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Statement of Environmental Effects and DA Report

Environmental Facility

“Wiruna” – 48 Old Ilford Rd, Ilford

Lot 7, DP 747954

Client: Astronomical Society of NSW Inc

Revision 2.8.2 11 April 2023

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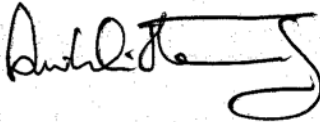
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I certify that I have prepared the contents of this Report and to the best of my knowledge:

- The information contained in this Report is neither false nor misleading; and
- It contains all relevant available information that is current at the time of release.



Angus Witherby

BA – Geography & Economics, Grad. Dip. Urb. & Reg. Planning, FPIA, CPP

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1 Introduction

The site is currently used by the Astronomical Society of NSW Inc (**the Society**) for astronomical observations and imaging. It has various consents currently applying to the land. Following enquiry of the Council these include:

- DA 24/1996 from Rylstone Shire – For enclose existing carport (now storage shed) and erect two farm buildings (being the Bush Kitchen and the Meeting Hall).
- DA 0196/2015 from Mid-Western Regional Council – for Outdoor Recreation Facility and Kitchen Shelter, including Construction Certificate, known by the Society as the Lounge
- DA 2720/006 from Rylstone Shire - issued in 1988 for the farmhouse on the western portion of the property.

The Society's Committee has undertaken a review of site operations, and as part of this requested, through Wakefield Planning, a review of current consents.

While it appears that many elements of the current use, described under existing and proposed uses, have consent of some kind, the Committee wishes to ensure that the entire of the structures on the land, together with both the current and proposed uses, receive the coverage of an appropriate development consent, and as necessary, building certificates or construction certificates. In this regard the Society seeks approval of a Development Application to:

- classify the property known as "Wiruna" as an Environmental Facility; and
- to encompass development approval for all existing structures, installations and long-term temporary use under this classification, or for uses ancillary to this classification; and
- to provide for potential future additions of permanent structures as outlined in this document.

It is noted that other approvals would be required, namely building certificates for any elements not having, but requiring a construction certificate, together with approval under the *Local Government Act (1993)* for the operation of the approved septic system.

Preliminary discussions have been held with Council regarding the application. This occurred in February 2018. Formal pre-lodgement now occurs through the Planning Portal.

The context of the site is shown on the Figure over:

