetation, in addition to being more than 500m away.

Therefore, the setbacks along with topographic and vegetative buffers, reduces the risk of the agricultural land use conflicting with the visitor accommodation and vice versa.

Figure 10. Proposed dwelling for visitor accommodation (red fill) from southern title boundary (blue line) is setback approximate 80m (orange line). All other boundaries area more than 800m away (Source: The LISTMap).

5 Land Use Activity

5.1 Current agricultural activities conducted

The proponent currently conducts mixed enterprise of cropping and grazing activities at the property. There are approximately 10,000 sheep at the property and cropping enterprise includes grass seeds and peas. Both enterprises are operated in rotation with other landholdings, with cropping predominantly under irrigation. The property has 1485ML of water allocation, with an existing 1155ML capacity dam on site and another 212.6ML capacity proposed dam with the permit approved. The property was acquired in 1980s and current infrastructures include a residential dwelling, manager's residence, shearing, machinery and pump sheds, silos, irrigation mains, pivots and dam, stock water troughs and boundary and internal fencing.

5.1.1 Adjacent land use activity

To the north and east of the property is predominantly dryland grazing on improved pasture and to the west and south is a mix of irrigated cropping and both dryland and irrigated grazing on improved pasture.

5.2 Potential agricultural land use activity

5.2.1 Pastoral use

The property is suitable for pastural use with slight limitations on Class 4 land, moderate limitations on Class 5 land and severe limitation on Class 6 land. Irrigation is predominantly used for the cropping enterprise with some irrigated grazing paddocks. Based on the property's size, land capability, topography and in conjunction with growing season duration and rainfall and assuming the whole property is used for pasture (between cropping rotations), it would be reasonable to consider that it can support a potential carrying capacity of 22.43 DSE/ha for a property total of approximately 10,015 DSE/year.

Thus, it is reasonable to consider that the property has the potential to support 10,015 head of dry sheep which represents an approximate total annual gross margin of $450,675 (at a gross margin of $45/DSE) or $1,009.35/ha.

The proposed development would result in the loss of approximately 0.025ha of Class 6 land, which has negligible effect on the total potential carrying capacity (DSE/year) of the property. Therefore, the productive capacity of the grazing enterprise is not affected by the proposed visitor accommodation.

5.2.2 Cropping use

The Class 4 land on the property is suitable for restricted cropping and can be used for mixed farming, including various vegetables and broadacre crops on a two in 10-year rotation, supported by irrigation.

Gross margins will vary depending on the choice of crop (irrigated) and can range from $1,510 for grass seeds to $1,000 for peas (DNRET). The proposed development has no effect on the cropping enterprise as the area is unsuitable for cropping.

5.2.3 Perennial horticulture use

Although the topography, soil type and climate are potentially suitable to horticultural crops, to establish commercial horticultural enterprise on this property (including berries and viticulture) would require significant capital investment in infrastructure. The proponent has investment approximately $1.5 million in irrigation development for the existing enterprises at the property in the past two years. Any diversification of enterprises will dilute the resources on the farm and reduce land area of core enterprises, adversely affecting the existing enterprises.

5.3 Impact on agricultural activities and residential amenity of neighbouring land

The proposed visitor accommodation is strategically located near the existing dam on the property, with sufficient setbacks and aided by topographic and vegetative buffers. There are no changes in the boundary and interaction of the property with neighbouring land and there are no nearby dwellings. Therefore, the proposal will have no impact on the land use activities and residential amenities of the neighbouring agricultural land use within the Rural Resource Zone.

After inspecting the site (site assessment completed April 29th, 2022), it has been concluded that the proposed setback distances, in conjunction with the buffer created by topography and vegetation, are sufficient to prevent unreasonable conflict or interference of agricultural land use on residential amenity and vice versa within the property and in the greater area.

5.4 Impact of agricultural activity on neighbouring land to the proposed development

Normal agricultural activities are not expected to have any unreasonable impact on the proposed development and vice versa in the future. An assessment of the key risks is summarised in Table 5. This has been compiled on the basis that the neighbouring farm activities are likely to include cropping and livestock grazing.

Table 3 Potential risk from agricultural land use activities on neighbouring land

Potential Risk from Neighbouring Agricultural Land Activity	Extent of Risk & Possible Mitigation Strategy
1. Spray drift and dust	Risk = low. Existing buffer distances, topography and vegetation will help mitigate the impact of sprays and dust if applied under normal recommended conditions. Spraying events should be communicated in a timely manner to the inhabitants of the dwelling. The use and application of agricultural sprays must abide by the Tasmanian Code of practice for ground spraying 2014.
2. Noise from machinery, livestock and dogs	Risk = low. low. Some occasional machinery traffic will occur when working and undertaking general farming duties on adjacent land. This is mitigated by the topography and vegetation to the west and east.

3. Irrigation water over boundary	Risk = low. Irritation is not practiced on this part of the property or on the adjoining neighbouring land.
4. Stock escaping and causing damage	Risk = Low. Provided that boundary fences are maintained in sound condition and livestock are checked regularly.
5. Electric fences	Risk = Low. Mitigated by the proponent attaching appropriate warning signs on boundary fencing.

5.5 Impact of proposed development on agricultural activity of neighbouring land

The proposed visitor accommodation, in consideration with the buffer zones, physical barriers and agricultural land use, have all been assessed as low risk impact to agricultural activity on neighbouring land. These potential impacts are usually manifested as complaints that could be made by residents of nearby dwellings. Other risks to neighbouring agricultural activity are outlined in Table 6. Some of these risks rely on an element of criminal intent and it could well be argued that this is very much lower with inhabitants of the dwelling than with other members of the public.

Table 4 Potential risk from proposed development on neighbouring agricultural land use and activity

Potential Risk to Neighbouring Agricultural Land Activity	Extent of Risk & Possible Mitigation Strategy
1. Trespass	Risk = low. Mitigation measures include installation and maintenance of sound boundary fencing, lockable gates and appropriate signage to warn inhabitants and visitors about entry onto private land; report unauthorised entry to police.
2. Theft	Risk = low. Ensure there is good quality boundary fencing on neighbouring properties and appropriate signage to deter inadvertent entry to property; limit vehicle movements, report thefts to police.
3. Damage to property	Risk = low. As for theft.
4. Weed infestation	Risk = low. Risks are expected to be negligible, with the proponents committed to the productivity and sustainability of their property and weed control is a key activity. Biosecurity practices are followed with dirt covered vehicles washed down before visiting the property and vehicles staying on established gravel roads.
5. Fire outbreak	Risk = low. Fire risk can be mitigated by careful operation of outside barbeques and disposal of rubbish. A bushfire management plan may be required for the proposed development.
6. Dog menace to neighbouring livestock	Risk = low. Mitigated by ensuring that good communication is maintained between the proponent and residents of the neighbouring properties. Dogs would be managed as per the guidelines determined by the council.

5.6 Impact of proposed development on amenity of dwellings on nearby land

There are no residential dwellings on neighbouring land within 1km vicinity of the proposed visitor accommodation at 157 Blackwwod Creek Road, apart from the manager's residence at the subject property (Figure 9). There is no dwelling within 200m of the proposed dwelling for visitor accommodation (Figure 9). The nearest neighbouring amenity (manager's residence on property) from the proposed visitor accommodations is approximately 465m to the west and separated by trees and topography.

There is sufficient setback along with buffers created by woodland vegetation and topography. Thus, there would be no adverse impact on the amenity of nearby lands and vice versa.

Figure 11. No neighbouring dwellings apart from manager's residence (blue pin) at subject property within 1km (light blue circle) of proposed visitor accommodation (red area) (Source: The LISTMap).

Figure 12. No neighbouring dwellings within 200m (yellow circle) of proposed visitor accommodation (red area) at the property (Source: The LISTMap).

5.7 Water storage and resources

The property is not serviced by TasWater for water and sewage (The LIST).

The property is in the Whitemore Irrigation District and consists of irrigation infrastructure such as irrigation mains, pivot irrigators and a 1155ML dam (with another proposed 212.6ML dam). There is a 1485ML irrigation water allocation from the scheme.

6 Planning Compliance Report – 26.0 Rural Resource Zone

6.1 Clause 26.1 Zone purpose

6.1.1 Clause 26.1.1 Zone purpose statement

Zone purpose statements:	Response:
26.1.1.1 To provide for the sustainable use or development of resources for agriculture, aquaculture, forestry, mining and other primary industries, including opportunities for resource processing. 26.1.1.2 To provide for other use or development that does not constrain or conflict with resource development uses. 26.1.1.3 To provide for economic development that is compatible with primary industry, environmental and landscape values. 26.1.1.4 To provide for tourism-related use and development where the sustainable development of rural resources will not be compromised.	21.1.1 The proposed visitor accommodation is located on Class 6 land at the property accounts for less than 0.05% (0.025ha of 651.5ha) of the total property area. The current agricultural land use at the property is not affected by the development. 26.1.1.2 The proposed visitor accommodation utilises 0.025ha of Class 6 land and does not diminish the productive capacity of the land nor change the interaction with surrounding agricultural land, as the location is on a small hilltop with rocky outcrops and situated next to the dam. This portion of the property is only intermittently grazed while rotating animals between paddocks to the east and west, separated by topography and woodland vegetation. Therefore, the proposal does not constrain or conflict with resource development uses. 26.1.1.3 The proposal does not affect the current agricultural land use and any surplus income from the proposed visitor accommodation will be invested in farm operations. The proponent is committed to the cropping and livestock enterprise at the property with significant investments (approx. $1.5million) for irrigation development to support the enterprises. 26.1.1.4 The proposed farm stay visitor accommodation will allow visitors to enjoy the bucolic setting and amenity. The land use interaction does not change as the proposed development is located on low land capability Class 6 land and has sufficient setbacks, aided by vegetation and topography. Therefore, sustainable development of rural resources will not be compromised.

6.1.2 Clause 26.1.2 Local area objectives

Local area objectives:	Response:
a) Primary Industries: Resources for primary industries make a significant contribution to the rural economy and primary industry uses are to be protected for long-term sustainability. The prime and non-prime agricultural land resource provides for variable and diverse agricultural and primary industry production which will be protected through individual consideration of the local context. Processing and services can augment the productivity of primary industries in a locality and are supported where they are related to primary industry uses and the long-term sustainability of the resource is not unduly compromised. b) Tourism Tourism is an important contributor to the rural economy and can make a significant contribution to the value adding of primary industries through visitor facilities and the downstream processing of produce. The continued enhancement of tourism facilities with a relationship to primary production is supported where the long-term sustainability of the resource is not unduly compromised. The rural zone provides for important regional and local tourist routes and destinations such as through the promotion of environmental features and values, cultural heritage and landscape. The continued enhancement of tourism facilities that capitalise on these attributes is supported where the long-term sustainability of primary industry resources is not unduly compromised. c) Rural Communities Services to the rural locality through provision for home-based business can enhance the sustainability of rural communities. Professional and other business services that meet the needs of rural populations are supported where they accompany a residential or other established use and are located appropriately in relation to settlement activity centres and surrounding primary industries such that the integrity of the activity centre is not undermined and primary industries are not unreasonably confined or restrained.	a) Primary Industries: The land use interaction is not affected by the proposed development. The proposed dwelling would be utilised as farm stay visitor accommodation and any surplus income would be put towards farm operations and maintenance. It is located on Class 6 land on an agriculturally insignificant part of the property and utilises less than 0.05% of the total property area. The existing agricultural land use is entirely retained on the remaining 99.95% land area of the property. Therefore, the long-term sustainability of the resource is not unduly compromised. b) Tourism The proposed farm stay visitor accommodation will attract tourists to the region without unduly compromising the long-term sustainability of resource development use since the property retains its current agricultural land use in the remaining 99.95% land area of the property. Furthermore, this accommodation can be used to house family members or seasonal farm hands to help with farm operations during peak seasons and in the off seasons, serve as a tourist accommodation. c) Rural Communities The proposed farm stay visitor accommodation will facilitate attracting tourists to the region which, in turn, will be beneficial for the broader rural community as tourists take advantage of the many unique tourism attractions, places of interest and natural values such as highlands, cradle mountain, and the northern midlands. It is reasonable to expect that this type of farm stay visitor accommodation would have a positive economic impact on the wider region as visitors would stay longer, visit more attractions and places of interest. Additionally, the ongoing operation of the visitor accommodation would have a flow on economic benefits due to the need for cleaning services and various accommodation consumables.

6.1.3 Clause 26.1.3 Desired future character statements

Desired future character statements:	Response:
The visual impacts of use and development within the rural landscape are to be minimised such that the effect is not obtrusive.	The proposed visitor accommodation would have minimal impact on the rural landscape as there are no nearby neighbouring dwellings and the development site is sheltered by woodland vegetation, dam and topography. Therefore, proposed development would not be obtrusive.

6.2 Clause 26.3 Use standards

6.2.1 Clause 26.3.1 Discretionary uses if not a single dwelling

Objective:	Response
a) To provide for an appropriate mix of uses that support the Local Area Objectives and the location of discretionary uses in the rural resources zone does not unnecessarily compromise the consolidation of commercial and industrial uses to identified nodes of settlement or purpose built precincts. b) To protect the long-term productive capacity of prime agricultural land by minimising conversion of the land to non-agricultural uses or uses not dependent on the soil as a growth medium, unless an overriding benefit to the region can be demonstrated. c) To minimise the conversion of non-prime land to a non-primary industry use except where that land cannot be practically utilised for primary industry purposes. d) Uses are located such that they do not unreasonably confine or restrain the operation of primary industry uses. e) Uses are suitable within the context of the locality and do not create an unreasonable adverse impact on existing sensitive uses or local infrastructure.	a) The proposal is consistent with the local area objectives. The development is on Class 6 land at the property to be used as a farm stay style visitor accommodation and does not confine or constrain the current agricultural land use at the property. b) N/A. There is no prime agricultural land at the property. c) The proposed visitor accommodation is to be located on Class 6 land at the property that accounts for less than 0.05% of the total property area. The area is not utilised for cropping or grazing currently and the proposed development has sufficient setbacks with topographic and vegetative buffers. The proposed visitor accommodation does not diminish the productive capacity of the land and the property retains its agricultural land use in entirety. d) The proposed development is located on Class 6 land, next to the irrigation dam, that has no significant agricultural use and is only used while rotating sheep between paddocks. The intensively farmed areas of the property are located at least 465m (approximately) to the east and west. Thus, there is sufficient setbacks with topographic and vegetative buffers. Therefore, the proposed visitor accommodation does not unreasonably confine or restrain the operation of primary industry uses. e) There are no neighbouring dwellings within 1km of proposed development, apart from the manager's residence on subject property (Figure

f) The visual impacts of use are appropriately managed to integrate with the surrounding rural landscape.	11). The proposed development is adequately sited to minimise any conflict with surrounding land use. Therefore, the use is suitable within the context of the locality and does not create an unreasonable adverse impact on existing sensitive uses or local infrastructure. f) The proposed development will utilise modern design and sustainable building materials to integrate with the rural landscape. It is also suitably sited, sheltered by woodland vegetation and topography, so as to not be obtrusive.
Performance Criteria:	**Response**
P3 The conversion of non-prime agricultural to non-agricultural use must demonstrate that: a) the amount of land converted is minimised having regard to: (i) existing use and development on the land; and (ii) surrounding use and development; and (iii) topographical constraints.	**P3** The proposed farm stay visitor accommodation does not significantly alter the existing land use or interaction with surrounding land and thus, unlikely to cause constraint or interference. a) The proposed farm stay visitor accommodation is to be located on Class 6 land and accounts for less than 0.05% of the total property area. The area has abundant frequent rocky outcrops and is situated next to the irrigation dam. The site of proposed development is unsuitable for cropping with severe limitations to grazing The property retains its agricultural land use (i.e. cropping and grazing) on the remaining land area. The land area immediately surrounding the development site is also of low land capability, Class 5 land, only used while rotating sheep between paddocks and is not affected by the proposed visitor accommodation. The proposed setbacks are sufficient and buffers created by topography and woodland vegetation help to minimise any potential constrains and conflict with surrounding land use *(see section 4 and 5 of the agricultural assessment)*.

