

# BUSHFIRE ASSESSMENT REPORT

Application for bush fire safety authority  
For a boundary re-alignment subdivision of bushfire-prone land  
at 1607 Salisbury Road, Underbank



Property access road, photo taken 22-09-2021

Report prepared December 2021



| Document status |   |          |                          |
|-----------------|---|----------|--------------------------|
| Project title   | Bushfire Assessment Report for BFSa: Boundary re-alignment subdivision at 1607 Salisbury Road, Underbank. |          |                          |
| Client          | Hill Top Planners on behalf of John, Sandra & Prudence Paris.   |          |                          |
| Prepared by     | Sam Ferguson  |          |                          |
| Revision        | Date  | Prepared | Reviewed                 |
| V1              | 17/12/2021  | SF       | Hilltop Planners PTY LTD |
| V2              |   | SF       | Clients                  |

*This report has been prepared in accordance with clause 44 of the Rural Fires Regulation 2013 (RF Regulation) and satisfies the application requirements for a bush fire safety authority under Section 100B of the Rural Fires Act 1997 (RF Act). These requirements are listed in Appendix I*

Signed



Sam Ferguson

B.Env.Sc., G.Cert. Bushfire Protection

Hunter Bushfire Services

17<sup>th</sup> December 2021

Accreditation number BPAD52192



Disclaimer:

*This document may only be used for the intended purpose for which it was commissioned by the client in accordance with the contract between Hunter Bushfire Services and their client. This report has been prepared in response to an agreed scope and based on available data including that supplied by the client. It has been assumed that all supplied information is both accurate and current. This report, results and outcome are accurate at date of production and subject to change over time along with the legislative and policy framework under which it was prepared. Hunter Bushfire Services will not be liable or responsible whatsoever for or in respect of any use of or reliance upon this report and its supporting material by any third party. Unauthorised use of this report in any form whatsoever is prohibited. Implementing the recommendations forwarded within this report as specified would ameliorate potential impact of any bushfire upon the site, but they do not imply that the area will not be affected by bushfire at some time.*

## Executive summary

Hunter Bushfire Services has been engaged by Hilltop Planners PTY LTD on behalf of John, Sandra & Prudence Paris to prepare a Bushfire Assessment Report (BAR) to accompany a Development Application (DA) for a proposed boundary re-alignment subdivision of land located at 1607 Salisbury Road, Underbank. The proposal is to subdivide 2/DP548362 & 1/ DP30442 to create proposed lots 62 & 63 of a new DP. Both lots are owned by the clients. A building entitlement will be identified near the existing homestead.

This assessment considers and assesses the bushfire hazards and potential threats relevant to the proposal, and outlines the minimum mitigative measures required by *Planning for Bushfire Protection 2019* (hereafter PBP) and addresses all submission requirements for an application for a bush fire safety authority (BFSA) under Section 100B(4) of the *Rural Fires Act 1997* (RF Act) as detailed in Cl.44 of the Rural Fires regulations, and listed in Appendix 2 of PBP 2019..

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

This assessment has been made based on the bushfire hazards in and around the Site at the time of Site inspection (22<sup>nd</sup> September 2021) and report production. This assessment demonstrates that the proposed boundary re-alignment subdivision does not constitute an increased risk to persons or property in the case of a Bushfire.

In summary, the following Site-specific Bushfire Protection Measures have been generated to enable the proposal to comply with PBP (2019);

- Access – as dead end roads are unavoidable, they must incorporate a minimum 12 metres outer radius turning circle, and be clearly sign posted as a dead end.
- The Sites are connected electricity, gas supply (if available) and water in accordance with the provisions of table 5.3c PBP (2019) as summarised in the Water Supply & Services section of this report.
- Each lot with an existing dwelling must provide a SWS of 20,000 Litres or more, for firefighting purposes.
- Careful consideration of future Site landscaping and ongoing fuel management must occur to minimise the potential impact of bushfire on the site.
- With regard to existing dwellings on each lot and notwithstanding the nature of the proposal (boundary adjustment), it is essential for each land owner to review their individual bushfire safety plan to implement in the case of an emergency. At a minimum ensure that all vegetation in the immediate vicinity of the principal dwelling is managed in accordance with the 10/50 Code at a minimum to afford a minimum standard of protection. In addition, consideration should be given to improved ember protection via screening of openings, gutters, weep holes and vents including sub floor areas. The location and accessibility of water for firefighting purposes should also be carefully considered with due regard to guidance provided in PBP 2019.

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## Introduction

Hunter Bushfire Services has been engaged by Hill Top Planners PTY LTD on behalf of John, Sandra & Prudence Paris to prepare a BAR to accompany a DA for a subdivision of lot 2 DP548362 & 1 of DP 30442 at 1607 Salisbury Road, Underbank - hereafter referred to as 'the Site' (see **Figure 1**).

The proposal is to subdivide lot 2/DP548362 & 1/DP30442 to create lots 63 & 64 of a new DP. Both lots are owned by the client.

This report determines which Bush Fire Protection Measures (BPM) are appropriate and outlines the minimum mitigative measures required via assessment of acceptable solutions as outlined in Chapter 5 of PBP (2019). This assessment has been made based on the bushfire hazards in and around the site at the time of site inspection (22<sup>nd</sup> September 2021) and report production.

All development on BFPL must satisfy the aims and objectives of Planning for Bush Fire Protection (PBP).

This BAR addresses the aims and objectives of PBP (2019) as they relate to a subdivision, being:

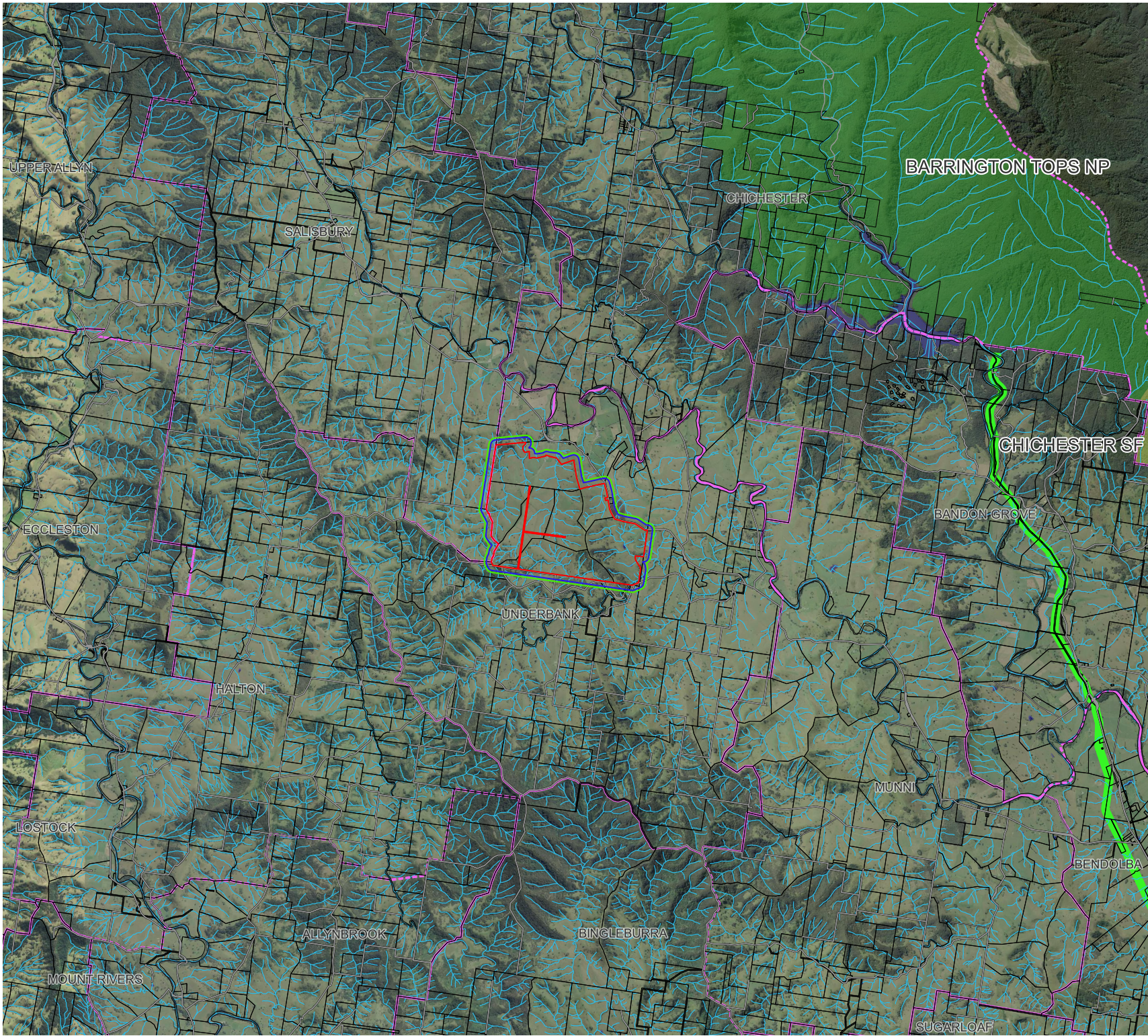
- Afford buildings and their occupants protection from exposure to a bushfire;
- Provide for a defendable space to be located around buildings;
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- Ensure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

This BAR also addresses the specific objectives for residential and rural residential subdivisions with a dwelling entitlement, as listed in section 5.2 of PBP (2019), and a checklist is included in Appendix II

As the proposal is will entail the creation of a building entitlement, a nominated building envelope will be identified.