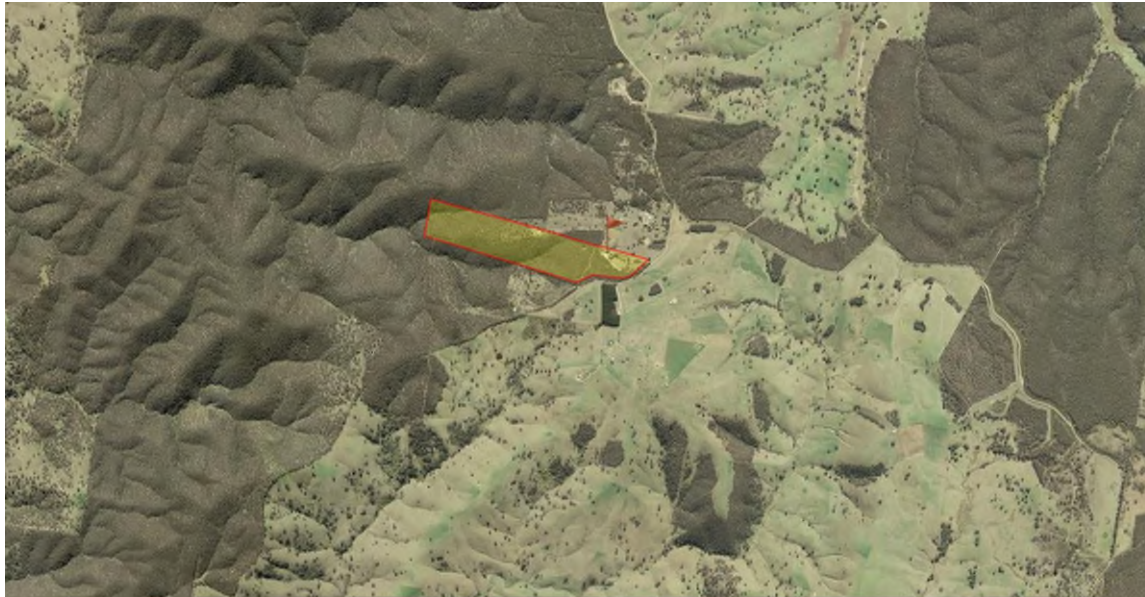


Figure 1-1 – Site in its context

The site consists of both cleared and timbered country, under native vegetation, and adjoins on its eastern side, cleared grazing land. The rear of the site has a partially cleared portion congruent with cleared areas on the neighbouring property. The land is traversed by two streams. Topography is flat on the lower portions of the site, rising to a plateau area with deeply incised streams.

The Figures below and over, show a more detailed view of the property.



Figure 1-2 – Aerial view of the Site

This Figure shows the site in more detail. The existing farmhouse can be seen in the middle of the site on the northern boundary, and the main cleared activity area on the east of the site. A farm dam is visible, together with the access to the farmhouse, which is through an adjoining property. The internal fire-break is visible, together with the internal road network and main hall. Refer also to Plan 1 – Existing Overall Property Usage Diagram.

The Figure following shows topographic detail of the property.

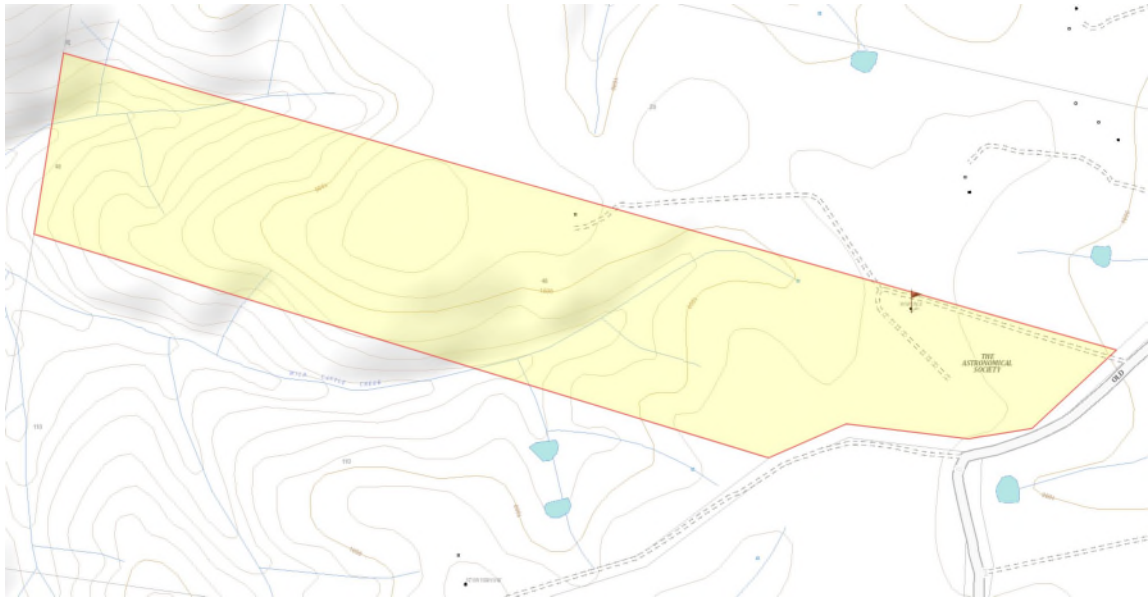


Figure 1-3 – Topographic Detail

The above Figure indicates the main topographic features, access roads and tracks, dams and watercourses. Note the brow of the hill, to the west of the centre of the property, which forms a secondary observing area.

The Figure, below, shows more detail of the main activity area of the property. Refer also to Plans 2 and 3, Existing Property Detail A and B.



Figure 1-4 – Site Detail – Main Activity Area

The approved main hall and original kitchen structure are visible, together with a range of small-scale structures for telescopes. Informal camping can be seen to the south of the internal access road, which forms a natural fire barrier to the observation area, main hall and the camping ground used for larger events. Access is gained along the northern side of the property, directly from Old Ilford Road.