6.2.2 Clause 26.3.2 Dwellings

Objective:	**Response**
To ensure that dwellings are: a) incidental to resource development; or b) located on land with limited rural potential where they do not constrain surrounding agricultural operations.	The proposed development is located on low land capability, Class 6 land and the proposed setbacks along with topography and vegetative buffers are sufficient to prevent any conflict or constraint on surrounding agricultural operations.
Performance Criteria:	**Response**
P1.1 b) the site is practically incapable of supporting an agricultural use or being included with other land for agricultural or other primary industry use, having regard to: i) limitations created by any existing use and/or development surrounding the site; and ii) topographical features; and iii) poor capability of the land for primary industry operations (including a lack of capability or other impediments).	**P1.1** The site of the proposed visitor accommodation is to be located on low land capability, Class 6 land. The area has abundant frequent rocky outcrops and is situated next to the irrigation dam. The site of proposed development is unsuitable for cropping with severe limitations to grazing The property retains its agricultural land use (i.e. cropping and grazing) on the remaining land area. The land area immediately surrounding the development site is also of low land capability, Class 5 land, only used while rotating sheep between paddocks and is not affected by the proposed visitor accommodation. The proposed setbacks are sufficient and buffers created by topography and woodland vegetation help to minimise any potential constrains and conflict with surrounding land use *((see section 3 and 4 of the agricultural assessment*).
P1.2 A dwelling may be constructed where it is demonstrated that wastewater treatment for the proposed dwelling can be achieved within the lot boundaries, having regard to the rural operation of the property and provision of reasonable curtilage to the proposed dwelling.	**P1.2** An adequate onsite wastewater treatment system would be supplied.
P1.3 A dwelling may be constructed where it is demonstrated that the lot has frontage to a road or a Right of Carriageway registered over all relevant titles.	**P1.3** The property has frontage with Blackwood Creek Road. The dwelling will utilise the existing farm access roads and laneways via Right of Carriageway.

6.2.3 Clause 26.3.3 Irrigation districts

Objective:	**Response**
To ensure that land within irrigation districts proclaimed under Part 9 of the *Water Management Act 1999* is not converted to uses that will compromise the utilisation of water resources.	The proposed visitor accommodation is within the Whitemore Irrigation District and hence, Performance Criteria P1 is addressed.
Performance Criteria:	**Response**
P1 Non-agricultural uses within an irrigation district proclaimed under Part 9 of *the Water Management Act 1999* must demonstrate that the current and future irrigation potential of the land is not unreasonably reduced having regard to: a) the location and amount of land to be used; and b) the operational practicalities of irrigation systems as they relate to the land; and c) any management or conservation plans for the land.	**P1** The proposed development is for a farm stay visitor accommodation. The proposed dwelling area accounts for less than 0.05% of the total land area of the property and is located on Class 6 land. The remaining 99.95% of the land area retains its current agricultural land use of irrigated cropping and a combination of dryland and irrigated grazing. The land area immediately surrounding the development site is also of low land capability, Class 5 land, only used while rotating sheep between paddocks and is not affected by the proposed visitor accommodation. The property has undergone significant irrigation development, with approximately $1.5 million spent in the last two years. The property is in the Whitemore Irrigation District and consists of irrigation infrastructure such as irrigation mains, pivot irrigators, and a 1155ML dam (with another proposed 212.6ML dam). There is a 1485ML irrigation water allocation from the scheme Therefore, the proposed use will not unreasonably reduce and/or materially diminish the current and future irrigation potential of the land.

6.3 Clause 26.4 Development standards

6.3.1 Clause 26.4.1 Building location and appearance

Objective:	**Response**
To ensure that the: a) ability to conduct extractive industries and resource development will not be constrained by conflict with sensitive uses; and b) development of buildings is unobtrusive and complements the character of the landscape.	The proposal is consistent with Acceptable Solutions A1 but not A2, hence, Performance Criteria P2 is addressed.
Acceptable Solutions:	**Response**
A1 Building height must not exceed: a) 8m for dwellings; or b) 12m for other purposes.	**A1** The building height will be less than 8m.
Performance Criteria:	**Response**
P2 Buildings must be setback so that the use is not likely to constrain adjoining primary industry operations having regard to: a) the topography of the land; and b) buffers created by natural or other features; and c) the location of development on adjoining lots; and d) the nature of existing and potential adjoining uses.	**P2** The proposed visitor accommodation has greater than 200m setback to all title boundaries except to the south, which is approximately 80m. However: a) The topography of the area surrounding the proposed development aids the setback so as to not confine or conflict with agricultural land use. The proposed location for the development is on a small hill, next to the dam, on Class 6 land and sits at a higher elevation. The development does not diminish the productive capacity of the land nor does it constrain surrounding land use (*see section 4 of the Agricultural Assessment*). b) There are buffers created by landform and topography, in addition to natural woodland vegetations to the east and west and irrigation dam to the north. c) There is no development on adjoining title to the south (*see figure 11 and 12*). d) The land area immediately surrounding the development site is also of low land capability, Class 5 land, only used while rotating sheep between paddocks and is not affected by the

e) the ability to accommodate a lesser setback to the road having regard to: i) the design of the development and landscaping; and ii) the potential for future upgrading of the road; and iii) potential traffic safety hazards; and iv) appropriate noise attenuation.	proposed visitor accommodation. Land use on adjoining title to the south is dryland grazing. The nature of use is not expected to change or intensified in the future, both on the subject and adjoining property. Furthermore, the setbacks aided by topography and vegetative buffers are sufficient to prevent any unduly conflict or constraint on surrounding land use. e) Not applicable as the development is not adjacent to any public road and sheltered by surrounding woodland vegetation and topography. Access to proposed visitor accommodation will be via the existing farm roads inside the property.

7 Conclusion

1. The property does not contain any prime agricultural land.
2. The proposed development is on Class 6 land, which is unsuitable for cropping with severe limitations to pastoral use.
3. Land immediately surrounding proposed development is Class 5 land that is unsuitable for cropping with moderate limitations to pastoral use.
4. The proposed development does not significantly alter the existing interaction of the property with surrounding land and within the property itself.
5. The proposed farm stay visitor accommodation does not affect the productive capacity of the land.
6. Current and future irrigation and agricultural development at the property will not be affected by the proposed visitor accommodation.
7. The proposed visitor accommodation would not create any additional constraints on the capability/capacity of agricultural activities on the property or neighbouring land.
8. The proposal is consistent with the Northern Midlands Interim Planning Scheme Rural Resource zone purpose, local area objectives, use standards, acceptable solutions and performance criteria statements 26.1.1, 26.1.2, 26.1.3, 26.3.1 P3(a), 26.3.2 P1.1(a) P1.2 P1.3, 26.3.3 P1 and 26.4.1 A1 P2.

8 References

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Department of Natural Resources and Environment Tasmania (DNRET) (2022), Crop Gross Margins – High Rainfall.

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Grose C.J. (1999) Land Capability Handbook: Guidelines for the Classification of Agricultural Land in Tasmania. 2nd Edition, DPIWE, Tasmania.

Isbell R.F., National Committee on Soil and Terrain (2021), 'The Australian Soil Classification. 3rd edn. CSIRO Publishing Melbourne.

National Committee on Soil and Terrain (2009) 'Australian soil and land survey field handbook (3rd edn).' (CSIRO Publishing: Melbourne).

9 Declaration

I declare that I have made all the enquiries which I consider desirable or appropriate, and no matters of significance which I regard as relevant have, to my knowledge, been withheld.

Faruq Isu

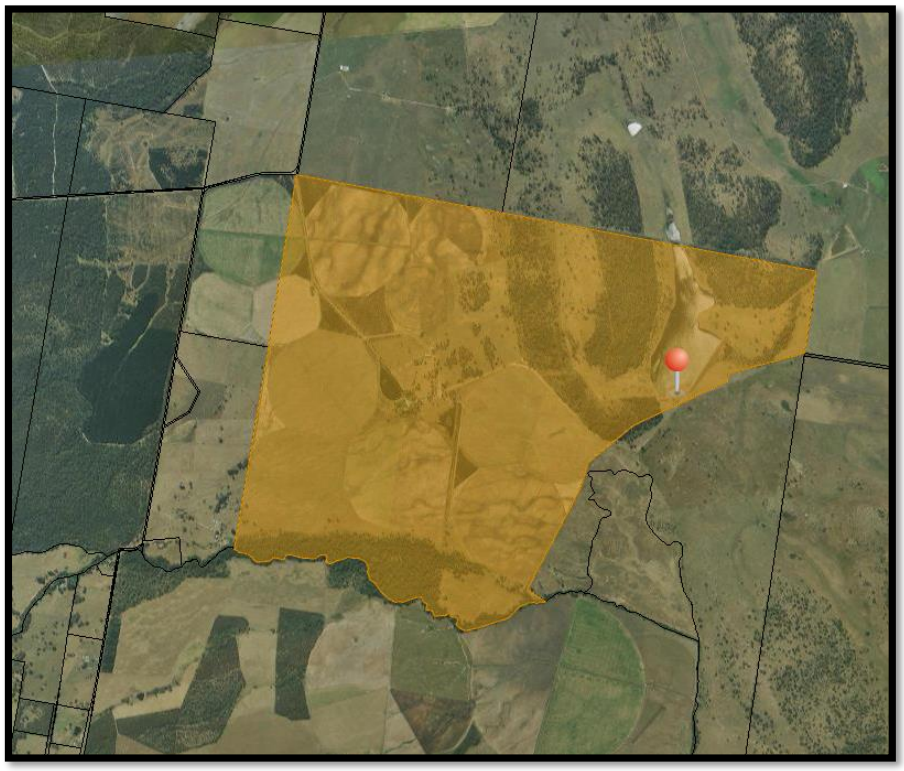
Mr. Faruq Isu MAppSc (AgrSc)
Consultant
Pinion Advisory Pty Ltd
May 2022

Rebecca Green & Associates

Bushfire Hazard Assessment Report &

Bushfire Hazard Management Plan

157 Blackwood Creek Road, Blackwood Creek



Rebecca Green & Associates

Prepared for (Client)

Nosswick Pty. Limited

157 Blackwood Creek Road

BLACKWOOD CREEK TAS 7301

Assessed & Prepared by

Rebecca Green

Senior Planning Consultant & Accredited Bushfire Hazard Assessor

Rebecca Green & Associates

PO Box 2108 LAUNCESTON TAS 7250

15 May 2023

Job No: RGA-B2304

Rebecca Green & Associates

Executive Summary

The proposed development at 157 Blackwood Creek Road, Blackwood Creek, is subject to bushfire threat. A bushfire attack under extreme fire weather conditions is likely to subject buildings at this site to considerable radiant heat, ember attack along with wind and smoke.

The site requires bushfire protection measures to protect the buildings and people that may be on site during a bushfire.

These measures include provision of hazard management areas in close proximity to the buildings, implementation of safe egress routes, establishment of a water supply and construction of buildings as described in AS 3959-2018 Construction of Buildings in Bushfire Prone Areas.

Primary responsibilities identified within this report:

Occupier	• Establish and maintain Hazard Management Areas as described in this report, including upgrading access and egress. • Establish and maintain adequate turning facilities for emergency vehicles on site, as described in this report. • Establish and maintain an independent water supply for fire fighting purposes, (min. 10,000l for fire fighting purposes per cabin). Noting dam to be used for static water supply, therefore remote offtake (water connection) and signage required. • Design and construct 1 x Visitor Accommodation Cabin to meet **BAL 12.5** (AS3959-2018).

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Contents

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Schedule 1 – Bushfire Report

1.0 Introduction

The Bushfire Attack Level (BAL) Report and Bushfire Hazard Management Plan (BHMP) has been prepared for submission with a Building Permit Application under the *Building Act 2016 & Regulations 2016*.

The Bushfire Attack Level (BAL) is established taking into account the type and density of vegetation within 100 metres of the proposed building site and the slope of the land; using the simplified method in AS 3959-2018 Construction of Buildings in Bushfire Prone Areas; and includes:

- The type and density of vegetation on the site,
- Relationship of that vegetation to the slope and topography of the land,
- Orientation and predominant fire risk,
- Other features attributing to bushfire risk.

On completion of assessment, a Bushfire Attack Level (BAL) is established which has a direct reference to the construction methods and techniques to be undertaken on the buildings and for the preparation of a Bushfire Hazard Management Plan (BHMP).

1.1 Scope

This report was commissioned to identify the Bushfire Attack Level for the existing property. ALL comment, advice and fire suppression measures are in relation to compliance with the Building Code of Australia and Australian Standards, *AS 3959-2018, Construction of buildings in bushfire-prone areas*.

1.2 Limitations

The inspection has been undertaken and report provided on the understanding that:-

1. The report only deals with the potential bushfire risk, all other statutory assessments are outside the scope of this report.
2. The report only identifies the size, volume and status of vegetation at the time the site inspection was undertaken and cannot be relied upon for any future development.
3. Impacts of future development and vegetation growth have not been considered.

No action or reliance is to be placed on this report; other than for which it was commissioned.

1.3 Proposal

The proposal is for the construction of one (1) new visitor accommodation cabin.

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2.0 Site Description for Proposal (Bushfire Context)

2.1 Locality Plan

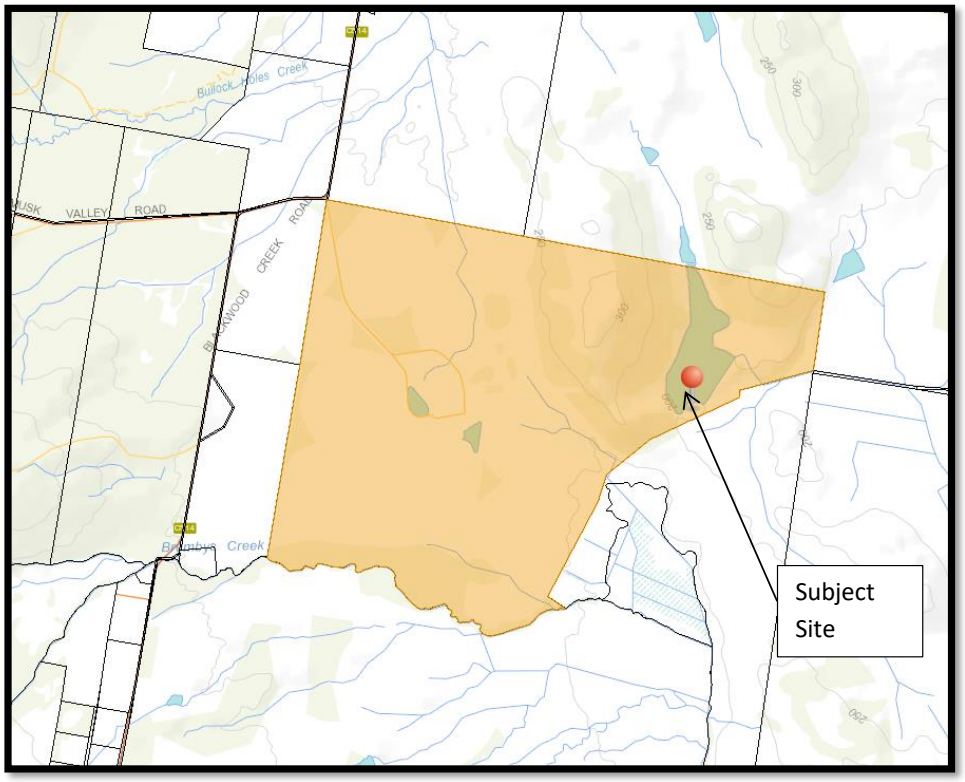

Figure 1: Location Plan of 157 Blackwood Creek Road, Blackwood Creek

2.2 Site Details

Property Address	"Nosswick", 157 Blackwood Creek Road, Blackwood Creek
Certificate of Title	Volume 109824 Folio 1
Owner	Nosswick Pty. Limited
Existing Use	Residential/ Rural
Type of Proposed Building Work	1 x Visitor Accommodation Cabin
BCA Classification	Visitor Accommodation – Class 1b
Water Supply	On-site supply for fire fighting purposes
Road Access	Street Frontage – Blackwood Creek Road