## Site location details

|  |  |
|--|--|
| <b>Street Address</b>                            | 1607 Salisbury Road, Underbank.  |
| <b>Title Details</b>                             | Lots 2 DP548362 & 1 of DP 30442 will be impacted; however the property consists of 7 lots, being lots 1,2,3,4,5 & 6 of DP30442 & 2/DP548362  |
| <b>Area</b>                                      | The proposed lot 62 will be 66.83 Ha while proposed lot 63 will total 154.37 Ha, consisting of two parts – 42.87Ha & 111.5 Ha each.  |
| <b>LGA</b>                                       | Dungog Council   |
| <b>Boundaries</b>                                | Salisbury Road adjoins the North-Eastern boundary & provides access to the Site via a Right-of-way over a neighbouring property. Rural properties adjoin the Site on each boundary. An unformed Crown Road is located within the Site and extends to the South-Western boundary.   |
| <b>Surrounding Land Use</b>                      | The surrounding land use is agricultural, with cattle grazing on grassland and irrigation of crops along the banks of the Williams River.  |
| <b>Land Zoning</b>                               | The Site and surrounding lands are zoned RU1 for Primary Production  |
| <b>Current Land Use</b>                          | The property hosts a single existing dwelling and ancillary buildings. The land on the site is stocked with cattle and grazed year-round. A neighbouring dwelling is located near the Northern property boundary & shares access to Salisbury Road.  |
| <b>Topography</b>                                | Underbank is defined by the foothills of the Barrington Tops & watered by the Williams River. Land to the South of the property is more heavily forested and steep. The Site is largely cleared of trees, with riparian corridors remaining. Plantings within the Site are adjoining access tracks and as windbreaks.  |
| <b>Climate &amp; Fire history</b>                | NPWS Fire History - Wildfires and Prescribed Burns records several fires within proximity of the Site; the nearest being the Chichester Rd, Underbank wildfire in 2017-18, some 2.5kms North. Several recorded wildfires are recorded nearby, within the Barrington Tops National Park & Chichester State Forest.<br>NSW RFS Bushfire Prone Land (BFPL) data (BFPL 20211019) shows that Category 1 & 2 hazard vegetation & Buffer impacts the Site. This designation has triggered the need for the following assessment. The Site and surrounds are located within Dungog LGA, which has a Fire Danger Index (FDI) of 100 as per NSW RFS publication "NSW Local Government Areas FDI" (May 2017). |
| <b>Environmental &amp; Cultural Significance</b> | A basic AHIMS Web search on 07/12/2021 returned no records of Aboriginal sites in or near either lot. As the proposal does not require a change of current land management practices, the proposal is not considered to constitute an impact on native species or matters of environmental or cultural significance. A search for Matters of National Environmental Significance is included as Appendix IV  |

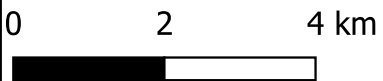


1607 Salisbury Road,  
Underbank

## Figure 1 - Locality Map



- Site
- Site assessment area
  - 100m
  - 140m
- NSW Cadastre
- Waterbody
- Waterway
- Road
- pipeline
- Suburb











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1607 Salisbury Road,  
Underbank

## Figure 2 - Site Map



### Site assessment area

-  100m
-  140m
-  Site
-  Property access
-  NSW Cadastre
-  Road
-  Waterway
-  Waterbody

### NSW Six Map Imagery



0 250 500 m



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## Figure 3 - Bush Fire Prone land Map



### Site assessment area

- 100m
- 140m
- Site
- Property access
- NSW Cadastre
- Road
- Waterway
- Waterbody

### BFPL (20211019) NSW RFS

- Buffer
- Category 1
- Category 2

NSW Six Map Imagery



0 250 500 m



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## Bushfire Hazard Assessment

### Vegetation Hazard Classes

All substantial areas of vegetation within 140m of the Site boundaries have been assessed and classified for bushfire assessment purposes according to Keith Class as per Keith (2004), Appendix 1 & Figure A1.2 of PBP (2019). A site visit was undertaken, and where access was not possible vegetation types have been classified using Aerial Photo Interpretation (API) of NSW SIX imagery (2021). The primary hazard vegetation class for the existing dwellings, nominated building envelope and shared property access is Grassland.

Keith Formation of the *Hunter Greater v4 E 3855* dataset identified Forested Wetlands and Riverine Forests within the North-West area of the property, and Rainforests & Wet sclerophyll forests along the Southern portion of the property, within the areas of steeper topography.

The most significant bushfire hazard vegetation within the Site assessment area is the dense vegetation along the steeper slopes within the Southern portion of the Site. As the majority of the Site is used to graze cattle, the primary hazard vegetation is grassland. Treed areas are on steeper hillsides away from the dwellings & property access roads. Planted trees spaced apart have been established along internal property access tracks & fence-lines as windbreaks (excluded as low threat vegetation under A1.10 of PBP). Some denser riverine & roadside vegetation is located near the property access point from Salisbury Road, on adjoining land.

Table 1 – Vegetation Hazard Class Determination

|             | Direction | Description   | Classification |
|-------------|-----------|---|----------------|
|             |           |   |                |
| Entire Site | North     | Low-lying & flatter areas cleared of trees host grazed fields. Riparian vegetation along waterways and Salisbury Road.  | Grassland      |
|             | South     | Steeper terrain with vegetated slopes. Vegetated waterways, Grassland predominant.  | Grassland      |
|             | East      | More level terrain, open areas for grazing adjoining Salisbury Road..   | Grassland      |
|             | West      | Managed land surrounding homestead, with cleared and grazed paddock to the Western boundary.  | Grassland      |
| Lot 1       | Direction | Description   | Classification |
|             | North     | Bound by Salisbury Road, the land is predominately grassland. Trees scattered along riparian corridors.   | Grassland      |
|             | South     | More mountainous country, with larger vegetated areas.  | Forest         |
|             | East      | Predominately grassland with denser vegetation scattered along waterways.   | Grassland      |
| Lot 2       | West      | Lot boundary runs along ridgetop, with vegetation along riparian zones.   | Grassland      |
|             | Direction | Description   | Classification |
|             | North     | North-Western corner of the lot contains significant riparian vegetation along Bullee Coggee Creek, extending to the property access point near Salisbury Road. | Forest         |
|             | South     | Grazing land for cattle – adjoining existing dwelling on lot 6/DP30442  | Grassland      |
|             | East      | Scattered trees along waterways & gullies, predominately grassland.   | Grassland      |
|             | West      | Significant riparian vegetation along Bullee Coggee Creek, and low-lying areas.   | Forest         |

Table 2 – Site photos



Photo 1: – Property access from Salisbury Road.



Photo 2: – Access track between existing dwellings



Photo 3: – Facing South from access track, grazed grassland adjoining road. Ample room for passing by emergency service & residents.



Photo 4: – Facing East from entrance to Site. Grazed grassland within valley to East of existing dwelling.



Photo 5: – Facing North from site of proposed dwelling site, near existing dwelling.



Photo 6: – Facing North-East from site of nominated building envelope. Grassland is the primary hazard vegetation in each direction.

## Slope Assessment

An assessment of the effective slope under the identified hazard vegetation was conducted for a distance of 100m around the Site. Both the average and maximum slopes were assessed to determine the gradient which would most significantly influence fire behaviour on the Site. Slopes have been categorised within the slope classification under PBP (2019) Appendix A1.4. Slopes were assessed during site visit and confirmed by Digital Elevation Model (DEM) data during map production for inaccessible areas. This 2 metre resolution DEM data is accurate to 0.3m vertically and 0.8m horizontally (to a 95% Confidence Interval) and was sourced from [NSW Spatial Services](#) then converted to contour lines for map production.

Table 3 – Effective Slope Class Determination

| Transect                    | Direction | Keith Class | Slope Class         |
|-----------------------------|-----------|-------------|---------------------|
| Nominated building envelope |           |             |                     |
| T1                          | North     | Grassland   | >0° to >5°          |
| T2                          | East      | Grassland   | >5° to >10°         |
| T3                          | South     | Grassland   | Upslope / Flat land |
| T4                          | West      | Grassland   | >5° to >10°         |

Due to the many drainage lines and variable topography of the Site, any future proposed dwelling must establish site-specific BPMs and APZs/BALs to ensure compliance with PBP (2019).

This BAR has determined that the Site is able to host a dwelling at or below BAL-29.

1607 Salisbury Road,  
Underbank

## Figure 4 - Site Assessment Map



- |                             |                     |
|-----------------------------|---------------------|
| Site                        | 10m contours        |
| NSW Cadastre                | Waterway            |
| Road                        | Waterbody           |
| <b>Site assessment area</b> |                     |
| 100m                        | Grassland           |
| 140m                        | Forest              |
| <b>Road surface</b>         |                     |
| Standard Road               | NSW Six Map Imagery |
| Vehicular Track             |                     |



0 100 200 m



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1607 Salisbury Road,  
Underbank

## Figure 5 - Proposed Subdivision Map



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- |                             |                            |
|-----------------------------|----------------------------|
| Proposed lots               | Road surface               |
| Site                        | Standard Road              |
| NSW Cadastre                | Vehicular Track            |
| Road                        | 10m contours               |
| <b>Site assessment area</b> | Waterway                   |
| 100m                        | Waterbody                  |
| 140m                        | <b>NSW Six Map Imagery</b> |



0 100200 m



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## Bushfire Hazard Determination

PBP (2019) sets out a suite of BPMs and criteria that require consideration and assessment for applicable proposals on bushfire-prone land in order to provide an adequate level of protection to new developments.