The application is accompanied by the plans and documents listed in the Appendix

This report consists of a statement of environmental effects regarding the proposal, and assesses the proposal under the provisions of Section 4.15 of the Act.

This report has been prepared by Angus Witherby, Director of Wakefield Planning at the request of the Astronomical Society of NSW.

This development is not the subject of a declaration of any reportable political donation or gift to a Councillor or staff member pursuant to the *Local Government and Planning Legislation Amendment (Political Donations) Act 2008*.

2 Existing and Proposed Uses

2.1 Existing Uses

Existing uses are shown on Plans 1 - 4, appended. These show the main activity area of the site (towards the eastern end) together with the existing farmhouse in mid-site and a secondary viewing area on the hilltop further to the west.

Astronomical observations largely take place in the areas as shown on Plan 1. These activities are supported by a hall, of sheet metal on a concrete slab, with attached bunkhouse being of compressed fibre board, metal cladding (added 2022) and timber construction with a sheet metal roof, together with attached amenities being two demountable amenity units on footings (see Plan 4).

The site also has an open kitchen and dining area with adjoining seating area (see Plan 4) consisting of two steel portal framed structures on concrete slabs. These provide shelter for cooking (gas stoves) and eating as well as washing up. Grey water drains to an existing rubble soak-away. Road access is generally good, via all-weather gravel internal roads.

Informal camping occurs near the main viewing and imaging areas, with people typically camping in the nearby woodland for smaller events and occasional visits. This is partially protected by a fire trail (see Plan 1 - Existing Overall Property Usage Diagram).

The bushland ambience is seen as a key and attractive feature of the site.

The camping areas are served both by the amenity block attached to the main hall, which is linked to a septic system, as well as a “long drop” toilet block on the edge of the timber area.

The site also has a dwelling, established in the 1980s, which provides limited accommodation. This dwelling is in a cleared area approximately half way into the site. The dwelling is not currently permanently occupied, and is accessed by a partially formed track via a right of way on an adjoining property. An unformed access track leads to the brow of a hill, which is also cleared, which is available as an observation site. View angles are partially restricted by existing vegetation. All tracks are readily traversed by a conventional two-wheel drive vehicle.

Physically, and in its operation, the site is similar to the numerous “bush” Scout Camps located throughout eastern Australia.

2.2 Details of the operation

The current operations of the site involve the hosting of a number of small gatherings per year, typically once per month, and typically involving 20-30 people. People would generally stay in existing accommodation when attending for the monthly meetings and maintenance “working bees”.

Other gatherings occur for special astronomical events, and also, annually, for a “star party” which may attract up to 350 people. The mixed camping/observing area is used during this event as shown on Plan 1. During smaller events, camping is mainly in the regular camping area also shown on Plan 1.

Smaller numbers of people attend the site on a regular basis, predominantly for maintenance activities.

Full operational details are included in Document C - Wiruna Property Management Plan and the Star Party Event Management Plan, Document D. Bushfire is an acknowledged risk on the site, and is managed under the Wiruna Bushfire Emergency Management and Evacuation Plan, Document B.

2.3 Proposed uses

2.3.1 Land Use Proposals

The use of the property will continue to be as an astronomical observing site (Environmental Facility) for the use of Society members and their guests. There are no plans to commence agriculture, run stock, or in any way change to another form of use.

2.3.2 Proposed buildings and structures

In the future, it is intended to have additional bunkhouses and/or cabins in the cleared areas to the north of the Meeting Hall. A three-car garage is planned adjacent to the existing storage shed. These proposals are shown on Plan 5: Detail D – Proposed new development.

In addition, sites for member telescopes are proposed. The Main Observing Field Management Plan (Document J) includes the existing telescope sites as well as additional sites. These are used on a temporary basis as set out in this Management Plan.

Approval is sought for the proposed facility layout. Colours and materials of proposed buildings would be compatible with existing buildings on the site, and would be fully detailed at construction certificate stage. Typical elevations and colours are provided at Plan 7.