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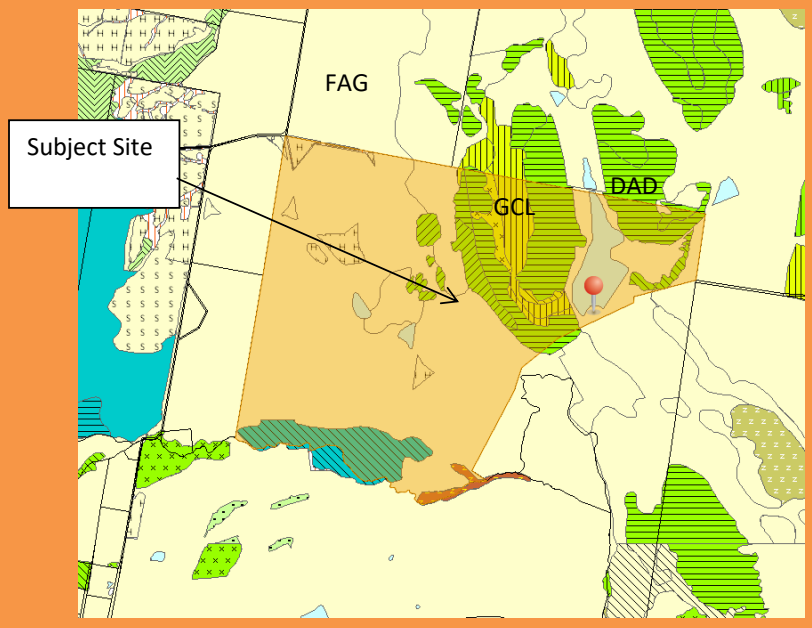
3.0 Bushfire Site Assessment

3.1 Vegetation Analysis

3.1.1 TasVeg Classification

Reference to Tasmanian Vegetation Monitoring & Mapping Program (TASVEG) indicates the land in and around the property is generally comprising of varying vegetation types including:



Code	Species	Vegetation Group
DAD	• Eucalyptus amygdalina forest and woodland on dolerite	Dry eucalypt forest and woodland
FAG	• Agricultural land	Modified land
GCL	• Lowland grassland complex	Native grassland

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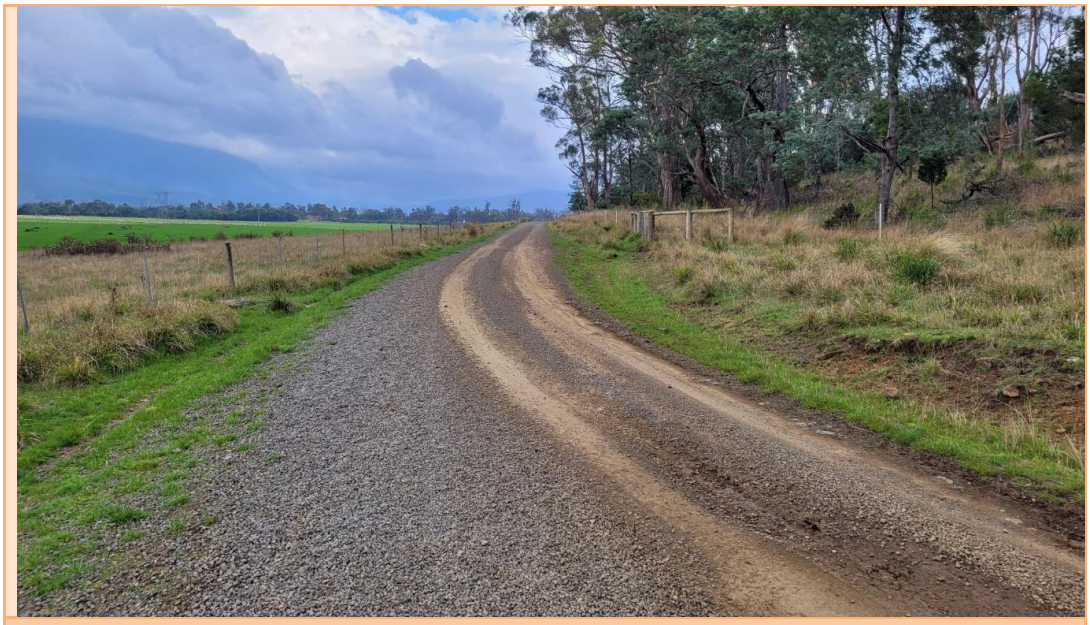
3.1.2 Site & Vegetation Photos



Existing access (3.5m wide approx.)

Existing driveway (3.2m wide approx.)

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Existing driveway (6.3m wide approx.)

Existing driveway (6.0m wide approx.)

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Existing driveway (4.6m wide approx.)

Existing driveway (4.5m wide approx.)

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Looking to north

Looking to east

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Looking to south

Looking to west

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Location of proposed water connection point from existing static supply of dam

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3.2 BAL Assessment – Visitor Accommodation Cabin

Vegetation classification AS3959	North ☒ North-East ☐	South ☒ South-West ☐	East ☒ South-East ☐	West ☒ North-West ☐
Group A	☐ Forest	☐ Forest	☐ Forest	☐ Forest
Group B	☐ Woodland	☐ Woodland	☐ Woodland	☐ Woodland
Group C	☐ Shrub-land	☐ Shrub-land	☐ Shrub-land	☐ Shrub-land
Group D	☐ Scrub	☐ Scrub	☐ Scrub	☐ Scrub
Group E	☐ Mallee-Mulga	☐ Mallee-Mulga	☐ Mallee-Mulga	☐ Mallee-Mulga
Group F	☐ Rainforest	☐ Rainforest	☐ Rainforest	☐ Rainforest
Group G	☒ Grassland	☒ Grassland	☒ Grassland	☒ Grassland
	☒ Managed Land	☐ Managed Land	☐ Managed Land	☐ Managed Land
Effective slope (degrees)	☐ Up/0^0	☐ Up/0^0	☐ Up/0^0	☐ Up/0^0
	☒ >0-5^0	☒ >0-5^0	☒ >0-5^0	☒ >0-5^0
	☐ >5-10^0	☐ >5-10^0	☐ >5-10^0	☐ >5-10^0
	☐ >10-15^0	☐ >10-15^0	☐ >10-15^0	☐ >10-15^0
	☐ >15-20^0	☐ >15-20^0	☐ >15-20^0	☐ >15-20^0
Distance to classified vegetation	Metres 0m to grassland	Metres 0m to grassland	Metres 0m to grassland	Metres 0m to grassland
Likely direction of bushfire attack	☐	☐	☐	☒
Prevailing winds	☐	☐	☐	☒
Exclusions	a b c d **e** f	a b c d e f	a b c d e f	a b c d e f
BAL Value (FDI 50)	**BAL – FZ (May be reduced to BAL-12.5 is Specified Hazard Management Area established and maintained)**	**BAL – FZ (May be reduced to BAL-12.5 is Specified Hazard Management Area established and maintained)**	**BAL – FZ (May be reduced to BAL-12.5 is Specified Hazard Management Area established and maintained)**	**BAL – FZ (May be reduced to BAL-12.5 is Specified Hazard Management Area established and maintained)**

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The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of any of the following:

(a) Vegetation of any type that is more than 100 metres from the site.
(b) Single areas of vegetation less than 1 hectare in area and not within 100m of other areas of vegetation being classified.
(c) Multiple areas of vegetation less than 0.25 hectare in area and not within 20 metres of the site, or each other.
(d) Strips of vegetation less than 20 metres in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 metres of the site or each other, or other areas of vegetation being classified.
(e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.
(f) Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTE: Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognisable as short-cropped grass for example, to a nominal height of 100mm).

3.2 Specified Hazard Management Areas

Hazard management areas are to be established and maintained between the bushfire prone vegetation and the building at a distance equal to, or greater than the separation distance specified for the Bushfire Attack Levels (BAL) in table 2.6 of *Australian Standard 3959-2018 Construction of Buildings in Bushfire Prone Areas.*

Where the Hazard Management Areas can be increased around the building and the classified vegetation in accordance with table 2.6 of Australian Standard 3959, the risk from bushfire attack can reduce.

Visitor Accommodation Cabin

Distance from Predominant vegetation for BAL 12.5	**North/** North-East	**South/** South-West	**East/** South-East	**West/** North-West
	16-<50	16-<50	16-<50	16-<50
	Metres	Metres	Metres	Metres

The separation distance for the SPECIFIED Hazard Management Area is to be shown on the attached Bushfire Hazard Management Plan measured from the external walls (Façade) of the building in metres along the ground to the bushfire hazard vegetation (if applicable).

3.3 Outbuildings

Not applicable – existing.

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3.4 Road Access

Roads are to be constructed to provide vehicle access to the site to assist firefighting and emergency personnel to defend the building or evacuate occupants; and provide access at all times to the water supply for firefighting purposes on the building site.

Private access roads are to be upgraded/maintained from the entrance to the property cross over with the public road through to the dwelling. Private access roads are to be designed, constructed and maintained to a standard not less than Table 2.

Existing/New Road Access and Driveways	Private access driveway / roads are to be upgraded/maintained from the entrance of the property cross over at the public road (Blackwood Creek Road) through to the buildings and on-site dedicated fire fighting water supply. Private access roads are to be maintained to a standard not less than specified in Table 2 C.

Table 2C: Requirements for Property Access

The following design and construction requirements apply to property access length is 200 metres or greater or access for a fire appliance to a fire fighting water point:

(i) All weather construction;
(ii) Load capacity of at least 20 tonnes, including for bridges and culverts;
(iii) Minimum carriageway width of 4 metres (where possible);
(iv) Minimum vertical clearance of 4 metres;
(v) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
(vi) Cross falls of less than 3 degrees (1:20 or 5%);
(vii) Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle;
(viii) Curves with a minimum inner radius of 10 metres;
(ix) Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and
(x) Terminate with a turning area for fire appliances provided by one of the following:
  a) A turning circle with a minimum inner radius of 10 metres;
  b) A property access encircling the building; or
  c) A hammerhead “T” or “Y” turning head 4 metres wide and 8 metres long.
(xi) Passing bays of 2m additional carriageway width and 20m length provided every 200m (minimum 19 required to Cabin).

3.5 Water Supply

A building that is constructed in a designated bushfire prone area must provide access at all times to a sufficient supply of water for firefighting purposes on the building site.

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The exterior elements of a habitable building in a designated Bushfire prone area must be within reach of a 120m long hose (reticulated) or 90m long hose (static) (lay) connected to –

(i) A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0; or

(ii) A stored water supply in a water tank, swimming pool, dam or lake available for fire fighting at all times which has the capacity of at least 10,000L for each separate building area to be protected.

New/ Existing On-site Dedicated Fire Fighting Water Supply	On-site water supply is to be established, no fire hydrant was sited during site inspection within 120m of the buildings. A water tank/dam of at least 10,000 litres per building area (total 10,000l for proposed cabin) to be protected and above ground pipes and fittings used for a stored water supply must be of non-rusting, non-combustible, non-heat-deforming materials and must be situated more than 6m from a building area to be protected.

It should be recognised that although water supply as specified above may be in compliance with the requirements of the Building Code of Australia, the supply may not be adequate for all firefighting situations.

Table 3B: Requirements for Static Water Supply for Fire Fighting

Column 1		**Column 2**
Element		**Requirement**
A.	Distance between building area to be protected and water supply	The following requirements apply: (1) The building area to be protected must be located within 90 metres of the fire fighting water point of a static water supply; and (2) The distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area.
B.	Static Water Supplies	A static water supply: (1) May have a remotely located offtake connected to the static water supply; (2) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times; (3) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems; (4) Must be metal, concrete or lagged by non-combustible materials if above ground; and (5) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS

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		3959-2018 the tank may be constructed of any material provided that the lowest 400mm of the tank exterior is protected by: (a) Metal; (b) Non-combustible material; or (c) Fibre-cement a minimum 6mm thickness.
C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a fire fighting water point for a static water supply must: (a) Have a minimum nominal internal diameter of 50mm; (b) Be fitted with a valve with a minimum nominal diameter of 50mm; (c) Be metal or lagged by non-combustible materials if above ground; (d) Where buried, have a minimum depth of 300mm; (e) Provide a DIN or NEN standard forged Storz 65mm coupling fitted with a suction washer for connection to fire fighting equipment; (f) Ensure the coupling is accessible and available for connection at all times; (g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length); (h) Ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling compliant with this Table; and (i) Where a remote offtake is installed, ensure the offtake is in a position that is: (a) Visible; (b) Accessible to allow connection by fire fighting equipment; (c) At a working height of 450-600mm above ground level; and (d) Protected from possible damage, including damage from vehicles.
D.	Signage for static water connections	The fire fighting water point for a static supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must: (a) Comply with water tank signage requirements within AS 2304:2019; or (b) Comply with the Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service.
E.	Hardstand	A hardstand area for fire appliances must be provided: (a) No more than three metres from the fire fighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like); (b) No closer than six metres from the building area to be protected;

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	(c) With a minimum width of three metres constructed to the same standard as the carriageway; and (d) Connected to the property access by a carriageway equivalent to the standard of the property access.

4.0 Layout Options

Not relevant to this proposal.

5.0 Other Planning Provisions

Not relevant to this proposal.

6.0 Conclusions and Recommendations

Mitigation from bushfire is dependent on the careful management of the site by maintaining reduced fuel loads within the hazard management areas and within the site.

The site has been assessed as requiring buildings (1 x Visitor Accommodation Cabin) to conform to or exceed BAL 12.5 requirements based on AS 3959 – 2018 Construction of Buildings in Bushfire Prone Areas.

Access

The driveway is to be upgraded/maintained to meet Table 2C. Requirements for Property Access, Director's Determination – Bushfire Hazard Areas, Version 1.1.

Water Supplies

Water supply tank **at least** 10,000 litres (per habitable building to be protected) is to be established and maintained, with a fitting suitable for TFS access, meeting the requirements for Reticulated Water Supply for Fire Fighting, Table 3B, Director's Determination – Bushfire Hazard Areas, Version 1.1.

Fuel Managed Areas

Hazard Management Areas as detailed within the plan shall be constructed and maintained as detailed in Section 2 of Schedule 2 (where applicable).

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Schedule 2 – Bushfire Hazard Management Plan

1.0 Introduction

The Bushfire Hazard Management Plan (BHMP) is developed from the results of a Bushfire Attack Level (BAL) Assessment Report prepared for the site in accordance with Australian Standard 3959. The BHMP provides reference and information to existing and subsequent owners on their responsibilities for the establishment, maintenance and future management of their property to reduce the risk of bushfire attack and includes: -

- Establishment of a Hazard Management Area in and around the existing and/or proposed buildings,
- Specifications of Private access road construction,
- Provision on firefighting water supply,
- Construction requirements in relation to the Building Code of Australia, dependent on the Bushfire Attack Level and requirements of Australian Standard 3959.
- Reduction and removal of vegetation and fuel loads in and around the property, buildings and Hazard Management Areas,
- Ongoing maintenance responsibilities by successive owners for perpetuity.

A copy of the plan MUST also be provided to ALL current and successive owners to make them aware of their continuing obligations to maintain the plan and protection measures attributed to their property in to the future.

2.0 Hazard Management Areas

The Hazard Management Area (defendable space) is provided between the vegetation and the buildings subject to bushfire risk. The space provides for management of vegetation and reduction in fuel loads in an attempt to:

- Prevent flame impingement on the dwelling;
- Provide a defendable space for property protection;
- Reduce fire spread;
- Deflect and filter embers;
- Provide shelter from radiant heat; and
- Reduce wind speed.

The *Building Act 2016*, requires a hazard management area to be established and maintained between the bushfire prone vegetation and the building at a distance equal to, or greater than the separation distance specified for the Bushfire Attack Levels (BAL) in *AS 3959-2018 Construction of Buildings in Bushfire Prone Areas*.

Refer to the attached BHMP Site Plan in Section 6 of this management plan for specific details on the Hazard Management Area.

Rebecca Green & Associates

2.1 Vegetation (Fuel) Management

Managing an area in a minimum fuel condition generally means a reduction in the amount and altering the arrangement of fuels. Most fine fuels are at or close to the ground, often as part of a grass, litter or shrub layer. If there is enough fuel, when a fire comes these fuels will ignite the trees above or set the bark alight which will burn up into the tree canopy causing the most dangerous of bushfire situation; a crown fire.

To prevent crown fires occurring it is necessary to remove the "ladder of fuel" between the ground and the tree crowns and to make sure the amount of ground fuel is not sufficient to set the crowns alight. Without fire burning below, a crown fire should not be sustained. Further removing continuity and separation of the vegetation canopies both horizontally and vertically will assist.