The measures required to be assessed are listed below and have been derived from the Bushfire Hazard Assessment in this report:

- APZ
- Access
- Services – Water supply, Gas and Electricity
- Landscaping and Fuel Management
- Emergency Management
- Existing Dwellings

### APZ

The primary hazard vegetation class for the existing dwellings, nominated building envelope and shared property access is Grassland. As such the BAL will be dependent on the extent of the APZ. The minimum required APZ in this case (A1.12.2) would be 10-17m depending on slope, however with a 50m APZ the dwellings & identified building envelope is able to achieve BAL-LOW.

The minimum required APZ for the identified building envelope as per table A1.12.2 of PBP2019 is;

Table 4 – Compliance with PBP for APZs (table 5.3a)

| Direction | Keith Class | Slope Class         | Minimum required APZ |
|-----------|-------------|---------------------|----------------------|
| North     | Grassland   | >0° to >5°          | 12m                  |
| East      | Grassland   | >5° to >10°         | 13m                  |
| South     | Grassland   | Upslope / Flat land | 10m                  |
| West      | Grassland   | >5° to >10°         | 13m                  |

NB: a 50m APZ is achievable for a future dwelling on the nominated building envelope to achieve BAL-LOW.

## Access

Adequate ingress/ egress and the provision of defensible space are requirements of Table 5.3b, and Appendix 3 of PBP (2019).

Property access to the Site is via Salisbury Road to the North. The existing property access road from Salisbury Road complies with all-weather access requirements and is considered appropriate and compliant for the purposes of the proposed development. Where through-roads are not viable, a turning circle as per Appendix 3 of PBP must be provided.

Table 5 – Compliance with PBP for Access (table 5.3b)

| No                                   | Performance Criteria  | Complies       | Acceptable Solutions  | Complies       | Response  |
|--------------------------------------|---|----------------|---|----------------|---|
| <b>Access (General Requirements)</b> |   |                |   |                |   |
| 1                                    | Firefighting vehicles are provided with safe, all-weather access to structures. | Yes            | Property access roads are two-wheel, all weather roads.   | Yes            | The property access road is well graded gravel of a standard that ensures two-wheel drive, all weather access.                          |
| 2                                    |   | Not Applicable | Perimeter roads are provided for residential subdivisions of 3 or more allotments.  | Not Applicable | Perimeter roads are not required because the proposal is a boundary re-alignment subdivision, and is not creating 3 or more allotments. |
| 3                                    |   | Not Applicable | Subdivisions of three or more allotments have more than one access in and out of the development.   | Not Applicable | One access is provided in and out of the development because it is for less than 3 allotments.  |
| 4                                    |   | Not Applicable | Traffic management devices are constructed to not prohibit access by emergency services vehicles.   | Not Applicable | Traffic management devices are not proposed for this development.   |
|                                      |   | Yes            | Maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, | Yes            | At the time of Site inspection, maximum grades of the unsealed access road do not exceed 10 degrees.                                    |

| No | Performance Criteria | Complies       | Acceptable Solutions  | Complies       | Response   |
|----|----------------------|----------------|---|----------------|--|
|    |                      |                | whichever is the lesser gradient.   |                |  |
| 5  |                      | Able to Comply | All roads are through roads.  | Able to Comply | Any roads that are not through roads must incorporate a minimum 12 metres outer radius turning circle, as per Appendix 3 of PBP 2019.  |
| 6  |                      | Able to Comply | Dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end. | Able to Comply | see above response.  |
| 7  |                      | Not Applicable | Where kerb and guttering are provided on perimeter roads, roll top kerbing should be used to the hazard side of the road.   | Not Applicable | No perimeter roads or road kerbs are proposed.   |
| 8  |                      | Not Applicable | Where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system.                    | Not Applicable | Access/egress for the Site is not through forest, woodland or heath vegetation.<br><br>Established property access is via an unsealed Right-of Way- this access to the dwelling sites is over low threat vegetation. (See Site photos) |
| 9  |                      | Not Applicable | One way only public access roads are no less than 3.5 metres wide and have  | Not Applicable | No one way public access roads are proposed.   |

| No              | Performance Criteria  | Complies       | Acceptable Solutions  | Complies       | Response   |
|-----------------|---|----------------|---|----------------|--|
|                 |   |                | designated parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression.   |                |  |
| 10              | The capacity of access roads is adequate for firefighting vehicles. | Not Applicable | The capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes), bridges and causeways are to clearly indicate load rating. | Not Applicable | The capacity of road surfaces and any bridges/causeways are to be designed to carry fully loaded firefighting vehicles (up to 23 tonnes). No bridges or causeways exist nor are required for access to the Site. |
| 11              | There is appropriate access to water supply.                        | Not Applicable | Hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression.   | Not Applicable | Water hydrants are not located in the road reserve and in turn a static water supply is required. See below.   |
| 12              |   | Not Applicable | Hydrants are provided in accordance with the relevant clauses of AS2419.1:2005.   | Not Applicable | Water hydrants are not located in the road reserve and in turn a static water supply is required. See below.   |
| 13              |   | Able to Comply | There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.  | Able to Comply | Suitable access for a Category 1 fire appliance within 4m of the static water supply where no reticulated supply is available is able to be provided.  |
| Perimeter Roads |   |                |   |                |  |
| 14              | Access roads are designed to allow safe access and egress for       | Not Applicable | Are two-way sealed roads.   | Not Applicable | No perimeter roads are proposed.   |
| 15              |   | Not Applicable | Minimum 8 m carriageway width kerb to kerb.   | Not Applicable | No perimeter roads are proposed.   |

| No                  | Performance Criteria  | Complies       | Acceptable Solutions  | Complies       | Response                             |
|---------------------|---|----------------|---|----------------|--------------------------------------|
| 16                  | firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface. | Not Applicable | Parking is provided outside of the carriageway width.   | Not Applicable | No perimeter roads are proposed.     |
| 17                  |   | Not Applicable | Hydrants are located clear of parking areas.  | Not Applicable | No perimeter roads are proposed.     |
| 18                  |   | Not Applicable | Are through roads, and these are linked to the internal road system at an interval of no greater than 500m. | Not Applicable | No perimeter roads are proposed.     |
| 19                  |   | Not Applicable | Curves of roads have a minimum inner radius of 6m.  | Not Applicable | No perimeter roads are proposed.     |
| 20                  |   | Not Applicable | The maximum grade road is 15 degrees and average grade of not more than 10 degrees.                         | Not Applicable | No perimeter roads are proposed.     |
| 21                  |   | Not Applicable | The road crossfall does not exceed 3 degrees.   | Not Applicable | No perimeter roads are proposed.     |
| 22                  |   | Not Applicable | A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.   | Not Applicable | No perimeter roads are proposed.     |
| Non-Perimeter Roads |   |                |   |                |                                      |
| 23                  | Access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating.   | Not Applicable | Minimum 5.5m carriageway width kerb to kerb.  | Not Applicable | No non-perimeter roads are proposed. |
| 24                  |   | Not Applicable | Parking is provided outside of the carriageway width.   | Not Applicable | No non-perimeter roads are proposed. |
| 25                  |   | Not Applicable | Hydrants are located clear of parking areas.  | Not Applicable | No non-perimeter roads are proposed. |
| 26                  |   | Not Applicable | Roads are through roads, and these are linked to the internal road system at an                             | Not Applicable | No non-perimeter roads are proposed. |

| No                     | Performance Criteria  | Complies       | Acceptable Solutions   | Complies       | Response  |
|------------------------|---|----------------|--|----------------|---|
|                        |   |                | interval of no greater than 500m.  |                |   |
| 27                     |   | Not Applicable | Curves of roads have a minimum inner radius of 6m.   | Not Applicable | No non-perimeter roads are proposed.  |
| 28                     |   | Not Applicable | The road crossfall does not exceed 3 degrees.  | Not Applicable | No non-perimeter roads are proposed.  |
| 29                     |   | Not Applicable | A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.  | Not Applicable | No non-perimeter roads are proposed.  |
| <b>Property Access</b> |   |                |  |                |   |
| 30                     | Firefighting vehicles can access the dwelling and exit the property safely. | Able to Comply | <p>There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70 kph) that supports the operational use of emergency firefighting vehicles.</p> <p>In circumstances where this cannot occur, the following requirements apply:</p> | Able to Comply | An assessment of the existing access has identified that specific access requirements are required because the site is not in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the speed limit is not greater than 70kph) that supports the operational use of emergency firefighting equipment. The specific access requirements are outlined below. |
| 31                     |   | Yes            | Minimum 4m carriageway width   | Yes            | A minimum 4m carriageway width is provided.   |