All vegetation will burn under the influence of bushfire; shrub layers need to be modified to remove tall continuous walls of vegetation and establish clear separation between the ground and the bottom of the tree canopy. Further minimisation of flammable ground litter such as leafs, twigs, bark, ferns and debris will further reduce fuel load with potential to burn or contribute to the growth of a bushfire.

Fuels do not need to be totally removed however fuels close to the building and inside the Hazard Management Area are to be kept to a minimum. As a general practice 5 tonnes per hectare is accepted as being controllable with normal firefighting resources. This can be visualised as grass cut to about 10 centimetres in height or ground litter about 2 centimetres thick. This is considered to be a low fuel level.

2.2 Other Risk Management Actions

Other actions that can be implemented to reduce the bushfire risk in the Hazard Management Areas include:

1. Establishing non-combustible paths and driveways around buildings.
2. Establish plantings of low flammability shrub species.
3. Ensure garden beds and shrubs are established well away from buildings.
4. Tree planting to be located at the outer edge of the Hazard Management Area and spaced well apart to ensure canopy separation.
5. Cut lawns short and maintain.
6. Remove fallen limbs, leaf and bark litter.
7. Avoid using pine bark and other flammable mulch in gardens.
8. Prune trees to ensure canopy separation horizontally and vertically, remove low hanging branches to ensure separation from ground litter.
9. Where the amount of land permits extend the vegetation management in to a secondary hazard management zone.

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3.0 On-going Site Management and Maintenance

On-going maintenance is required to the buildings and landscaping within the hazard management area to ensure the continued performance of the bushfire mitigation measures which have been designed into the development for occupant and community protection.

Specified Hazard Management Areas are only a minimum distance required; owners are encouraged to establish a greater management area where land area and opportunity permits. An additional fuel modified buffer zone between the Hazard Management Area and the bushfire vegetation will only improve the protection level and reduce the risk to the property during a bushfire event.

Preparedness comes down to diligent annual maintenance in and around the buildings and Hazard Management Areas particularly during the period of greatest risk; August to February of each year.

Recommendation:

1. Locate wood piles or other flammable storage well away from the habitable building.
2. Solid non-combustible fencing such as steel provides a fire and heat radiation shield to the dwelling.
3. Metal flywire screens prevent sparks and embers from entering the building.
4. Seal gaps under floor spaces, roof space, under eaves, external vents, skylights, chimneys and wall cladding.
5. Remove ladder fuels from the under storey of larger trees. Prune canopies to provide separation.
6. Rake up leaf litter and vegetation debris. Cut grass and maintain to less than 10cm.
7. Keep garden beds well away from the dwelling and use non-combustible garden mulches including rock or stones.
8. Establish plantings of low flammability shrub species.
9. Seal all gaps in external claddings.
10. Keep roof gutters clear of leaf litter, bark and similar debris, remove and maintain. Install gutter guards to assist.
11. Flammable fuels such as gas bottles should be located on the opposite side of the house to the likely direction of a bushfire.
12. Seal gaps in roofing to prevent the entry of embers.
13. Surround the dwelling with non-combustible paths.
14. Outbuildings to be at least 6m from the main dwelling.
15. Ensure hoses provide coverage to the whole site. Use metal hose fittings.
16. Flammable fuels and the like to be stored in minimum volumes well away from the habitable building.

4.0 Vehicular Access

Roads are to be constructed to provide vehicle access to the site to assist firefighting and emergency personnel to defend the building or evacuate occupants; and provide access at all times to the water supply for firefighting purposes on the building site.

Rebecca Green & Associates

Private access roads are to be constructed from the entrance to the property cross over with the public road through to the dwelling and water storage area on the site (if applicable). Private access roads are to be designed, constructed and maintained to a standard as recommended below:

Recommendations:

The following design and construction requirements apply to property access length is 200 metres or greater or access for a fire appliance to a fire fighting water point:

(i) All weather construction;
(ii) Load capacity of at least 20 tonnes, including for bridges and culverts;
(iii) Minimum carriageway width of 4 metres (where possible);
(iv) Minimum vertical clearance of 4 metres;
(v) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
(vi) Cross falls of less than 3 degrees (1:20 or 5%);
(vii) Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle;
(viii) Curves with a minimum inner radius of 10 metres;
(ix) Maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and
(x) Terminate with a turning area for fire appliances provided by one of the following:
  a) A turning circle with a minimum inner radius of 10 metres;
  b) A property access encircling the building; or
  c) A hammerhead “T” or “Y” turning head 4 metres wide and 8 metres long.
(xi) Passing bays of 2m additional carriageway width and 20m length provided every 200m.

5.0 Water Supply

A building that is constructed in a designated bushfire prone area must provide access at all times to a sufficient supply of water for firefighting purposes on the building site.

Recommendations:

The exterior elements of a habitable building in a designated Bushfire prone area must be within reach of a 120m long hose (reticulated) or 90m long hose (static) (lay) connected to –

(i) A fire hydrant system designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03-2011-3.1 MRWA Edition 2.0; o
(ii) A stored water supply in a water tank, swimming pool, dam or lake available for fire fighting at all times which has the capacity of at least 10,000L for each separate building area to be protected.

Rebecca Green & Associates

5.1 Reticulated Water Supply

Not applicable to this proposal.

5.2 On-Site Dedicated Fire Fighting Water Supply

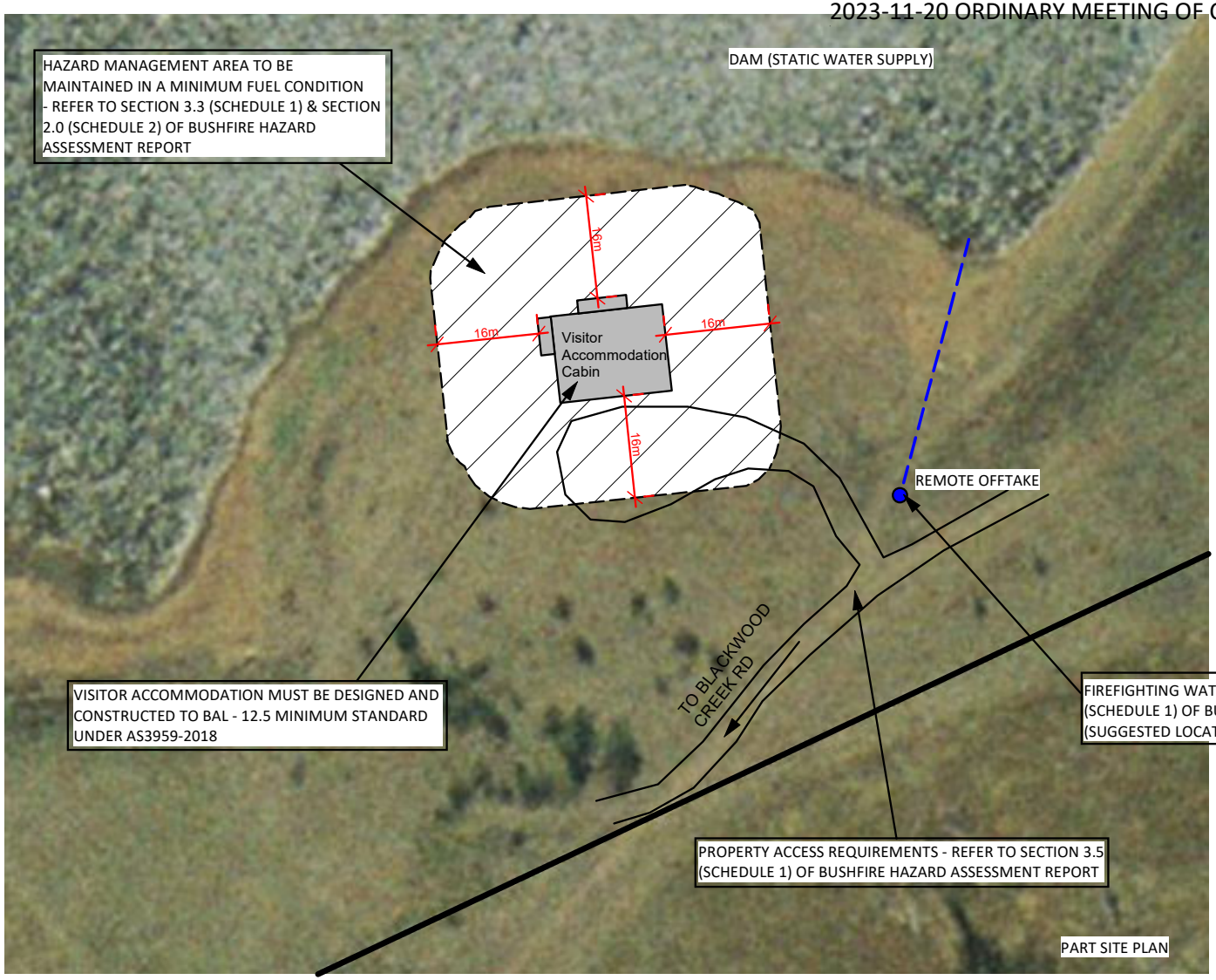
A water tank/dam of at least 10,000 litres per building area to be protected and above ground pipes and fittings used for a stored water supply must be made of non-rusting, non-combustible, non-heat-deforming materials and must be situated more than 6m from a building, but within 90m of the building area (water connection point). Hardstanding must be provided within 3m of a static water supply/water connection point (remotely located offtake valve).

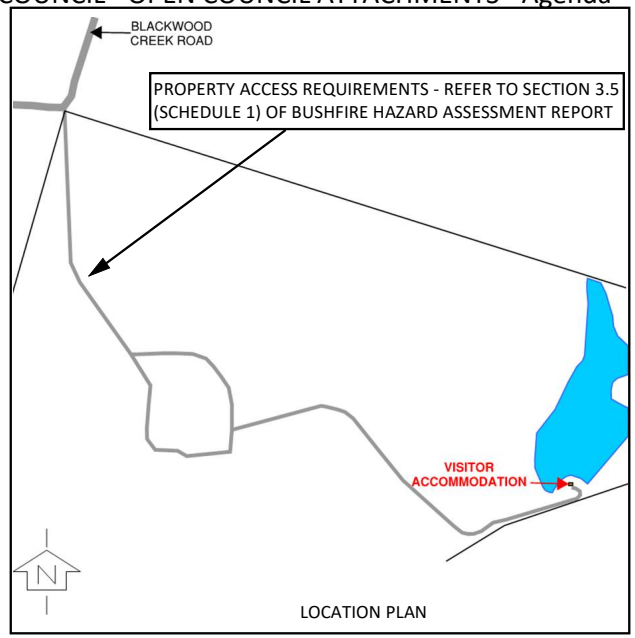
The water tank/dam must be fitted with a 65mm outlet and DIN or NEN Standard compliant forged Storz 65mm adaptor fitted with a standard (delivery) washer rated to 1800kPa working pressure and 2400kPa burst pressure.

It should be recognised that although water supply as specified above may be in compliance with the requirements of the Building Code of Australia the supply may not be adequate for all fire fighting situations.

Rebecca Green & Associates

Bushfire Hazard Management Site Plan





* THIS BHMP MUST BE READ IN CONJUNCTION WITH BUSHFIRE HAZARD ASSESSMENT REPORT REF: RGA-B2304, R. GREEN, 15 MAY 2023

* THIS BHMP HAS BEEN PREPARED TO SATISFY THE REQUIREMENTS OF THE *DIRECTORS DETERMINATION - BUSHFIRE HAZARD AREAS (V1.1)*

N

BUSHFIRE HAZARD MANAGEMENT PLAN
BUSHFIRE ATTACK LEVEL (BAL) - 12.5
1 x NEW VISITOR ACCOMMODATION CABIN

157 BLACKWOOD CREEK ROAD, BLACKWOOD CREEK
VOLUME 109824 FOLIO 1
PROPERTY ID 2928830

DATE: 15 MAY 2023
VERSION: 1
DRAWN: REBECCA GREEN
PHONE: 0409 284 422
EMAIL: ADMIN@RGASSOCIATES.COM.AU
BFP - 116, SCOPE - 1, 2, 3A, 3B, 3C

Rebecca Green & Associates

Rebecca Green & Associates

Form 55

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To:	Nosswick Pty. Limited		*Owner /Agent*
	157 Blackwood Creek Road		*Address*
	BLACKWOOD CREEK TAS	7301	*Suburb/postcode*

Qualified person details:

Qualified person:	Rebecca Green		
Address:	PO Box 2108	Phone No:	0409 284 422
	Launceston 7250	Fax No:	
Licence No:	BFP-116	Email address:	admin@rgassociates.com.au

Qualifications and Insurance details: Accredited to report on bushfire hazards under Part IVA of the *Fire Services Act 1979*

(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: Analysis of hazards in bushfire prone areas

(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address:	157 Blackwood Creek Road	Lot No:	1
	BLACKWOOD CREEK 7301	Certificate of title No:	109824

The assessable item related to this certificate: 1 x Visitor Accommodation Cabin

(description of the assessable item being certified)
Assessable item includes –
- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

Certificate details:

Certificate type: Bushfire Hazard

(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work: ✓

or

a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents:	Bushfire Hazard Assessment Report & Bushfire Hazard Management Plan (Rebecca Green & Associates, 15 May 2023, Job No. RGA-B2304)
Relevant	N/A
References:	*Australian Standard 3959-2018*

Substance of Certificate: (what it is that is being certified)

1. Assessment of the site Bushfire Attack Level (BAL – 12.5 for 1 x Visitor Accommodation Cabin) to Australian Standard 3959-2018

2. Bushfire Hazard Management Plan showing BAL-12.5 solutions.

Scope and/or Limitations

Scope

This report and certification was commissioned to identify the Bushfire Attack Level for the existing property. All comment, advice and fire suppression measures are in relation to compliance with the *Building Act 2016* & *Regulations 2016*, *Building Code of Australia* and *Australian Standard 3959-2018, Construction of buildings in bushfire-prone areas*.

Limitations

The assessment has been undertaken and report provided on the understanding that:-

1. The report only deals with the potential bushfire risk all other statutory assessments are outside the scope of this certificate.
2. The report only identifies the size, volume and status of vegetation at the time the inspection was undertaken and cannot be relied upon for any future development.
3. Impacts of future development and vegetation growth have not been considered.
4. No assurance is given or inferred for the health, safety or amenity of the general public, individuals or occupants in the event of a Bushfire.
5. No warranty is offered or inferred for any buildings constructed on the property in the event of a Bushfire.

No action or reliance is to be placed on this certificate or report; other than for which it was commissioned.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		RG-099/2023	15 May 2023

Rebecca Green & Associates

Attachment 1 – AS3959-2018 Construction Requirements

Rebecca Green & Associates

BAL Assessments

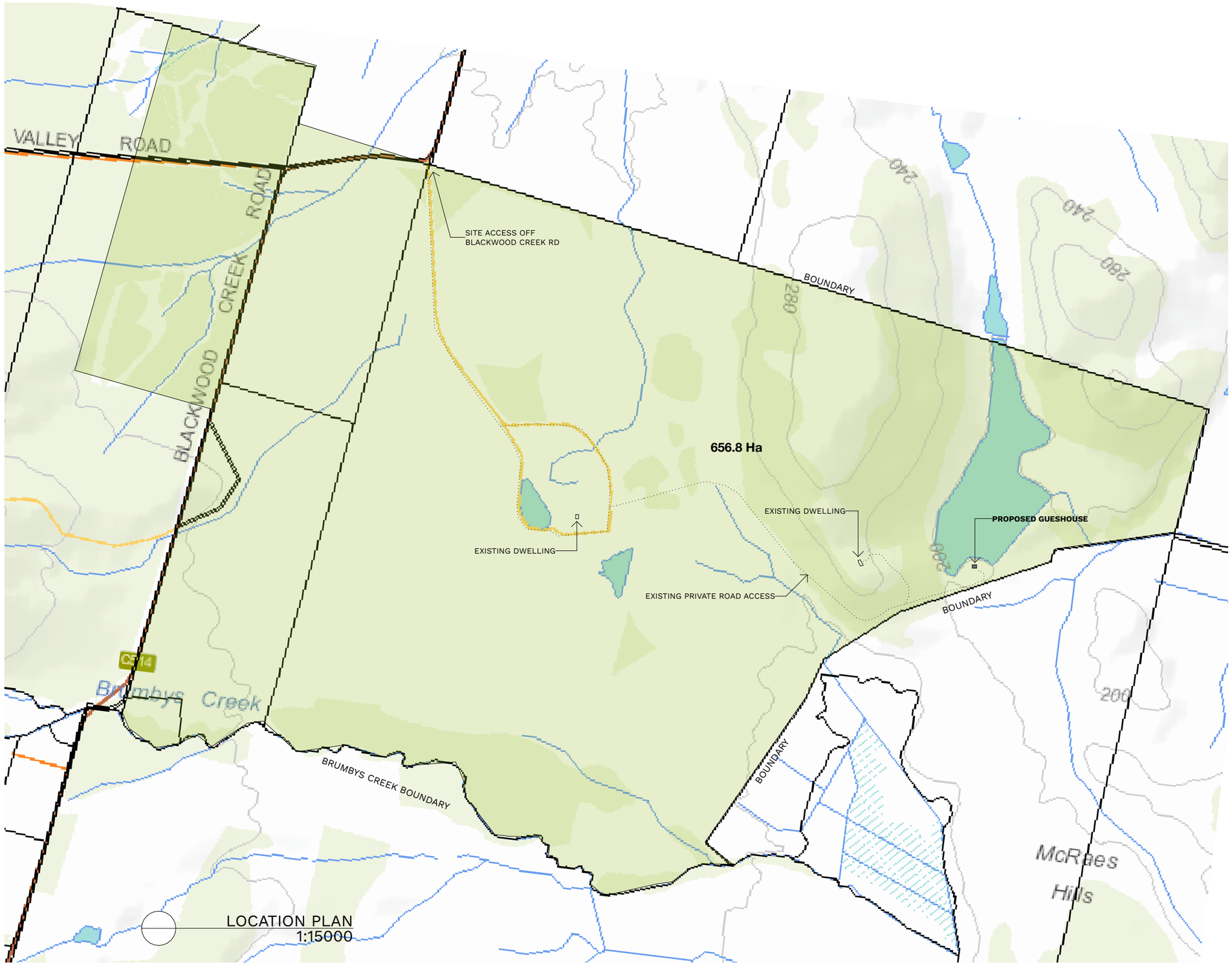
Revised for 2018 edition

	BAL—LOW	BAL-12.5	BAL-19	BAL-29	BAL-40	BAL –FZ (FLAMEZONE)
SUBFLOOR SUPPORTS	No special construction requirements	No special construction requirements	Enclosure by external wall or by steel, bronze or aluminium mesh	Enclosure by external wall or by steel, bronze of aluminium mesh. Non-combustible or naturally fire resistant timber supports where the subfloor is unenclosed	If enclosed by external wall refer below "External Walls" section in table or non-combustible sub-floor supports, or tested for bushfire resistance to AS1530.8.1	Enclosure by external wall or non-combustible with an FRL of 30/-/- or to be tested for bushfire resistance to AS1530.8.2
FLOORS	No special construction requirements	No special construction requirements	Concrete slab on ground or enclosure by external wall, metal mesh as above or flooring less than 400mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation	Concrete slab on ground or enclosure by external wall, metal mesh as above or flooring less than 400mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation	Concrete slab on ground or enclosure by external wall or protection of underside with a non-combustible material such as fibre cement sheet or be non-combustible or to be tested for bushfire resistance to AS1530.8.1	Concrete slab on ground or enclosure by external wall or an FRL of 30/30/30 or protection of underside 30 minute incipient spread of fire system or to be tested for bushfire resistance to AS1530.8.2
EXTERNAL WALLS	No special construction requirements	As for BAL-19	Parts less than 400mm above ground or decks etc to be of non-combustible material, 6mm fibre cement clad or bushfire resistant/ naturally fire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) or timber framed, or steel framed walls sarked on the outside and clad with 6mm fibre cement sheeting or steel sheeting or bushfire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) or timber framed, or steel framed walls sarked on the outside and clad with 9mm fibre cement sheeting or steel or to be tested for bushfire resistance to AS1530.8.1	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) with a minimum thickness of 90mm or a FRL of -/30/30 when tested from outside or to be tested for bushfire resistance to AS1530.8.2
EXTERNAL WINDOWS	No special construction requirements	4mm grade A Safety Glass of glass blocks within 400m of ground, deck etc with Openable portion metal screened with frame of metal or metal reinforced PVC-U or bushfire resisting timber	5mm toughened glass or glass bricks within 400mm of the ground, deck etc with openable portion metal screened with frame of metal or metal reinforced PVC-U or bushfire resisting timber. Above 400mm annealed glass can be used with all glass screened	5mm toughened glass with openable portion screened and frame of metal or metal reinforced PVC-U, or bushfire resistant timber and portion within 400mm of ground, deck, screen etc screened	6mm toughened glass. Fixed and openable portion screened with steel or bronze mesh	Protected by bushfire shutter or FRL of -/30/- and openable portion screened with steel or bronze mesh or be tested for bushfire resistance to AS1530.8.2
EXTERNAL DOORS	No special construction requirements	As for BAL-19 except that door framing can be naturally fire resistant (high density) timber	Screened with steel, bronze or aluminium mesh or glazed with 5mm toughened glass, non-combustible or 35mm solid timber for 400mm above threshold, metal or bushfire resistant timber framed for 400mm above ground, decking etc. tight-fitting with weather strips at base	Screened with steel, bronze or aluminium mesh or non-combustible, or 35mm solid timber for 400mm above threshold. Metal or bushfire resistant timber framed tight-fitting with weather strips at base	Non-combustible or 35mm solid timber, screened with steel or bronze mesh, metal framed, tight-fitting with weather strips at base	Protected by bushfire shutter or tight-fitting with weather strips at base and a FRL of -/30/-
ROOFS	No special construction requirements	As for BAL-19 (including roof to be fully sarked)	Non-combustible covering, roof/wall junctions sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked.	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked and no roof mounted evaporative coolers	Roof with FRL of 30/30/30 or tested for bushfire resistance to AS1530.8.2. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. No roof mounted evaporative coolers
VERANDAS DECKS ETC.	No special construction requirements	As for BAL-19	Enclosed sub floor space—no special requirements for materials except within 400mm of ground. No special requirements for supports or framing. Decking to be non-combustible or bushfire resistant within 300mm horizontally and 400mm vertically from a glazed element	Enclosed sub floor space or non-combustible or bushfire resistant timber supports. Decking to be non-combustible or bushfire resistant timbers	Enclosed sub-floor space or non-combustible supports. Decking to be non-combustible	Enclosed sub floor space or non-combustible supports. Decking to have no gaps and be non-combustible

Please note: The information in the table is a summary of the construction requirements in the AS3959-2018 standard and is not intended as a design or construction guide. You should consult the standard for the full technical details.