| No | Performance Criteria | Complies       | Acceptable Solutions   | Complies       | Response   |
|----|----------------------|----------------|--|----------------|--|
| 32 |                      | Not Applicable | In forest, woodland and heath situations, rural property roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m, at the passing bay | Not Applicable | The property access road is not located near Forest, woodland or heath-class hazard vegetation and so passing bays are not required.                   |
| 33 |                      | Yes            | A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches.   | Yes            | A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches is achieved.   |
| 34 |                      | Able to Comply | Property access must provide a suitable turning head in accordance with Appendix 3.  | Able to Comply | Ample space is available.to provide turning heads in accordance with PBP. The plans are to show a suitable turning head in accordance with Appendix 3. |
| 35 |                      | Yes            | Curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress.   | Yes            | Curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress.   |
| 36 |                      | Yes            | The minimum distance between inner and outer curves is 6m.   | Yes            | The minimum distance between inner and outer curves is 6m.   |
| 37 |                      | Yes            | The crossfall is not more than 10 degrees.   | Yes            | At the time of Site inspection, the crossfall is not more than 10 degrees.   |
| 38 |                      | Yes            | Maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads.  | Yes            | At the time of Site inspection, the maximum grades do not exceed 10 degrees for unsealed roads.  |

| No | Performance Criteria | Complies       | Acceptable Solutions   | Complies       | Response  |
|----|----------------------|----------------|--|----------------|---|
| 39 |                      | Not Applicable | A development compromising more than three dwellings has formalised access by dedication of a road and not a right of way.   | Not Applicable | The development does not comprise of more than three dwellings. |
| 40 |                      | NB             | Note: Some short constrictions in the access may be accepted where they are not less than 3.5m wide, extent for no more than 30m and where the obstruction cannot be reasonably avoided or removed. The gradients applicable to public roads also apply to community style development property access roads in addition to the above. |                |   |

## Water Supply & Services

The Site must comply with the acceptable solutions for services listed in Table 5.3c of PBP (2019).

The proposal is able to satisfy these requirements given:

- Each lot with a dwelling must provide a static water supply as per Table 5.3d of PBP (2019), for this proposal a 20kl tank is required for each existing dwelling.
- The Site is connected to the existing power supply available from Dungog.
- Gas supply (if available) shall be provided in accordance with the provisions of PBP (2019).

A 20KL SWS must be provided for each existing dwelling, in an accessible location. A 65mm Storz outlet with a ball valve be fitted & a hardened ground surface for truck access within 4m of the SWS outlet is to be established.

Table 6— Compliance with PBP for Services (table 5.3c)

Table 6 – Compliance with FDI for Services (Table 5.3c)

|  | PERFORMANCE CRITERIA  | ACCEPTABLE SOLUTION   |                  |                    |  |            |  |             |   |             |   |                 |
|--|---|---|------------------|--------------------|--|------------|--|-------------|---|-------------|---|-----------------|
| Water supplies   | an adequate water supply is provided for firefighting purposes  | <ul style="list-style-type: none"><li>▪ reticulated water is to be provided to the development where available;</li><li>▪ a static water and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed; and</li><li>▪ static water supplies shall comply with Table 5.3d:</li></ul> <p><b>Table 5.3d</b></p> <p>Water supply requirements for non-reticulated developments or where reticulated water supply cannot be guaranteed.</p> <table><tr><th>DEVELOPMENT TYPE</th><th>WATER REQUIREMENTS</th></tr><tr><td>Residential lots (&lt;1,000m<sup>2</sup>)</td><td>5,000L/lot</td></tr><tr><td>Rural-residential lots (1,000-10,000m<sup>2</sup>)</td><td>10,000L/lot</td></tr><tr><td>Large rural/lifestyle lots (&gt;10,000m<sup>2</sup>)</td><td>20,000L/lot</td></tr><tr><td>Multi-dwelling housing (including dual occupancies)</td><td>5,000L/dwelling</td></tr></table> | DEVELOPMENT TYPE | WATER REQUIREMENTS | Residential lots (<1,000m <sup>2</sup> ) | 5,000L/lot | Rural-residential lots (1,000-10,000m <sup>2</sup> ) | 10,000L/lot | Large rural/lifestyle lots (>10,000m <sup>2</sup> ) | 20,000L/lot | Multi-dwelling housing (including dual occupancies) | 5,000L/dwelling |
|  | DEVELOPMENT TYPE  | WATER REQUIREMENTS  |                  |                    |  |            |  |             |   |             |   |                 |
|  | Residential lots (<1,000m <sup>2</sup> )  | 5,000L/lot  |                  |                    |  |            |  |             |   |             |   |                 |
|  | Rural-residential lots (1,000-10,000m <sup>2</sup> )  | 10,000L/lot   |                  |                    |  |            |  |             |   |             |   |                 |
|  | Large rural/lifestyle lots (>10,000m <sup>2</sup> )   | 20,000L/lot   |                  |                    |  |            |  |             |   |             |   |                 |
| Multi-dwelling housing (including dual occupancies)  | 5,000L/dwelling   |   |                  |                    |  |            |  |             |   |             |   |                 |
| water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations | <ul style="list-style-type: none"><li>▪ fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2005;</li><li>▪ hydrants are not located within any road carriageway; and</li><li>▪ reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.</li></ul> |   |                  |                    |  |            |  |             |   |             |   |                 |
| flows and pressure are appropriate   | <ul style="list-style-type: none"><li>▪ fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005</li></ul>   |   |                  |                    |  |            |  |             |   |             |   |                 |
| the integrity of the water supply is maintained  | <ul style="list-style-type: none"><li>▪ all above-ground water service pipes are metal, including and up to any taps; and</li><li>▪ above-ground water storage tanks shall be of concrete or metal.</li></ul>   |   |                  |                    |  |            |  |             |   |             |   |                 |
| Electricity  | location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings   | <ul style="list-style-type: none"><li>▪ where practicable, electrical transmission lines are underground;</li><li>▪ where overhead, electrical transmission lines are proposed as follows;</li><li>▪ lines are installed with short pole spacing of 30m, unless crossing gullies, gorges or riparian areas; and</li><li>▪ no part of a tree is closer to a power line than the distance set out in <i>ISSC3 Guideline for Managing Vegetation Near Power Lines</i></li></ul>  |                  |                    |  |            |  |             |   |             |   |                 |

## Gas Services

location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings

- reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - The storage and handling of LP Gas, the requirements of relevant authorities, and metal piping is used;
- all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;
- connections to and from gas cylinders are metal;
- polymer-sheathed flexible gas supply lines are not used; and
- above-ground gas service pipes are metal, including and up to any outlets

### Landscaping and Fuel Management

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

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

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

Ongoing fuel management across the site as part of the maintenance regime must give due consideration to Appendix 4 Asset Protection Zone Requirements of PBP (2019) which provides guidance on maintenance activities to assist in achieving the landscape principles.

### Emergency Management

Any fire within the site would be attended in the first instance by RFS Flat Tops brigade, located approximately 9.1km West of the Site by road. The next closest RFS brigade is located in Dungog-located 13.1kms from the Site via Alison Road.

To assist emergency responders from the NSW RFS, Site access is to comply with the provisions set out in PBP (2019) and any tanks' connection points be readily accessible and clearly marked. If pumps are to be available, they must be regularly maintained and in good working order.

### Existing Dwellings (5.1.3)

Despite the nature of the proposal, it is essential for each land owner to review their individual bushfire safety plan to implement in the case of an emergency, and ensure that all vegetation in the immediate vicinity of dwellings is managed in accordance with the 10/50 Code to afford a minimum standard of protection. The existing dwellings should ensure surrounding vegetation is managed as per Appendix 4 of PBP (2019). In addition, consideration should be given improving ember protection via screening of openings, gutters, weep holes and vents including sub floor areas. Advice regarding the maintenance, upgrading and protection of existing buildings can be found on the NSW RFS website [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au).

## Conclusion & Recommendations

Hunter Bushfire Services has been engaged by Hill Top Planners PTY LTD on behalf of John, Sandra & Prudence Paris to prepare a BAR to accompany a DA for a subdivision of lot 2 DP548362 & 1 of DP 30442 at 1607 Salisbury Road, Underbank.

This assessment considered and assessed the bushfire hazard and potential threats relevant to the proposal, and outlined the minimum mitigative measures which would be required in accordance *Planning for Bushfire Protection (2019)* (PBP).

In order to determine how the proposed development is bushfire-prone, and which setbacks and other Bush Fire Protection Measures (BPM) are appropriate, this assessment adhered to the methodology and procedures outlined in PBP (2019) via assessment of acceptable solutions as outlined in Chapter 5 of PBP (2019). This assessment has been made based on the bushfire hazards in and around the Site at the time of site inspection (22<sup>nd</sup> September 2021) and report production.

This assessment demonstrated that the proposed subdivision does not constitute an increased risk to persons or property in the case of a Bushfire.

In summary, the following Site-specific Bushfire Protection Measures have been generated to enable the proposal to comply with PBP (2019);

- Access – as dead end roads are unavoidable, they must incorporate a minimum 12 metres outer radius turning circle, and be clearly sign posted as a dead end.
- The Sites are connected electricity, gas supply (if available) and water in accordance with the provisions of table 5.3c PBP (2019) as summarised in the Water Supply & Services section of this report.
- Each lot with an existing dwelling must provide a SWS of 20,000 Litres or more, for firefighting purposes.
- Careful consideration of future Site landscaping and ongoing fuel management must occur to minimise the potential impact of bushfire on the site.
- With regard to existing dwellings on each lot and notwithstanding the nature of the proposal (boundary adjustment), it is essential for each land owner to review their individual bushfire safety plan to implement in the case of an emergency. At a minimum ensure that all vegetation in the immediate vicinity of the principal dwelling is managed in accordance with the 10/50 Code at a minimum to afford a minimum standard of protection. In addition, consideration should be given to improved ember protection via screening of openings, gutters, weep holes and vents including sub floor areas. The location and accessibility of water for firefighting purposes should also be carefully considered with due regard to guidance provided in PBP 2019.