Rebecca Green & Associates

Attachment 2 – Proposal Plans



CUMULUS

EST 2011

REV	DATE	PURPOSE

N

CUMULUS STUDIO PTY LTD

INFO@CUMULUS.STUDIO

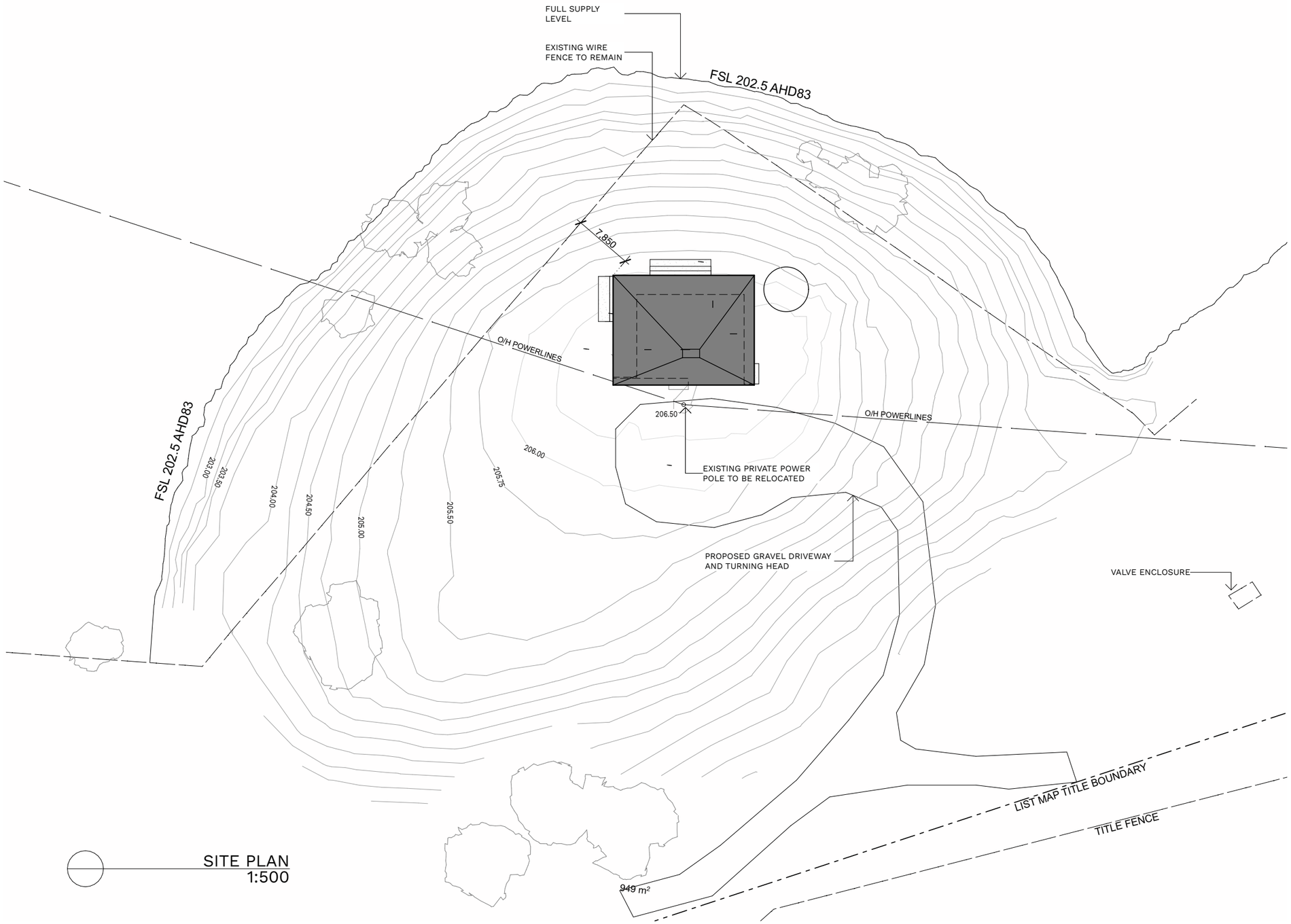
PROJECT NAME
Guesthouse
New Dwelling

PROJECT STAGE
CONCEPT DESIGN

DRAWING TITLE
LOCATION PLAN

DATE 8/5/23 | ORIGINAL SIZE A3

DRAWING Nº J22108-SK03 | REVISION



SITE PLAN
1:500

CUMULUS EST 2011

REV	DATE	PURPOSE

N

CUMULUS STUDIO PTY LTD

INFO@CUMULUS.STUDIO

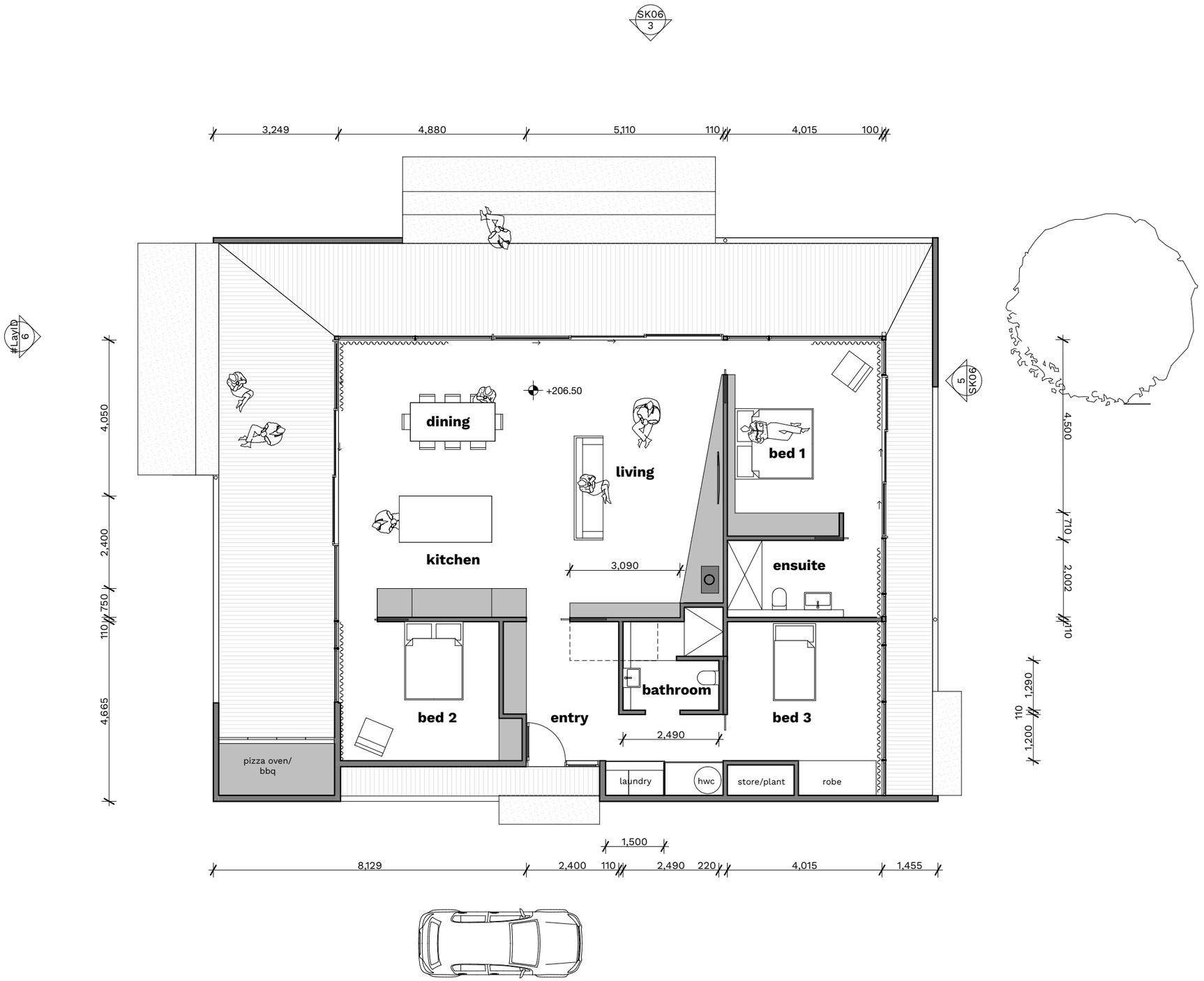
PROJECT NAME
Guesthouse
New Dwelling

PROJECT STAGE
CONCEPT DESIGN

DRAWING TITLE
SITE PLAN

DATE 8/5/23 | ORIGINAL SIZE A3

DRAWING Nº J22108-SK04 | REVISION



CUMULUS

REV DATE PURPOSE

N

CUMULUS STUDIO PTY LTD

INFO@CUMULUS.STUDIO

PROJECT NAME
Guesthouse
New Dwelling

PROJECT STAGE
CONCEPT DESIGN

DRAWING TITLE
FLOOR PLAN

DATE 8/5/23
ORIGINAL SIZE A3

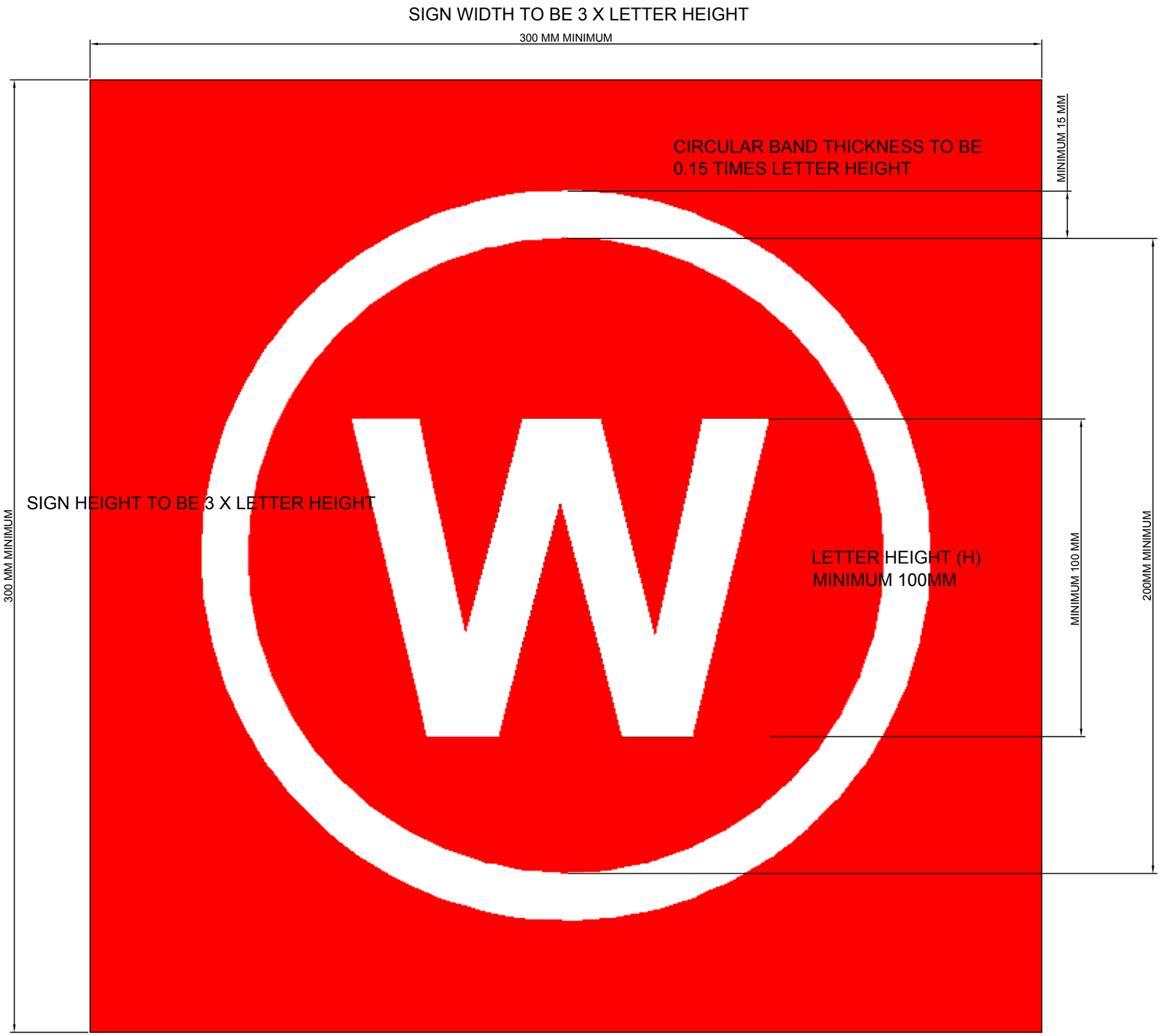
DRAWING Nº J22108-SK05
REVISION

Rebecca Green & Associates

Attachment 3 – Tasmania Fire Service Water Supply Signage Guideline

V1.0

10,000 LITRE DOMESTIC FIREFIGHTING STATIC WATER INDICATOR SIGN



LETTERING TO BE UPPERCASE AND NOT LESS THAN 100MM IN HEIGHT

INSIDE DIAMETER OF CIRCULAR BAND TO BE 2 TIMES LETTER HEIGHT

SIGN SIZE DIMENSIONS
3 X LETTER HEIGHT HIGH AND 3 X LETTER HEIGHT WIDE.

THICKNESS OF CIRCULAR BAND TO BE 0.15 TIMES LETTER HEIGHT

TEXT STYLE TO BE IN ACCORDANCE WTH AS1744.2015, SERIES F

SIGN TO BE IN FADE RESISTING MATERIAL WITH WHITE REFLECTIVE LETTERING AND CIRCLE ON A RED BACKGROUND

RED TO BE R-13 SIGNAL RED
COLOUR CODE 1795U

WHITE SUBSTRATE COLOUR TO BE
PMS 186C

SIGN TO BE CONSTRUCTED FROM UV STABILIZED, NON FLAMMABLE AND NON HEAT DEFORMING MATERIAL

SIGN TO BE PERMANENTLY FIXED

Tasmania Fire Service

Rebecca Green & Associates

References

(a) Australian Standards, AS 3959-2018, *Construction of buildings in bushfire-prone areas*, Standards Australia, Sydney NSW.

(b) Resource Management & Conservation Division of the Department Primary Industry & Water September 2006, TASVEG, *Tasmanian Vegetation Map*, Tasmania.

(c) Tasmanian Government, Land Information System Tasmania, www.thelist.tas.gov.au

BUSHFIRE EMERGENCY PLAN

Name of Site / Facility
Nosswick Lakehouse

Address of Site / Facility
157 Blackwood Creek Road, Blackwood Creek, Tasmania, 7301

Plan Prepared By	Rebecca Green		
Plan Approved By	Scott Colvin	BFP No.	116
Date Approved		Plan Version	V.1

The purpose of this plan is to identify procedures for occupants and site managers to follow in the event of bushfire emergency.

This plan is comprised of:

1. Bushfire Emergency Plan
2. Bushfire Action Plan

This plan must be reviewed annually, prior to the bushfire season.

Information within this plan must be maintained, and key personnel must review their responsibilities under this plan.

Tasmania Fire Service

APPROVED
CHIEF OFFICER, TASMANIA FIRE SERVICE
PER HILSTON, BUSHFIRE RISK UNIT
17 / 05 / 2023

REVIEW ANNUALLY

COPY TO TFS
fire@fire.tas.gov.au

Contents

Document Control

Revision	Date	Details
1	15 May 2023	Bushfire Emergency Plan primary document

1.0 Primary Emergency Management Action

The **Primary Action** to follow under **normal** bushfire conditions is to:

EVACUATE

Refer to Pre-Emptive Procedures when forecast conditions exceed normal

2.0 Site Contact(s) & Details

2.1 Site Emergency Contact(s)

Primary contact	Scott Colvin		
Position / role	Co-Owner		
Phone number (BH)		**Phone number (AH)**	As for BH
Secondary contact	Lydia Colvin		
Position / role	Co-Owner		
Phone number (BH)		**Phone number (AH)**	As for BH

2.2 Site Details

Type of facility / site	Short term overnight accommodation		
Number of buildings	One (1)	**Number of employees**	Nil
Number of occupants	Up to 5 guests	**Number with support needs**	Unknown

Description of support needs

The facility does not cater for people with disabilities though the actual number will vary according to the individual bookings.

3.0 Roles & Responsibilities

The following table identifies the emergency control organisation (ECO) – the individuals responsible for implementing the emergency procedures in the event of a bushfire emergency.

Position	Name	Area of Responsibility	Mobile Phone No.
Co-Owner	Scott Colvin	Fire Warden and Initial Contact (all of site)	
Co-Owner	Lydia Colvin	Deputy Warden (all of site)	

4.0 Emergency Contacts

Dial '000' for emergency assistance.

The following table identifies important contacts and information sources for bushfire emergency management purposes.

Name / Organisation	Details	Phone No. / Website
Fire, Police, Ambulance	Fire or Emergency	000
Tasmania Fire Service	Bushfire Hotline	1800 000 699
Tasmania Fire Service	Incident Information	www.fire.tas.gov.au
Bureau of Meteorology	Fire Weather Information	www.bom.gov.au
Tas Alert	Emergency Information	www.alert.tas.gov.au
Tas Police Community Alerts	Road Closures	www.police.tas.gov.au/community•alerts/
Local ABC Radio Station	Bushfire Alerts	91.7 FM

5.0 Preparations prior to bushfire season

5.1 Site Maintenance

Actions
1. Maintain the Hazard Management Area ensuring lawns and grassed areas are kept below 100 mm in height
2. Check provision of onsite water supply for firefighting purposes, ensuring supply is adequate, available and accessible
3. Ensure no hazards are present which would contribute to increased fire intensity, removing rubbish piles etc.
4. Ensure lawns and grassed areas are kept green if water supply allows
5. Ensure property access is kept clear and easily trafficable
6. Ensure defendable spaces around buildings and assembly areas are maintained
7. Ensure firefighting pumps, hoses and equipment are serviced and operational
8. Ensure first aid kits, fire extinguishers, emergency lighting etc. are current and serviceable
9. Ensure Roofs and gutters are free from leaf litter and debris
10.

5.2 Emergency Management

Actions
1. Review Bushfire Emergency Plan to ensure details, procedures and contact phone numbers are correct.
2. Ensure Staff have been informed of, and are familiar with, the procedures laid out in the Bushfire Emergency Plan.
3. Ensure revised and current versions of the Emergency Plan and Action Plan are available for review.
4. Ensure nominated off-site shelter is still a safe choice, confirming contact details if appropriate.
5. Make contact with management at off-site refuges if necessary confirming use during fire season.
6. Place current version of emergency plan and action plan in premises in visible location
7. Ensure the nominated escape route to shelter is still a viable choice. If not, update Action Plan
8. Ensure adequate levels of drinking water are available.
9.
10.

EVACUATION

6.0 Evacuation Procedures

Evaluation of bushfire risk and the safety of employees and occupants has determined that the **PRIMARY** action to follow under normal bushfire conditions is to evacuate to a designated off-site refuge.

6.1 Assembly Points

Designated Evacuation Assembly Points
1. Assemble on gravel driveway/ carparking, south of the accommodation building
2.
3.

6.2 Off-Site Refuge(s)

Primary Off-Site Refuge	
Name of venue:	Cressy Recreation Ground
Address of venue:	2A Macquarie Street, Cressy
Nearest cross-street:	Cressy Road
Map reference:	GDA94 MGA55: 506975E, 5385572N
Venue phone number:	Nil
Travel time to venue:	20 minutes via vehicle (Approx. 24.0km)

Secondary Off-Site Refuge	
Name of venue:	
Address of venue:	
Nearest cross-street:	
Map reference:	
Venue phone number:	
Travel time to venue:	

6.3 Evacuation Transportation Arrangements

Primary Transportation Arrangements	
Number & type of vehicles required:	Guests will be required to use own vehicles
Name of transport provider:	
Phone number:	
Time required before transport on-site:	

Secondary Transportation Arrangements	
Number & type of vehicles required:	Managers will be available as an alternate Note: any elderly or persons with a disability will be assisted or helped to find transport. Most guests will own and provide their own vehicles.
Name of transport provider:	Scott and Lydia Colvin
Phone number:	
Time required before transport on-site:	5 Minutes (Reside onsite)

6.4 Evacuation Procedures

Trigger(s)	Actions
1. Watch and Act Bushfire Alert for Area; or	Fire Warden to direct evacuation and advise Emergency Services
2. Emergency Warning Alert for Area;	Guests to Proceed to Evacuation Assembly point
3. Direction to evacuate from TFS or TASPOL	All persons are to be accounted for.
4.	Close all doors and windows in building.
5.	Wear sturdy clothing and footwear if available.
6.	Using Bushfire Action Plan Map, guests to evacuate to nominated Off-site Shelter
7.	Do not drive through smoke or flame. If path is blocked, return to premises and shelter on site.
9.	
10.	
11.	
12.	

Once the threat has passed, refer to: *Procedures Following Bushfire*.

SHELTER-IN-PLACE

7.0 Shelter-In-Place Procedures

Evaluation of bushfire risk and the safety of occupants has determined that the **SECONDARY** action to follow under normal bushfire conditions is to shelter at a designated on-site refuge.

7.1 On-Site Refuge(s)

Designated On-Site Refuges
1. Living Room of accommodation unit
2.
3.
4.

7.2 Sheltering Procedures

Trigger(s)	Actions
1. Instructed by TFS/TAS Police; or	Advise TFS, 000 that people are sheltering at premises
2. Prevented from Evacuation due to road closure etc; or	Take shelter in building/site protecting guests from radiant heat
3. Fire in close proximity, considered too dangerous to leave.	Monitor building interior for outbreaks of fire within and extinguish if possible
4.	Soak towels and place under doors to exclude embers
5.	Wear sturdy clothing and footwear if available.
6.	Ensure people can exit structure if it catches fire.
7.	
8.	
9.	
10.	
11.	
12.	
13.	

Once the threat has passed, refer to: *Procedures Following Bushfire*.

8.0 Procedures Following Bushfire

8.1 Shelter-In-Place

Actions
1. Ensure the safety of all people and seek medical assistance for those requiring it.
2. Ensure TFS /TASPOL are aware of situation with staff and guests. (Sheltering, Safe/ injured etc.)
3. Ensure all people drink plenty of water to avoid dehydration.
4. Staff or owners to extinguish any spot fires still burning around premises if safe to do.
5. Chief warden to seek information and ensure fire front has passed.
6. No person should attempt to re-enter fire affected buildings or areas until safe and advised by TFS/TASPOL.
7. Fire warden to arrange alternate accommodation for guests if required and if possible.
8. Fire warden to establish through TFS that it is safe to leave the refuge and roads are clear.
9. Chief Warden to review Emergency Plan for effectiveness, make note of weaknesses and amend as necessary.
10.

8.2 Evacuate

Actions
1. Ensure the safety of all people and seek medical assistance for those requiring it.
2. Fire warden to establish through TFS that it is safe to leave the refuge and roads are clear.
3. Fire warden to arrange alternate accommodation for guests if required and if possible.
4. No person should attempt to re-enter fire affected buildings or areas until safe and advised by TFS/TASPOL
5. Chief Warden to review Emergency Plan for effectiveness, make note of weaknesses and amend as necessary.
6.
7.
8.
9.
10.

PRE-EMPTIVE

9.0 Pre-emptive Procedures

Evaluation of bushfire risk and the safety of occupants has determined that the following pre-emptive measures should implemented outside of normal bushfire conditions.