1607 Salisbury Road,  
Underbank

## Figure 6 - Bush Fire Protection Measures Map



Hunter Bushfire Services  
mapping & assessment reports

|                   |                            |
|-------------------|----------------------------|
| Proposed lots     | Site assessment area       |
| Site              | 100m                       |
| SWS               | 140m                       |
| 50m APZ           | Property access            |
| <b>Buildings</b>  | <b>Road surface</b>        |
| Existing dwelling | Standard Road              |
| Sheds             | Vehicular Track            |
| Building envelope | Waterway                   |
| NSW Cadastre      | Waterbody                  |
| Road              | <b>NSW Six Map Imagery</b> |



0 100 200 m

Disclaimer: While every effort is made to ensure this map is free of errors, there is no warranty that the map or its features are either spatially or temporally accurate or fit for a particular use. This map is provided without any warranty of any kind whatsoever, either express or implied. Reference should always be made to the Architectural Plans for site features, such as the building footprint.

Job ID: SIPPE s100b Date: 17/12/2021

## References

- AS-3959 Construction of Buildings in Bushfire-Prone Areas. Standards Australia (2018)
- [NSW Bushfire Prone Land data](#) NSW Rural Fire Service 2021
- Environmental Planning & Assessment Act 1979. NSW Government.
- NSW SIX imagery (2015) Department of Finance, Services and Innovation <https://www.spatial.nsw.gov.au/>
- Ocean Shores to Desert Dunes. DEC, Sydney. Keith D (2004).
- Planning for Bushfire Protection. NSW Rural Fire Service (2019).
- Rural Fires Act 1997. NSW Government.
- Rural Fires Act Regulation 2008. NSW Government.

## Abbreviations

|                   |  |
|-------------------|--|
| APZ               | Asset Protection Zone  |
| BAL               | Bush Fire Attack Level   |
| BAR               | Bushfire Assessment Report   |
| BCA               | Building Code of Australia   |
| BFPL              | Bush fire prone land   |
| BFDB              | Bush Fire Design Brief   |
| BPM               | Bush fire protection measure   |
| BFSA              | Bush fire safety authority   |
| DA                | Development application  |
| DCP               | Development Control Plan   |
| DPIE              | NSW Department of Planning, Industry and Environment   |
| EP&A Act          | Environmental Planning and Assessment Act 1979   |
| FDI               | Fire Danger Index  |
| FFDI              | Forest Fire Danger Index   |
| GFDI              | Grassland Fire Danger Index  |
| IPA               | Inner Protection Area  |
| kW/m <sup>2</sup> | Kilowatts per metre squared  |
| LEP               | Local Environmental Plan   |
| NASH              | National Association of Steel Framed Housing (2014) Steel Framed Construction in Bush Fire Areas |
| NCC               | National Construction Code   |
| OPA               | Outer Protection Area  |
| PBP               | Planning for Bush Fire Protection 2019   |
| RF Act            | Rural Fires Act 1997   |
| RF Reg            | Rural Fires Regulation 2013  |
| NSW RFS           | NSW Rural Fire Service   |
| SEPP              | State Environmental Planning Policy  |
| SFPP              | Special fire protection purpose  |
| SFR               | Short fire run   |

## APPENDIX I – SUBMISSION REQUIREMENTS

To demonstrate that this BAR is in accordance with clause 44 of the Rural Fires Regulation 2013 (RF Regulation) and satisfies the application requirements for a bush fire safety authority under Section 100B of the Rural Fires Act 1997 (RF Act). (p.95).

| No | General   | Response   |
|----|---|--|
| 1  | A description (including the address) of the property on which the development the subject of the application is proposed to be carried out.  | Please refer to Site location details                  |
| 2  | A classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system of classification of vegetation contained within Planning for Bushfire Protection. | Please refer to Vegetation Hazard Classes              |
| 3  | An assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property).   | Please refer to Slope Assessment                       |
| 4  | Identification of any significant environmental features of the property.   | Please refer to Site location details                  |
| 5  | The details of any threatened species, population or ecological community identified under the Threatened Species Conservation Act 1995 that is known to the applicant to exist on the property.  | Please refer to APPENDIX IV – MNES SEARCH              |
| 6  | The details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property.                    | Please refer to APPENDIX V – AHIMS                     |
| 7  | A bushfire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters:   |  |
|    | a The extent to which the development is to provide setbacks, including Assessment Protection Zones.  | Please refer to Part 3 – Bushfire Protection Measures. |
|    | b The siting and adequacy of water supplies for firefighting.   | Please refer to Water Supply & Services.               |
|    | c The capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency.  | Please refer to Site location details.                 |
|    | d Whether or not public roads in the vicinity that link the fire trail network have two-way access.   | Please refer to Site location details                  |
|    | e The adequacy of arrangements for access to and egress from the development site for the purposes of emergency response.   | Please refer to Access.                                |

|  |   |  |   |
|--|---|--|---|
|  | f | The adequacy of bush fire maintenance plans and fire emergency procedures for the development site.  | A Bushfire Survival Plan is advised to be prepared by the residents of the existing dwelling. Information to assist with the preparation of a Bush Fire Survival Plan can be found at <a href="http://www.nswrfs.gov.au">www.nswrfs.gov.au</a> . A fire maintenance plan for the site is addressed under Landscaping and Fuel Management & APZ sections of this report. |
|  | g | The construction standards to be used for building elements in the development.  | The construction standards to be used will depend on the APZ provided, which will be addressed via a subsequent BAR for any dwelling that is proposed. This report has demonstrated the proposed subdivision is able to comply with PBP (2019), and APZs are able to be provided for existing and future dwellings within the Site.                                     |
|  | h | The adequacy of sprinkler systems and other fire protection measures to be incorporated into the development.  | The bushfire protection measures required for this development to comply with PBP are listed in this report under Bushfire Hazard Determination & Conclusion & Recommendations. Further BPMs such as sprinklers are not considered necessary for the protection of life and property, considering the risk profile of the Site.   |
|  | i | An assessment of the extent to which the proposed development conforms with or deviates from the standards, specific objectives, performance criteria and acceptable solutions set out in Chapters 5-8 of PBP. | The extent to which the proposed development conforms with the standards, specific objectives and acceptable solutions set out in Chapters 5-8 of PBP is considered to be acceptable.   |
|  | j | Identify any fire trails that exist on the property that are on the Register of Certified Fire Trails under the RF Act s.620.  | No fire trails are on the property that are listed on the Register of Certified Fire Trails under the RF Act s.620.   |

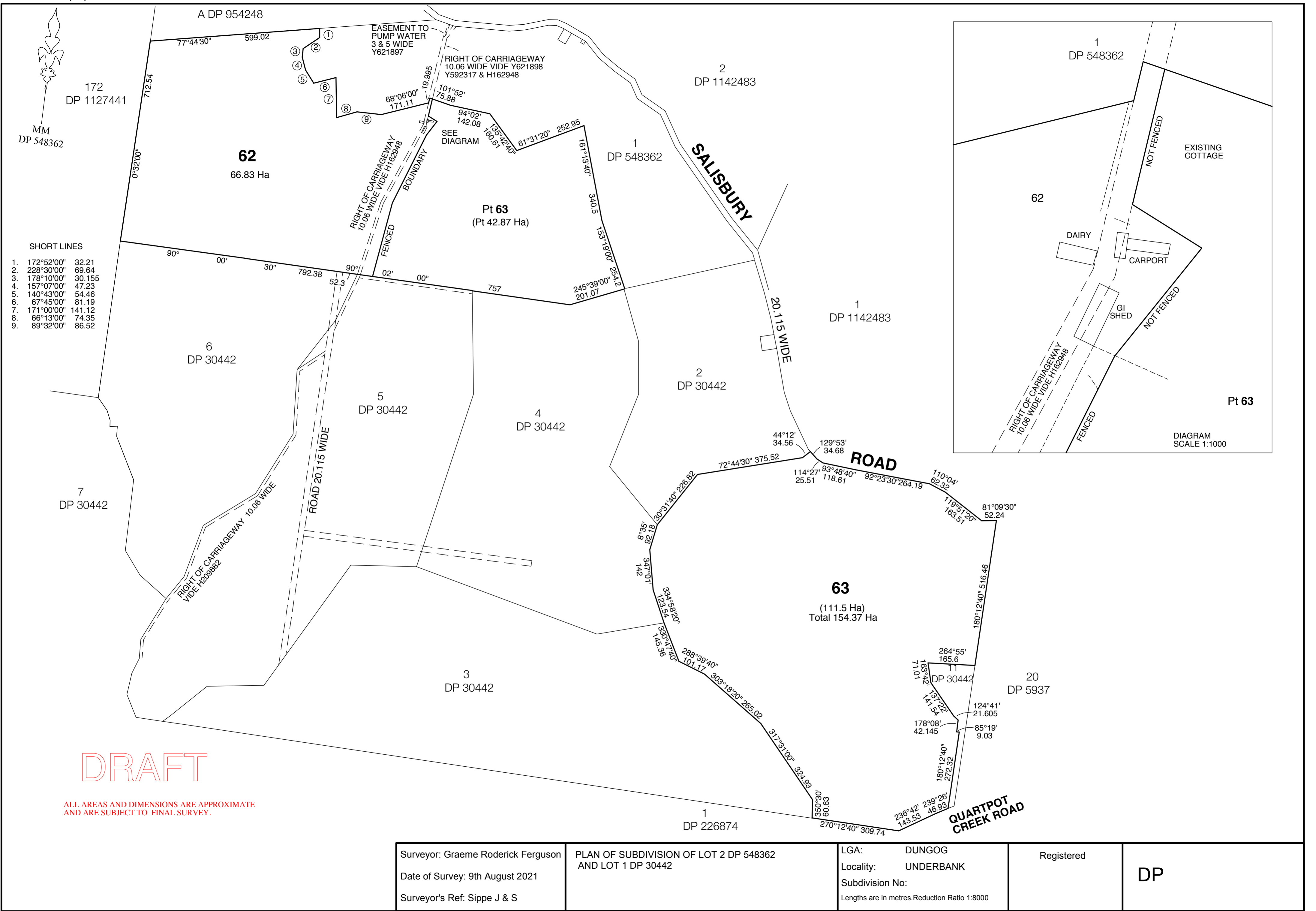
## APPENDIX II – AIMS AND OBJECTIVES OF PBP