Trigger(s)	Actions
1. Extreme Fire Conditions forecast	Facilities closed and guests to evacuate site.
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

10.0 Attachments

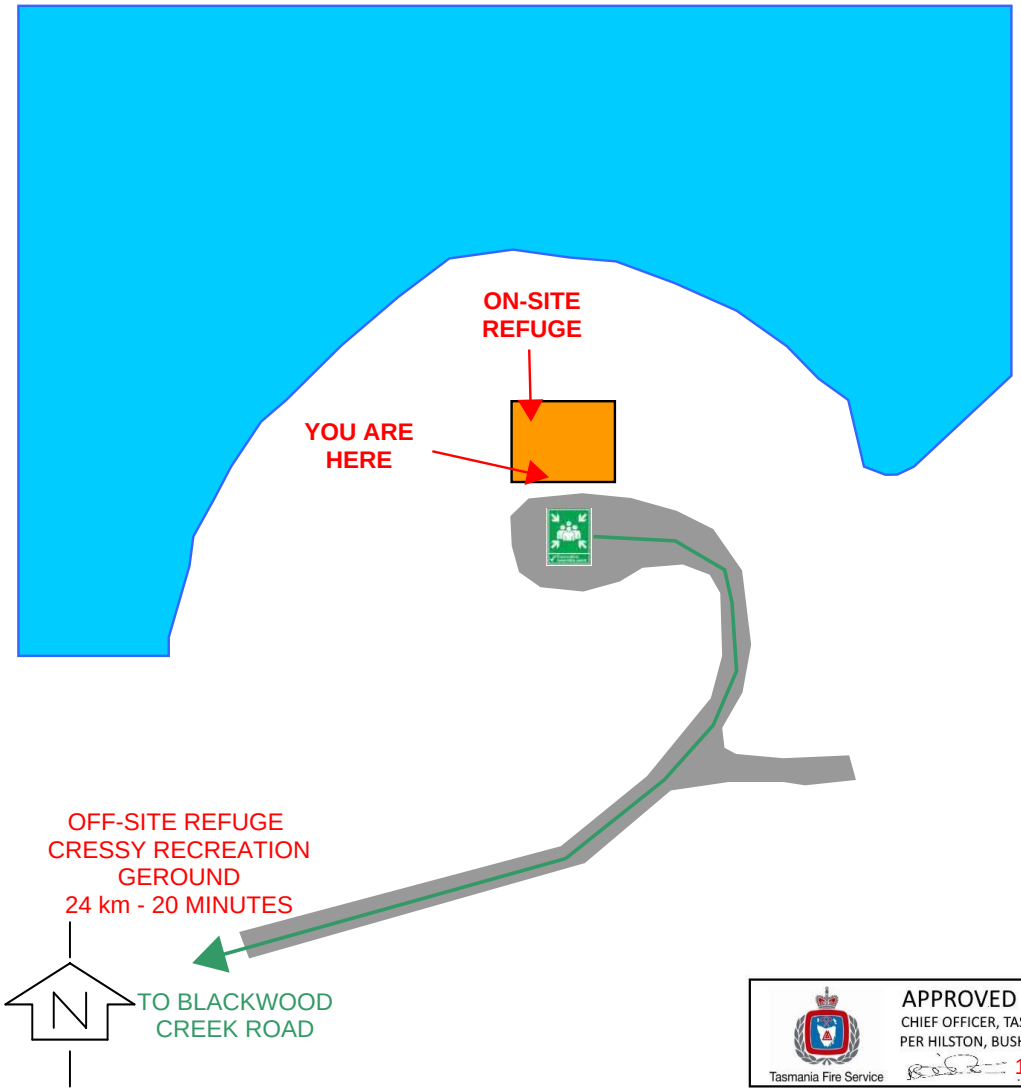
☐ Occupant/employee register

☐ Parent/guardian contact register

X Bushfire Action Plan

☐ Off-Site refuge map www.fire.tas.gov.au

BUSHFIRE ACTION PLAN



APPROVED
CHIEF OFFICER, TASMANIA FIRE SERVICE
PER HILSTON, BUSHFIRE RISK UNIT
Tasmania Fire Service
17 / 05 / 2023

EMERGENCY
DIAL 000

IN CASE OF BUSHFIRE

ENSURE ALL PERSONS ARE ACCOUNTED FOR

ATTEMPT TO MAKE CONTACT WITH CHIEF OR DEPUTY FIRE WARDENS

CONTACT TASMANIA FIRE SERVICE FOR SITUATION UPDATE ON 1800 000 699

PRIMARY ACTION:

ASSEMBLE AT ASSEMBLY AREA AND EVACUATE TO OFF-SITE REFUGE SITE LOCATED AT
1) CRESSY RECREATION GROUND

SECONDARY ACTION (IF EVACUATION IS NOT POSSIBLE):

CLOSE ALL DOORS AND WINDOWS AND PHONE 000 AND ADVISE OF SITUATION

RELOCATE TO ON-SITE REFUGE IN KITCHEN / LIVING ROOM

BUSHFIRE ACTION PLAN
157 BLACKWOOD CREEK ROAD,
BLACKWOOD CREEK, TASMANIA, 7301

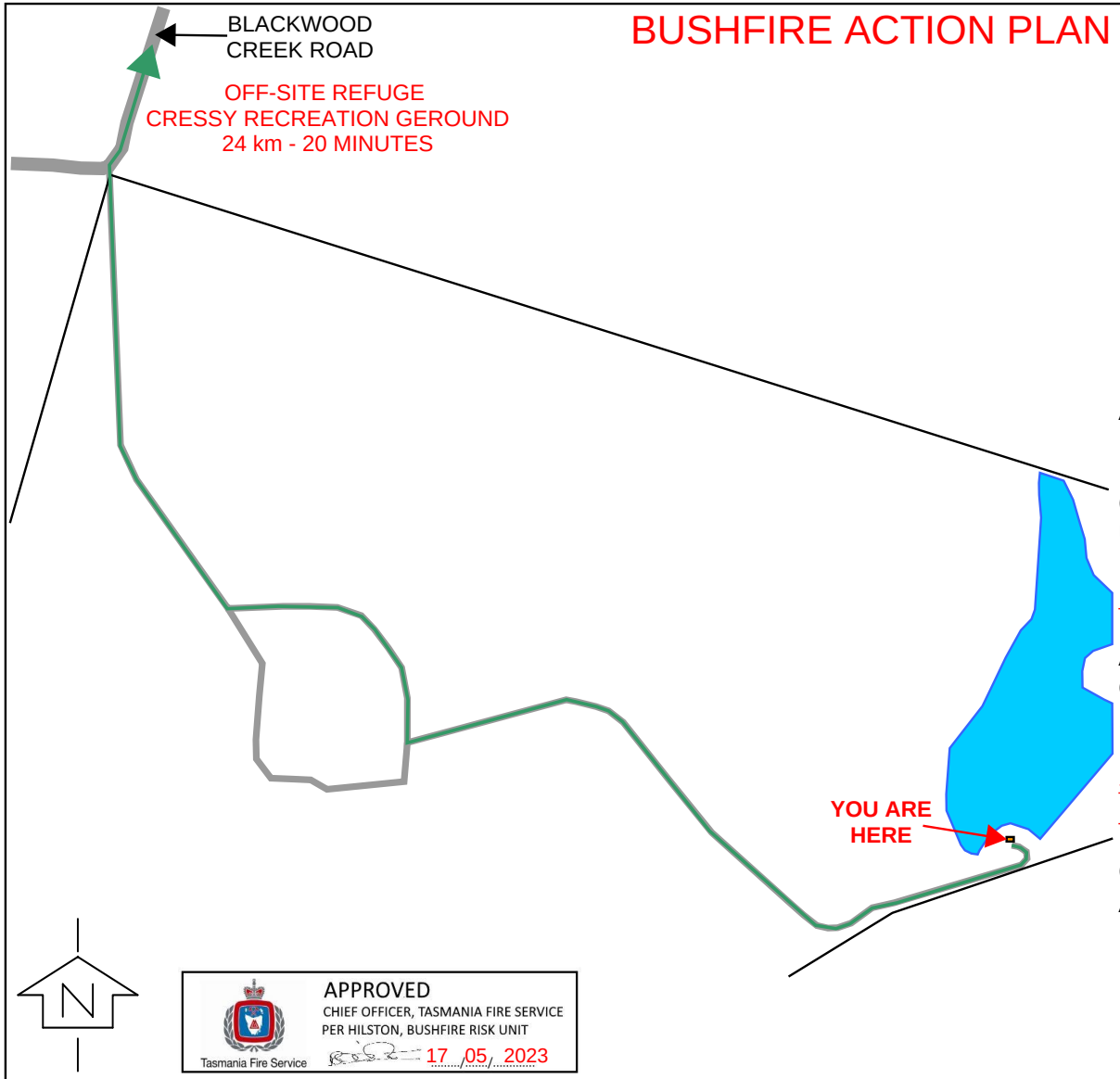
PLAN REVISED AND CURRENT AS OF
15/5/2023

SITE CONTACT
SCOTT COLVIN
CHIEF FIRE WARDEN
CO-OWNER

SITE CONTACT
LYDIA COLVIN
DEPUTY FIRE WARDEN
CO-OWNER

EVACUATION
ASSEMBLY POINT

BUSHFIRE ACTION PLAN



APPROVED
CHIEF OFFICER, TASMANIA FIRE SERVICE
PER HILSTON, BUSHFIRE RISK UNIT
Tasmania Fire Service
17 05 2023

EMERGENCY
DIAL 000

IN CASE OF BUSHFIRE

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157 BLACKWOOD CREEK ROAD,
BLACKWOOD CREEK, TASMANIA, 7301

PLAN REVISED AND CURRENT AS OF
15/5/2023

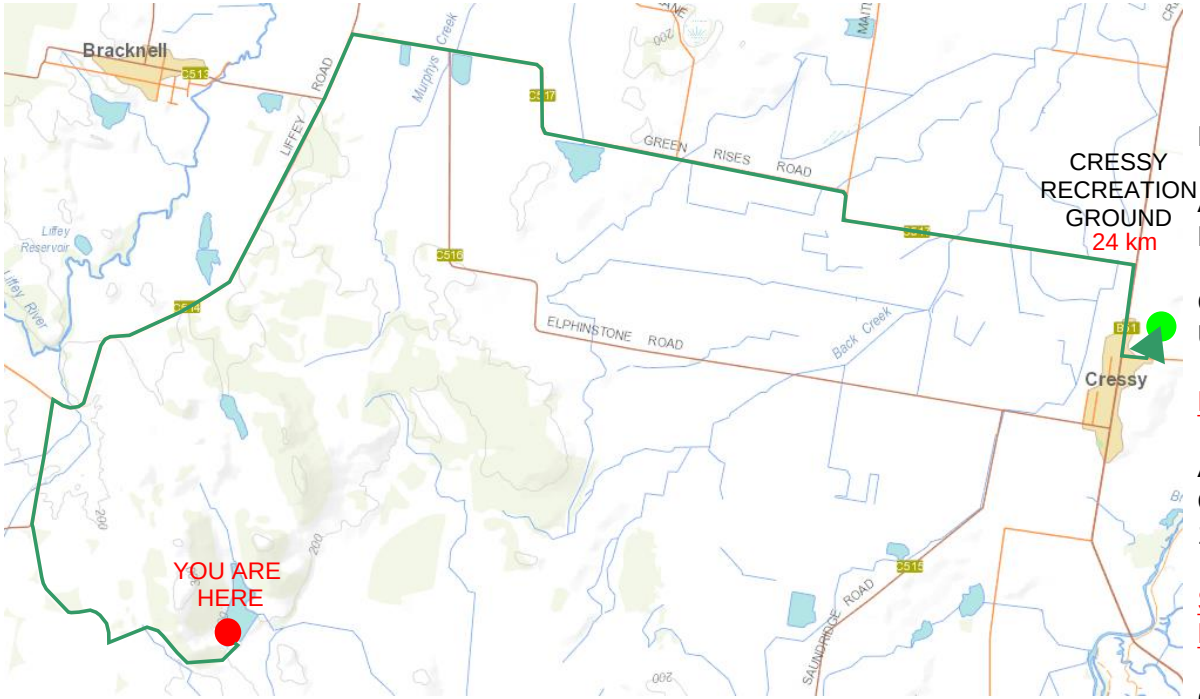
SITE CONTACT
SCOTT COLVIN
CHIEF FIRE WARDEN
CO-OWNER

SITE CONTACT
LYDIA COLVIN
DEPUTY FIRE WARDEN
CO-OWNER

EVACUATION
ASSEMBLY POINT

BUSHFIRE ACTION PLAN - ROUTE MAP

EMERGENCY
DIAL 000



IN CASE OF BUSHFIRE

ENSURE ALL PERSONS ARE ACCOUNTED FOR

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APPROVED
CHIEF OFFICER, TASMANIA FIRE SERVICE
PER HILSTON, BUSHFIRE RISK UNIT
Tasmania Fire Service
17 /05/ 2023

BUSHFIRE ACTION PLAN
157 BLACKWOOD CREEK ROAD,
BLACKWOOD CREEK, TASMANIA, 7301

PLAN REVISED AND CURRENT AS OF
15/5/2023

SITE CONTACT
SCOTT COLVIN
CHIEF FIRE WARDEN
CO-OWNER

SITE CONTACT
LYDIA COLVIN
DEPUTY FIRE WARDEN
CO-OWNER

OFF SITE REFUGE

EVACUATION ROUTE

D1 Consulting Engineers Pty Ltd

Onsite Wastewater System Design Report

157 Blackwood Creek Road, Blackwood Creek

For Scott Colvin

29 May 2023

Ref: 35723

D1 Consulting Engineers Pty Ltd
ABN 33 629 191 368
224A Invermay Road, Mowbray TAS 7248

Table of Contents

1. Introduction

Assessment for an onsite wastewater disposal assessment has been conducted for Scott Colvin at 157 Blackwood Creek Road, Blackwood (title reference 109824/1) for a new three bedroom residential building.

Therefore the investigation has been conducted to provide the following:

- An assessment of the suitability to support a new dwelling using an onsite wastewater disposal system for the proposed of domestic use (in accordance with AS1547:2012 “On-site domestic wastewater management”).

2. Field Investigation

The field investigation was conducted in May 2022 and involved a detailed site inspection followed by the attempted excavation of three boreholes in the area of the proposed dwelling. The soils surrounding the proposed development area on the property are black to reddish brown, sandy loam to loam shallow topsoil, over grey fine sandy to silty sandy loam on subsurface, developed on Jurassic dolerite.

Refer to Site Classification Report by Pinon Advisory Report (May 2022).

3. Site Conditions

The property comprises of varies from flat and undulating plains to low hills trending in a northwest/southeast direction. The soils are imperfectly drained on depressions, to moderately well drained on hills, and generally slowly permeable. The vegetation present on the property is predominantly improved pastures, with seasonal cropping (as per grass seeds and peas) grown on the land. There are patches of native vegetation and established shelterbelts of trees and shrubs in the area.

General Information:

- Land Use: Rural Resource
- Method of testing: Hand Excavated
- Waterways/bores: 75m (No water bores)
- History: Agriculture Property
- Climate: Annual rainfall for the area is approximately 621.7mm(Refer to BOM Site 091021)

4. Effluent Disposal

4.1 Permeability of Soil and Soil Classification

The soil has been classified as follows:

- Texture: Sandy Loam (Table 5.1 from AS1547-2012);
- Structure: Weakly structured (Table 5.1 from AS1547-2012);
- Category 2 (Table 5.1 from AS1547-2012).

The permeability (K_{sat}) was measured at >3.0m/day. For moderately structured Category 2 soils with the indicative permeability from AS1547 Table L1 being >3.0m/day. Therefore, the permeability is within the strongly structured Category 2 soils.

- Adopted permeability: **3.0m/day**

Due to the proximity of the proposed building's onsite wastewater absorption beds to the existing dam it is recommended that an AWTS system is used to reduce potential contamination of the waterway by secondary treatment to the effluent.

4.2 Setbacks

The minimum separation distance between the disposal area and downslope features is based on Appendix R from AS/NZS 1547:2012 "Recommended Setback Distances for Land Application Systems", and Section 3.1 from the Building Act 2016: Director's Guidelines for On-site Wastewater Management Systems.

From the documents, the following setbacks are required:

- 100m from downslope sensitive features such as watercourses;
- 50m from water bores or water supply;
- 7m from downslope buildings; and
- 6m from downslope property boundaries; and
- 3m from up-slope buildings; and
- 1.5m from cross slope or up-slope boundaries.

Vertical Setback

- 1.5m from ground water and
- 0.5m from Hardpan or Bedrock.

4.3 Wastewater System Design

The AS1547:2012 provides a guide for a typical wastewater flow allowances under a range of circumstances. As a general guide, the standard recommends a typical wastewater flow of **120L/person/day** for households on water tank supplied. The proposed 3 bedroom building will be serviced by an onsite waste water management system for the population equivalent of 5 which has been adopted. As such, a wastewater daily flow of **600L/day** is required.

This selected AWTS will need to have a capacity to treat 600L of effluent per day, and sub-surface (near surface) irrigation.

4.3.1 AWTS and Sub-Surface Irrigation

As the wastewater field is to be raised by 200mm using good quality topsoil, according to AS1547:2012 Table L1, the recommended design irrigation rate (DIR) for sub-surface irrigation (drip irrigation) will be 5mm/day.

$$A = \frac{Q}{DIR}$$

Where:

A = Area in m^2;

Q = Design daily flow in L/day; and

DIR = Design Irrigation Rate in mm/day.

As the DIR value has been set at 5mm/day and the design daily flow (Q) has been set at 600L/day, the total required area for the effluent disposal field is **120m^2** as per the equation above.

There is adequate area for the effluent disposal field on site. If needed in the future there is adequate remove for a reserve effluent disposal field on site.

The sub-surface irrigation is to be constructed as per the cross sections details. The design details for the irrigation area are as follows:

- 200mm of good quality topsoil is to be placed on the existing ground surface.
- The irrigation lines are generally installed on top of the good quality topsoil and covered with a minimum depth of 100mm of good quality topsoil. However, as an alternative, installing the irrigation lines on the surface of the imported topsoil and covering them with thick covers of mulch (at least 150mm thick) is considered acceptable;
- The irrigation lines are required to have a typical line spacing of 1m; and

- The irrigation area is not to be located through any poorly drained depressions. As such, minor filling/mounding of the irrigation area may be required to ensure there is no localised saturated area.