The checklist below demonstrates that this BAR satisfies the aims and objectives of Planning for Bush Fire Protection 2019, and the specific objectives for residential and rural residential subdivisions with a dwelling entitlement.

| <b>Aims and objectives of PBP (p.10).</b>   |                 |   |
|---|-----------------|---|
| <b>Requirement</b>  | <b>Complies</b> | <b>Bushfire Assessment Report (BAR)</b>   |
| Afford occupants of any building adequate protection from exposure to bush fire.  | <b>YES</b>      | The land around the dwelling provides for defensible space and secure egress from the (grassland) bushfire hazard.  |
| Provide for defensible space to be located around buildings.  | <b>YES</b>      | The managed land around the existing dwellings provides defensible space.   |
| Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent direct flame contact and material ignition. | <b>YES</b>      | The APZs have been informed by the methodology of PBP 2019 to provide suitable separation between the bushfire hazard and future or existing buildings.                           |
| Ensure that safe operational access and egress for emergency service personnel and residents is available.  | <b>YES</b>      | All lots have direct access to local roads, which then connect to Salisbury Road, an existing sealed public road.   |
| Provide for ongoing management and maintenance of bush fire protection measures, including flue loads in the Asset Protection Zone (APZ).                     | <b>YES</b>      | APZs identified for the proposed lots will be required to maintain the APZ in accordance with PBP 2019 (Appendix 4) and the NSW RFS <i>Standards for Asset Protection Zones</i> . |
| Ensure utility services are adequate to meet the needs of firefighters (and others assisting in bush firefighting).   | <b>YES</b>      | The development will be required to provide essential water supplies to meet the needs of firefighters.   |
| <b>5.2 specific objectives for residential and rural residential subdivisions with a dwelling entitlement (p.42)</b>  |                 |   |
| <b>Requirement</b>  | <b>Complies</b> | <b>Bushfire Assessment Report (BAR)</b>   |
| minimise perimeters of the subdivision exposed to the bush fire hazard (hourglass shapes, which maximise perimeters   | <b>YES</b>      | The proposed boundary realignment subdivision does not increase exposure to bush fire hazard vegetation.  |

|  |            |   |
|--|------------|---|
| and create bottlenecks should be avoided);   |            |   |
| minimise vegetated corridors that permit the passage of bush fire towards buildings;   |            |   |
| provide for the siting of future dwellings away from ridge-tops and steep slopes, within saddles and narrow ridge crests;                      | <b>YES</b> | Future dwellings are encouraged (when isolated rural developments) to be clustered near existing dwellings, to enable shared defence, vegetation management and emergency egress in case of bushfire. |
| ensure that APZs between a bush fire hazard and future dwellings are effectively designed to address the relevant bush fire attack mechanisms; | <b>YES</b> | A future BAR will assess ultimate siting location and determine and appropriate APZ. The minimum required APZ for the site is provided in this BAR in the section on APZs.                            |
| ensure the ongoing maintenance of APZs;  | <b>YES</b> | APZs are required to be maintained as per Appendix 4 of PBP 2019.   |
| provide adequate access from all properties to the wider road network for residents and emergency services;                                    | <b>YES</b> | Adequate access for all dwellings within the Site are provided to the wider road network for residents and emergency services.  |
| provide access to hazard vegetation to facilitate bush fire mitigation works and fire suppression; and   | <b>YES</b> | Access to the surrounding grassland hazard vegetation is provided.  |
| ensure the provision of an adequate supply of water and other services to facilitate effective firefighting.                                   | <b>YES</b> | The requirement for SWS on each lot with a dwelling will ensure the provision of an adequate supply of water and other services to facilitate effective firefighting.                                 |

## **APPENDIX III – PROPOSED SUBDIVISION PLANS**



## APPENDIX IV – MNES SEARCH

### *EPBC Act Protected Matters report - Caveat*

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999. The report provides the mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species, listed threatened ecological communities and other information could be useful as an indicator of potential habitat value. The mapped locations have been collated from a range of data sources at various resolutions as acknowledged at the end of this report.

Not all species listed under the EPBC Act have been mapped (see below) and therefore this report is a general guide only. Where data is available to support mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information to inform a referral may need to ... seek and consider other information sources.



# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 13-Dec-2021

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

|  |      |
|--|------|
| <a href="#">World Heritage Properties:</a>                   | None |
| <a href="#">National Heritage Places:</a>                    | None |
| <a href="#">Wetlands of International Importance (Ramsar</a> | 1    |
| <a href="#">Great Barrier Reef Marine Park:</a>              | None |
| <a href="#">Commonwealth Marine Area:</a>                    | None |
| <a href="#">Listed Threatened Ecological Communities:</a>    | 4    |
| <a href="#">Listed Threatened Species:</a>                   | 35   |
| <a href="#">Listed Migratory Species:</a>                    | 14   |

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

|   |      |
|---|------|
| <a href="#">Commonwealth Lands:</a>                                 | 1    |
| <a href="#">Commonwealth Heritage Places:</a>                       | None |
| <a href="#">Listed Marine Species:</a>                              | 19   |
| <a href="#">Whales and Other Cetaceans:</a>                         | None |
| <a href="#">Critical Habitats:</a>                                  | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a>                  | None |
| <a href="#">Australian Marine Parks:</a>                            | None |
| <a href="#">Habitat Critical to the Survival of Marine Turtles:</a> | None |

## Extra Information

This part of the report provides information that may also be relevant to the area you have

|   |      |
|---|------|
| <a href="#">State and Territory Reserves:</a>           | None |
| <a href="#">Regional Forest Agreements:</a>             | 1    |
| <a href="#">Nationally Important Wetlands:</a>          | None |
| <a href="#">EPBC Act Referrals:</a>                     | 2    |
| <a href="#">Key Ecological Features (Marine):</a>       | None |
| <a href="#">Biologically Important Areas:</a>           | None |
| <a href="#">Bioregional Assessments:</a>                | None |
| <a href="#">Geological and Bioregional Assessments:</a> | None |

# Details

## Matters of National Environmental Significance

| Wetlands of International Importance (Ramsar Wetlands) |                                      |                 | [ Resource Information ] |
|--|--------------------------------------|-----------------|--------------------------|
| Ramsar Site Name                                       | Proximity                            | Buffer Status   |                          |
| <a href="#">Hunter estuary wetlands</a>                | 50 - 100km upstream from Ramsar site | In feature area |                          |

| Listed Threatened Ecological Communities   |  |  | [ Resource Information ] |
|--|--|--|--------------------------|
| For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps. |  |  |                          |
| Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.   |  |  |                          |

| Community Name  | Threatened Category   | Presence Text                         | Buffer Status   |
|---|-----------------------|---------------------------------------|-----------------|
| <a href="#">Central Hunter Valley eucalypt forest and woodland</a>                                  | Critically Endangered | Community may occur within area       | In feature area |
| <a href="#">Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland</a>       | Endangered            | Community may occur within area       | In feature area |
| <a href="#">Lowland Rainforest of Subtropical Australia</a>   | Critically Endangered | Community likely to occur within area | In feature area |
| <a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a> | Critically Endangered | Community may occur within area       | In feature area |

| Listed Threatened Species   |                       |  | [ Resource Information ] |
|---|-----------------------|--|--------------------------|
| Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. |                       |  |                          |
| Number is the current name ID.  |                       |  |                          |
| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status            |
| BIRD  |                       |  |                          |
| <a href="#">Anthochaera phrygia</a>   |                       |  |                          |
| Regent Honeyeater [82338]   | Critically Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area          |
| <a href="#">Atrichornis rufescens</a>   |                       |  |                          |
| Rufous Scrub-bird [655]   | Endangered            | Species or species habitat may occur within area                   | In feature area          |