Guidelines for the design of sub-surface irrigation are outlined in AS/NZS 1547 Appendix M and Director's Guidelines for On-site Wastewater Management Systems v2.0.

The risk management process is an inherent part of the on-site wastewater disposal design.

The onsite wastewater disposal system has been designed by considering the site characteristics and with risk identification in accordance with AS1547:2012. The risk reduction measures are detailed in the report and form the basis of the system selection and design.

The area of the disposal field shall be vegetated with grasses or other suitable vegetation. A list of Tasmanian plants suitable for treated wastewater from AWTS units is attached in this report.

As part of the Building Act, the client must specify the AWTS model and provide the Certificate of Accreditation for that particular model before the proposed development gets approval. A list of accredited AWTS models can be found on the Tasmanian Government Department of Justice website.

http://www.justice.tas.gov.au/building/plumbing/accredited_waste_water_management_systems

4.3.2 System Operational Considerations

Installation of an AWTS requires consideration for ongoing maintenance and care of the system to ensure its longevity. It is essential that manufacturers guidelines are adhered to and maintenance requirements are carried out.

In relation to the AWTS, low sodium/phosphorus products are to be utilised, together with optimisation of washing regimes to limit overloading of water allowance when taking into consideration washing machine and dishwasher usage and personal bathing/hygiene.

A regular (quarterly) inspection or manufacturers recommendations should be carried out to evaluate solids and soap build up in the AWTS.

It is important to note that the absorption area is to be protected from vehicles and livestock.

4.4 Wastewater Recommendations

It is recommended that the following actions are undertaken in looking after your system:

- Minimise domestic water use;
- Minimise the use of non-biodegradable detergents;
- Minimise the use of detergents containing phosphorous (E.g. Calgon or similar);

- Avoid discharging polluting chemicals into wastewater systems; and
- Monitor quality of groundwater.
- All toilets facilities are outfitted with water saving taps, shower heads and toilet flushing systems.
- All laundry facilities are 4 star rates water saving appliances.

4.4.1 System Operational Considerations

Installation of an AWTS requires consideration for ongoing maintenance and care of the system to ensure its longevity. It is essential that manufacturers guidelines are adhered to and maintenance requirements are carried out.

In relation to the AWTS, low sodium/phosphorus products are to be utilised, together with optimisation of washing regimes to limit overloading of water allowance when taking into consideration washing machine and dishwasher usage and personal bathing/hygiene.

A regular (quarterly) inspection or manufacturers recommendations should be carried out to evaluate solids and soap build up in the AWTS.

It is important to note that the absorption area is to be protected from vehicles and livestock.

4.4.2 Risk Assessment

The following table outlines assessed risks and ranking in relation to the system recommendations:

Risk	Estimated Level	Mitigation Measures	Reassessed Risk Level
Wastewater System Hydraulic Failure	High	Decrease solids in wastewater discharged. Install outlet filter on septic tank.	Low
Marginal Soil Conditions / Removal of Vegetation	Medium	Ensure sufficient topsoil depth and plant density.	Low
Pipe Blockage	Medium	Provision of system care and maintenance guidelines to homeowner by manufacturer.	Low
Biological Failure from Chemical Poisoning	High	Education of property owners. Use of low sodium/phosphorous products.	Low
Pipe Damage	High	The infiltration area is to be protected by fencing or by other appropriate means. No vehicles or animal compaction.	Low
Appropriate installation	High	Installation by suitably qualified and endorsed plumber. Inspection required to ensure appropriate installation.	Low
Impact of Reserve Provisions	Low	There is sufficient area on site for reserve, if required. Detailed on wastewater plan.	Low

5. References:

AS/NZS 1547 – 2012 On-site domestic wastewater management.
Building Act 2016: Directors-guidelines-for-Onsite-wastewater-management-systems v2.0

Attachments:

Limitations of report

- Site Plan & Details

Appendix A – Pinion Report
Appendix B – List of Example Plants
Appendix C – Certificate Forms

D1 Consulting Engineers – Limitations of Report

These notes have been prepared to assist in the interpretation and understanding of the limitations of this report.

Project specific criteria

The report has been developed on the basis of unique project specific requirements as understood by D1 Consulting Engineers Pty Ltd and applies only to the site investigated. Project criteria are typically identified in the Client brief and the associated proposal prepared by D1 Consulting Engineers Pty Ltd and may include risk factors arising from limitations on scope imposed by the Client. The report should not be used without further consultation if significant changes to the project occur. No responsibility for problems that might occur due to changed factors will be accepted without consultation.

Subsurface variations with time

Because a report is based in conditions which existed at the time of subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. In the event of significant delays in the commencement of a project, further advice should be sought.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and at the time they are taken. All available data is interpreted by professionals to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, as it is virtually impossible to provide a definitive subsurface profile which includes all the possible variability's inherent in soil and rock masses.

Report Recommendations & integrity

The report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout the area. This assumption cannot be substantiated until earthworks and/or foundation construction is almost complete and therefore the report recommendations can only be regarded as preliminary. Where variations in conditions are encountered, further advice should be sought. This report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way.

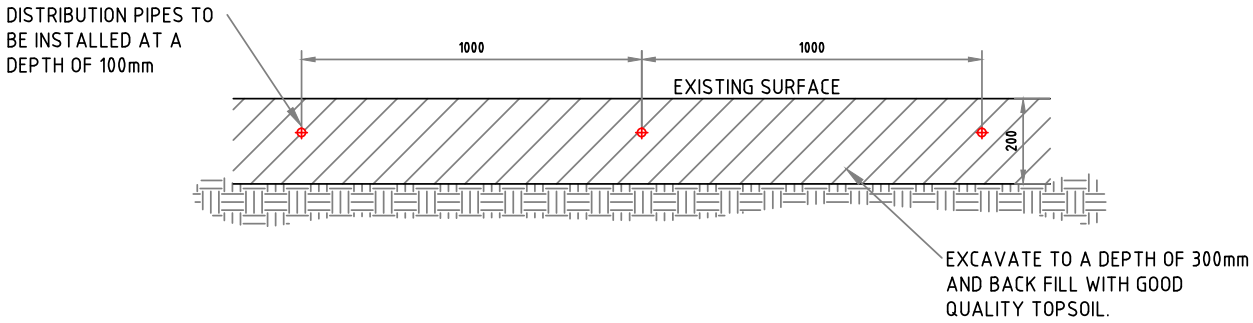
Specific purposes

This report should not be applied to any project other than the originally specified at the time the report was issued. This report does not cover issues of site contamination unless specifically required to do so by the client. In the absence of such a request, D1 Consulting Engineers Pty Ltd take no responsibility for such issues.

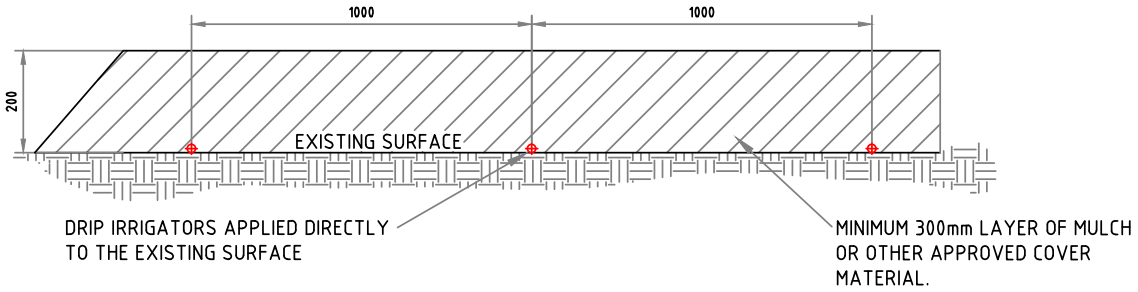
Interpretation by others

D1 Consulting Engineers Pty Ltd will not be responsible for interpretations of site data or the report findings by others involved in the design and construction process. Where any confusion exists, clarification should be sought from D1 Consulting Engineers

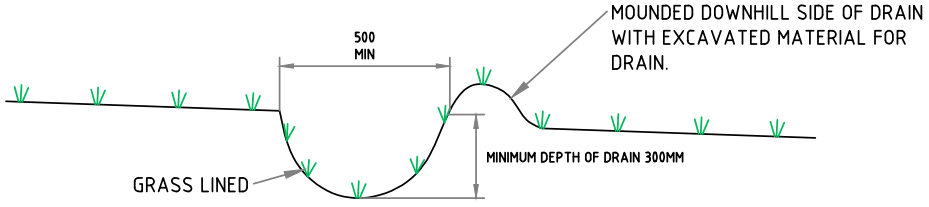
DO NOT SCALE. Locations are indicative only. Refer to Architects drawings for co-ordination between structure and architectural items. Contractor to site check all dimensions.



SHALLOW SUB-SURFACE DRIP IRRIGATION FOR CATEGORIES 5 SOIL TYPE



COVERED SURFACE DRIP IRRIGATION



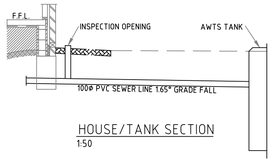
TYPICAL CUT-OFF DRAIN

D1 CONSULTING ENGINEERS		IRRIGATION CROSS SECTIONS		CLIENT: SCOTT COLVIN	
		DRAWN	M.S	PROJECT: AWTS DESIGN SYSTEM	
		APPROVED	M.S.		
		REVISION	-	157 BLACKWOOD CREEK ROAD, BLACKWOOD CREEK	
DATE	29/05/2023	224A Invermay Road, Mowbray TAS 7248 Phone 0400 347 100 or 0418 571 734 Email Chris.mcleand1ce@gmail.com Marcus.salonend1ce@gmail.com		THIS DRAWING AND ITS CONTENTS ARE CONFIDENTIAL, ARE SUBJECT TO RETURN ON DEMAND AND MAY NOT BE COPIED OR DISCLOSED TO ANY THIRD PARTY OR USED DIRECTLY OR INDIRECTLY FOR ANY OTHER PURPOSE THAN AS DETERMINED IN WRITING BY D1 CONSULTING ENGINEERS PTY LTD.	PROJECT NO. 35723 / FIGURE NO. 2
SCALE	N.T.S.				
PAGE SIZE	A4				

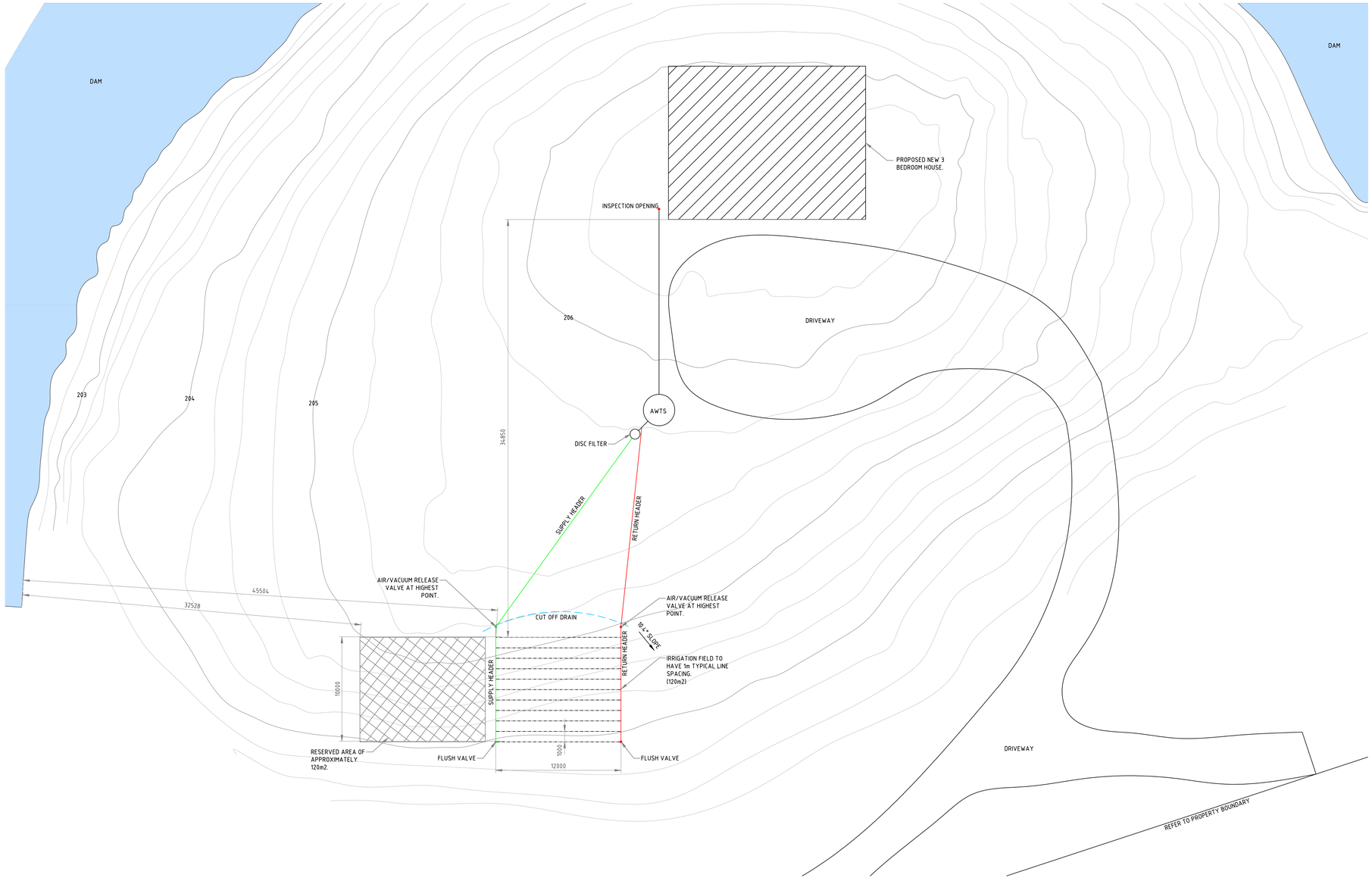
NOTES:
PLUMBING CONNECTION TO BE CARRIED OUT IN ACCORDANCE WITH PLUMBING CODES AND REGULATIONS

VENTS, OVERFLOW RELIEF GULLY AND INSPECTION OPENINGS TO BE PROVIDED AS PER THE PLUMBING CODES AND REGULATIONS

SUB-SURFACE IRRIGATION TO BE SET BACK 15m FROM DOWNHILL SENSITIVE FEATURES SUCH AS WATER COURSES, 1.0m FROM BUILDINGS, 1.5m FROM DOWNHILL BOUNDARIES AND 0.5m FROM CROSS SLOPE PROPERTY BOUNDARIES.



HOUSE/TANK SECTION
1:50



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NOTE:
FOR PROPOSED BUILDING LOCATION REFER TO ARCHITECTURAL DOCUMENTATION.

SITE DRAINAGE PLAN
1:200

REV No.	DESCRIPTION	ISSUED BY	DATE	REV No.	DESCRIPTION	ISSUED BY	DATE
0	FOR CONSTRUCTION	MS	29.05.23				

NORTH

D1 CONSULTING ENGINEERS Pty Ltd
D1 Consulting Engineers
10 Jackson Street, Mowbray, TAS 7248
Phone 0400 347 100 or 0418 571 734
Email Chris.mcleand1ce@gmail.com
Marcus.Salonend1ce@gmail.com

SCALE	1:200 (A1)
DATE	MAY 2023
DRAWN	MS
JOB No.	35723
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CHECKED	

SCOTT COLVIN
157 BLACKWOOD CREEK ROAD
BLACKWOOD CREEK
SITE DRAINAGE PLAN

REV	DWG. No
0	H01

Appendix A

Pinion Report

SCOTT COLVIN

Agricultural assessment and compliance report

“Nosswick” 157 Blackwood Creek Road, Blackwood Creek TAS 7301

MAY 2022

pinion ADVISORY

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Phone: 1300 746 466

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Report author: Faruq Isu MAppSc (AgrSc)

An appropriate citation for this report is: Pinion Advisory, 2022, Agricultural assessment and planning scheme compliance report – 157 Blackwood Creek Rd, Scott Colvin, Launceston, TAS

Document status:

Date	Status /Issue number	Reviewed by	Authorised by	Transmission method
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07/05/22	Final	FI	FI	Email

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