| Scientific Name  | Threatened Category   | Presence Text  | Buffer Status   |
|--|-----------------------|--|-----------------|
| <a href="#">Botaurus poiciloptilus</a><br>Australasian Bittern [1001]                          | Endangered            | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                                  | Critically Endangered | Species or species habitat may occur within area       | In feature area |
| <a href="#">Erythroriorchis radiatus</a><br>Red Goshawk [942]                                  | Vulnerable            | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Falco hypoleucos</a><br>Grey Falcon [929]  | Vulnerable            | Species or species habitat may occur within area       | In feature area |
| <a href="#">Grantiella picta</a><br>Painted Honeyeater [470]                                   | Vulnerable            | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]                       | Vulnerable            | Species or species habitat known to occur within area  | In feature area |
| <a href="#">Lathamus discolor</a><br>Swift Parrot [744]  | Critically Endangered | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847]          | Critically Endangered | Species or species habitat may occur within area       | In feature area |
| <a href="#">Rostratula australis</a><br>Australian Painted Snipe [77037]                       | Endangered            | Species or species habitat likely to occur within area | In feature area |
| FROG   |                       |  |                 |
| <a href="#">Mixophyes balbus</a><br>Stuttering Frog, Southern Barred Frog (in Victoria) [1942] | Vulnerable            | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Mixophyes iteratus</a><br>Giant Barred Frog, Southern Barred Frog [1944]           | Vulnerable            | Species or species habitat likely to occur within area | In feature area |
| MAMMAL   |                       |  |                 |

| Scientific Name   | Threatened Category | Presence Text   | Buffer Status   |
|---|---------------------|---|-----------------|
| <a href="#">Chalinolobus dwyeri</a><br>Large-eared Pied Bat, Large Pied Bat [183]   | Vulnerable          | Species or species habitat likely to occur within area            | In feature area |
| <a href="#">Dasyurus maculatus maculatus (SE mainland population)</a><br>Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]                            | Endangered          | Species or species habitat known to occur within area             | In feature area |
| <a href="#">Petauroides volans</a><br>Greater Glider [254]  | Vulnerable          | Species or species habitat likely to occur within area            | In feature area |
| <a href="#">Petrogale penicillata</a><br>Brush-tailed Rock-wallaby [225]  | Vulnerable          | Species or species habitat likely to occur within area            | In feature area |
| <a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a><br>Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104] | Vulnerable          | Species or species habitat known to occur within area             | In feature area |
| <a href="#">Potorous tridactylus tridactylus</a><br>Long-nosed Potoroo (SE Mainland) [66645]  | Vulnerable          | Species or species habitat likely to occur within area            | In feature area |
| <a href="#">Pseudomys novaehollandiae</a><br>New Holland Mouse, Pookila [96]  | Vulnerable          | Species or species habitat likely to occur within area            | In feature area |
| <a href="#">Pseudomys oralis</a><br>Hastings River Mouse, Koontoo [98]  | Endangered          | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Pteropus poliocephalus</a><br>Grey-headed Flying-fox [186]  | Vulnerable          | Foraging, feeding or related behaviour known to occur within area | In feature area |
| PLANT   |                     |   |                 |
| <a href="#">Arthraxon hispidus</a><br>Hairy-joint Grass [9338]  | Vulnerable          | Species or species habitat may occur within area                  | In feature area |
| <a href="#">Cryptostylis hunteriana</a><br>Leafless Tongue-orchid [19533]   | Vulnerable          | Species or species habitat may occur within area                  | In feature area |

| Scientific Name  | Threatened Category   | Presence Text  | Buffer Status   |
|--|-----------------------|--|-----------------|
| <a href="#">Cynanchum elegans</a><br>White-flowered Wax Plant [12533]  | Endangered            | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Dichanthium setosum</a><br>bluegrass [14159]   | Vulnerable            | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Eucalyptus glaucina</a><br>Slaty Red Gum [5670]  | Vulnerable            | Species or species habitat known to occur within area  | In feature area |
| <a href="#">Euphrasia arguta</a><br>[4325]   | Critically Endangered | Species or species habitat may occur within area       | In feature area |
| <a href="#">Haloragis exalata subsp. velutina</a><br>Tall Velvet Sea-berry [16839]   | Vulnerable            | Species or species habitat may occur within area       | In feature area |
| <a href="#">Persicaria elatior</a><br>Knotweed, Tall Knotweed [5831]   | Vulnerable            | Species or species habitat may occur within area       | In feature area |
| <a href="#">Rhodamnia rubescens</a><br>Scrub Turpentine, Brown Malletwood [15763]  | Critically Endangered | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Rhodomyrtus psidioides</a><br>Native Guava [19162]   | Critically Endangered | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Syzygium paniculatum</a><br>Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307] | Vulnerable            | Species or species habitat may occur within area       | In feature area |
| <a href="#">Thesium australe</a><br>Austral Toadflax, Toadflax [15202]   | Vulnerable            | Species or species habitat may occur within area       | In feature area |
| <a href="#">Tylophora woollsii</a><br>[20503]  | Endangered            | Species or species habitat may occur within area       | In feature area |

| Listed Migratory Species | <a href="#">[ Resource Information ]</a> |               |               |
|--------------------------|--|---------------|---------------|
| Scientific Name          | Threatened Category                      | Presence Text | Buffer Status |

| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status   |
|---|-----------------------|--|-----------------|
| Migratory Marine Birds  |                       |  |                 |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]                                       |                       | Species or species habitat likely to occur within area | In feature area |
| Migratory Terrestrial Species   |                       |  |                 |
| <a href="#">Cuculus optatus</a><br>Oriental Cuckoo, Horsfield's Cuckoo [86651]                  |                       | Species or species habitat may occur within area       | In feature area |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]                        | Vulnerable            | Species or species habitat known to occur within area  | In feature area |
| <a href="#">Monarcha melanopsis</a><br>Black-faced Monarch [609]                                |                       | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]   |                       | Species or species habitat may occur within area       | In feature area |
| <a href="#">Myiagra cyanoleuca</a><br>Satin Flycatcher [612]                                    |                       | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Rhipidura rufifrons</a><br>Rufous Fantail [592]                                     |                       | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Symposiachrus trivirgatus as Monarcha trivirgatus</a><br>Spectacled Monarch [83946] |                       | Species or species habitat known to occur within area  | In feature area |
| Migratory Wetlands Species  |                       |  |                 |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                  |                       | Species or species habitat may occur within area       | In feature area |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                              |                       | Species or species habitat may occur within area       | In feature area |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                                   | Critically Endangered | Species or species habitat may occur within area       | In feature area |

| Scientific Name   | Threatened Category   | Presence Text  | Buffer Status   |
|---|-----------------------|--|-----------------|
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                        |                       | Species or species habitat may occur within area       | In feature area |
| <a href="#">Gallinago hardwickii</a><br>Latham's Snipe, Japanese Snipe [863]          |                       | Species or species habitat likely to occur within area | In feature area |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area       | In feature area |

### Other Matters Protected by the EPBC Act

| Commonwealth Lands  |       | [ <a href="#">Resource Information</a> ] |
|---|-------|--|
| The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information. |       |  |
| Commonwealth Land Name  | State | Buffer Status                            |
| Communications, Information Technology and the Arts - Telstra Corporation Limited   |       |  |
| Commonwealth Land - Australian Telecommunications Commission [11372]  | NSW   | In feature area                          |

| Listed Marine Species   | [ <a href="#">Resource Information</a> ] |  |                 |
|---|--|--|-----------------|
| Scientific Name   | Threatened Category                      | Presence Text  | Buffer Status   |
| Bird  |  |  |                 |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]      |  | Species or species habitat may occur within area                           | In feature area |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]           |  | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Bubulcus ibis as Ardea ibis</a><br>Cattle Egret [66521] |  | Species or species habitat may occur within area overfly marine area       | In feature area |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]  |  | Species or species habitat may occur within area                           | In feature area |

| Scientific Name  | Threatened Category   | Presence Text  | Buffer Status   |
|--|-----------------------|--|-----------------|
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                | Critically Endangered | Species or species habitat may occur within area overfly marine area       | In feature area |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]               |                       | Species or species habitat may occur within area overfly marine area       | In feature area |
| <a href="#">Gallinago hardwickii</a><br>Latham's Snipe, Japanese Snipe [863] |                       | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Haliaeetus leucogaster</a><br>White-bellied Sea-Eagle [943]      | Vulnerable            | Species or species habitat known to occur within area                      | In feature area |
| <a href="#">Hirundapus caudacutus</a><br>White-throated Needletail [682]     |                       | Species or species habitat known to occur within area overfly marine area  | In feature area |
| <a href="#">Lathamus discolor</a><br>Swift Parrot [744]                      |                       | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]                    |                       | Species or species habitat may occur within area overfly marine area       | In feature area |
| <a href="#">Monarcha melanopsis</a><br>Black-faced Monarch [609]             |                       | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]                      |                       | Species or species habitat may occur within area overfly marine area       | In feature area |

| Scientific Name  | Threatened Category   | Presence Text  | Buffer Status   |
|--|-----------------------|--|-----------------|
| <a href="#">Myiagra cyanoleuca</a><br>Satin Flycatcher [612]   |                       | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Neophema chrysostoma</a><br>Blue-winged Parrot [726]   |                       | Species or species habitat may occur within area overfly marine area       | In feature area |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847]                            | Critically Endangered | Species or species habitat may occur within area                           | In feature area |
| <a href="#">Rhipidura rufifrons</a><br>Rufous Fantail [592]  |                       | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a><br>Australian Painted Snipe [77037] | Endangered            | Species or species habitat likely to occur within area overfly marine area | In feature area |
| <a href="#">Symposiachrus trivirgatus as Monarcha trivirgatus</a><br>Spectacled Monarch [83946]                  |                       | Species or species habitat known to occur within area overfly marine area  | In feature area |

## Extra Information

|                            |  |
|----------------------------|--|
| Regional Forest Agreements | [ <a href="#">Resource Information</a> ] |
|----------------------------|--|

Note that all areas with completed RFAs have been included.

| RFA Name                           | State           | Buffer Status   |
|------------------------------------|-----------------|-----------------|
| <a href="#">North East NSW RFA</a> | New South Wales | In feature area |

|                    |  |
|--------------------|--|
| EPBC Act Referrals | [ <a href="#">Resource Information</a> ] |
|--------------------|--|

| Title of referral            | Reference | Referral Outcome  | Assessment Status | Buffer Status   |
|------------------------------|-----------|-------------------|-------------------|-----------------|
| Controlled action            |           |                   |                   |                 |
| <a href="#">Tillegra Dam</a> | 2008/4551 | Controlled Action | Completed         | In feature area |

|  |           |                       |           |                 |
|--|-----------|-----------------------|-----------|-----------------|
| Not controlled action  |           |                       |           |                 |
| <a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a> | 2015/7522 | Not Controlled Action | Completed | In feature area |

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

## **APPENDIX V – AHIMS BASIC SEARCH RESULTS**

Sam Ferguson

Date: 07 December 2021

1

Toronto New South Wales 2283

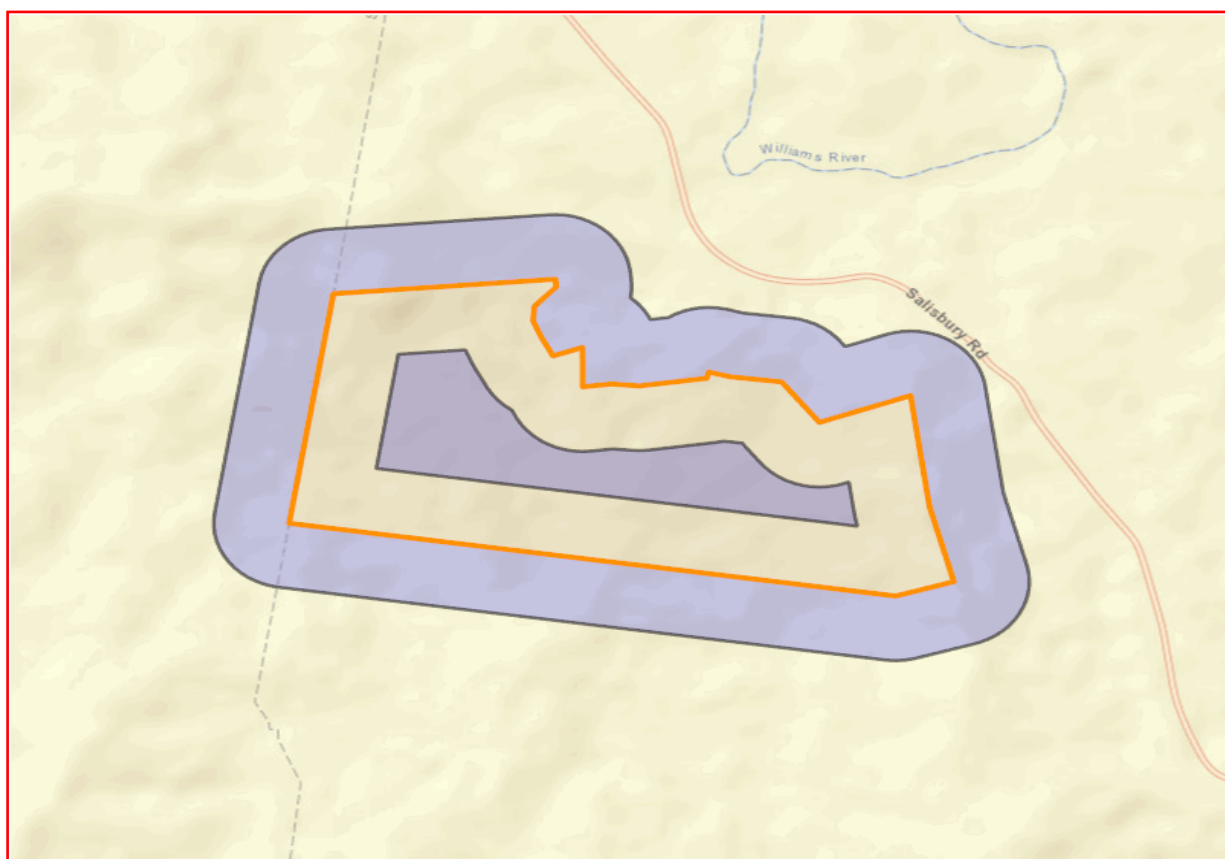
Attention: Sam Ferguson

Email: sffergo@gmail.com

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 2, DP:DP548362, Section : - with a Buffer of 200 meters, conducted by Sam Ferguson on 07 December 2021.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

|   |   |
|---|---|
| 0 | Aboriginal sites are recorded in or near the above location.          |
| 0 | Aboriginal places have been declared in or near the above location. * |

Sam Ferguson

Date: 07 December 2021

1

Toronto New South Wales 2283

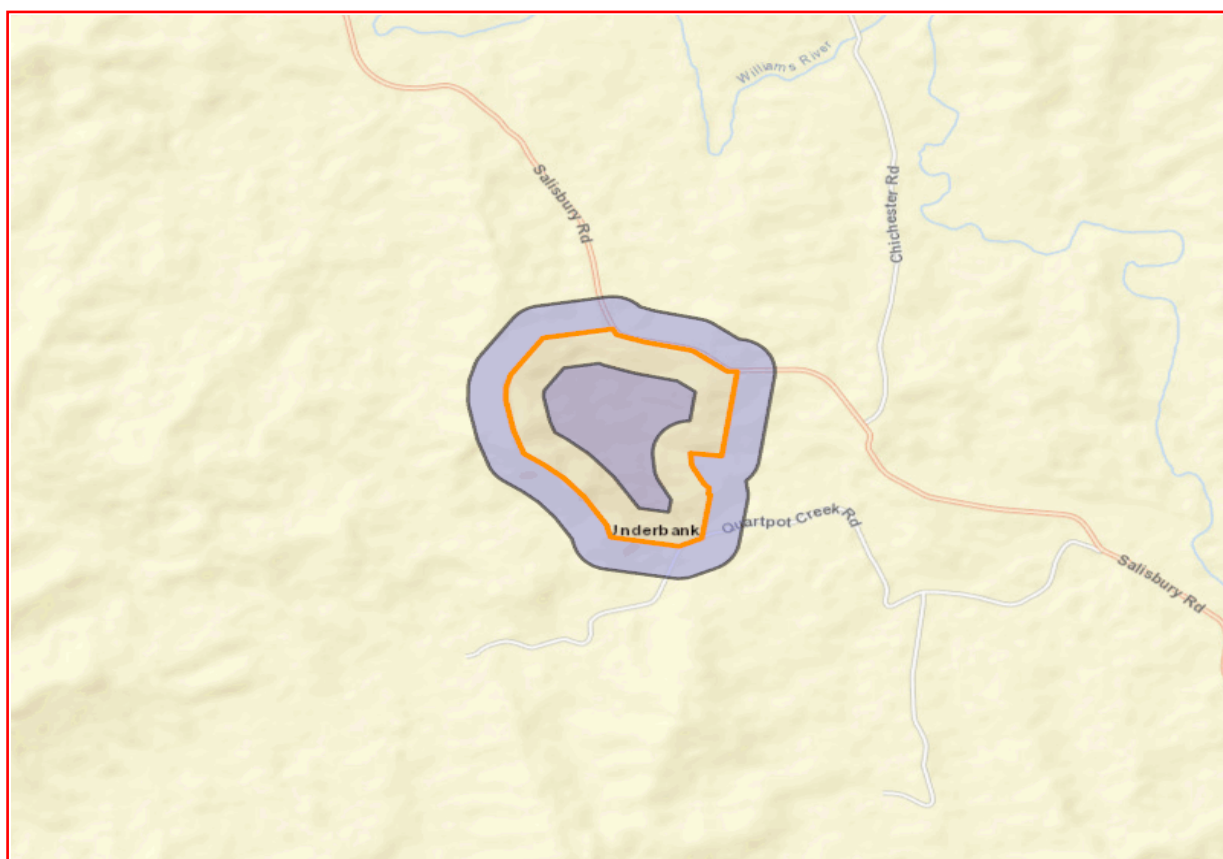
Attention: Sam Ferguson

Email: sffergo@gmail.com

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 1, DP:DP30442, Section : - with a Buffer of 200 meters, conducted by Sam Ferguson on 07 December 2021.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

|   |   |
|---|---|
| 0 | Aboriginal sites are recorded in or near the above location.          |
| 0 | Aboriginal places have been declared in or near the above location. * |