3 Statutory Review

3.1 Site context

48 Old Ilford Road is located within the RU1 Primary Production Zone as shown on the following Figure.



Figure 3-1 – Site Zoning

Overlays also apply to the property, covering bushfire, lot size and terrestrial biodiversity. These are shown on the Figures below and over:



Figure 3-2 – Bushfire Prone Land Overlay

The bushfire overlay above shows the land as being affected by two fire categories, although in practice three exist.

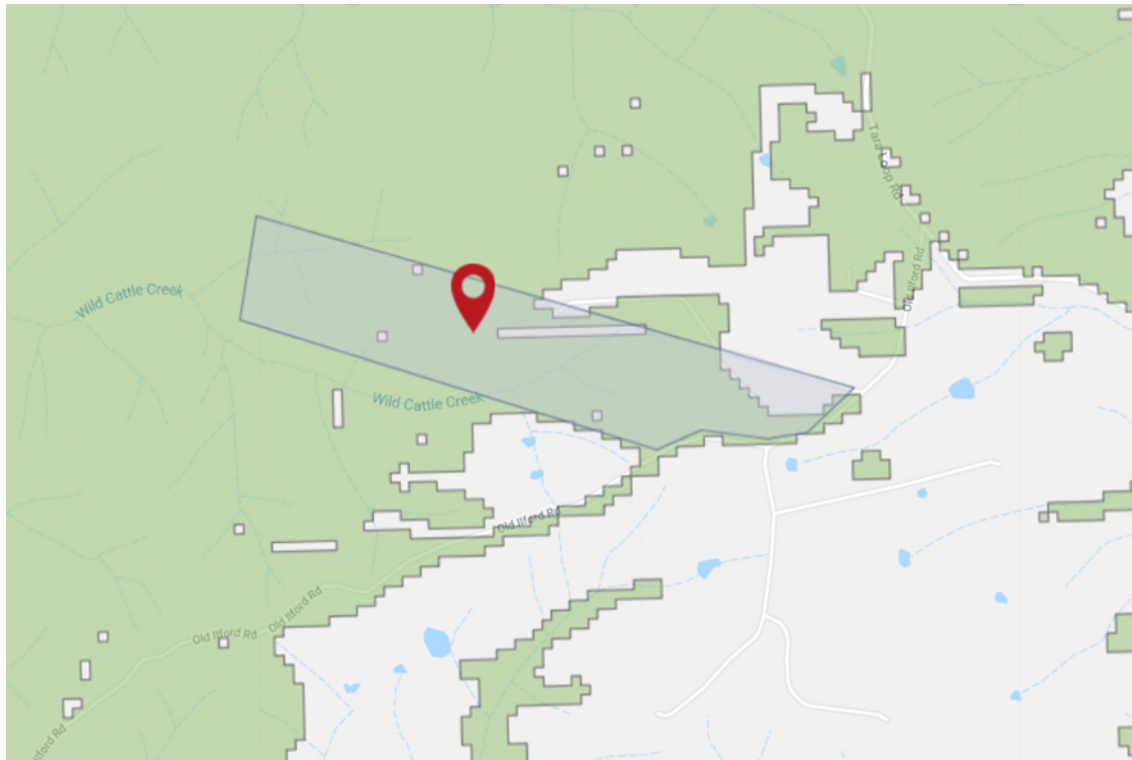


Figure 3-3 – Terrestrial Biodiversity

The land is shown as being affected by moderate terrestrial biodiversity, largely congruent with the timbered sections of the site.

Under changes to biodiversity legislation, in addition to the Terrestrial Biodiversity Overlay, the land is subject to the Biodiversity Values Map. The extract below shows this as affecting the creek line. This creek would be unaffected by the development.



Figure 3-4 – Biodiversity Mapping

The Biodiversity Mapping Tool allows an estimation to be made of the allowable clearing before biodiversity offsets need to be considered. In this respect

thinning/lopping of vegetation is proposed to improve view lines from the main observing field. Provided that this area is less than 1 ha, there is no need for offsets. The area is shown on the Figure following, and is approximately 0.45 of a ha. In addition, the expansion of the APZ will involve clearing of some of this area, further reducing the lopped area.



Figure 3-5 – Area for lopping of trees (shown green)

The land is affected by both the 40 and 100 ha minimum lot sizes, following the vegetation boundary. As no subdivision or new dwelling is proposed, this does not affect the development. See Figure following:

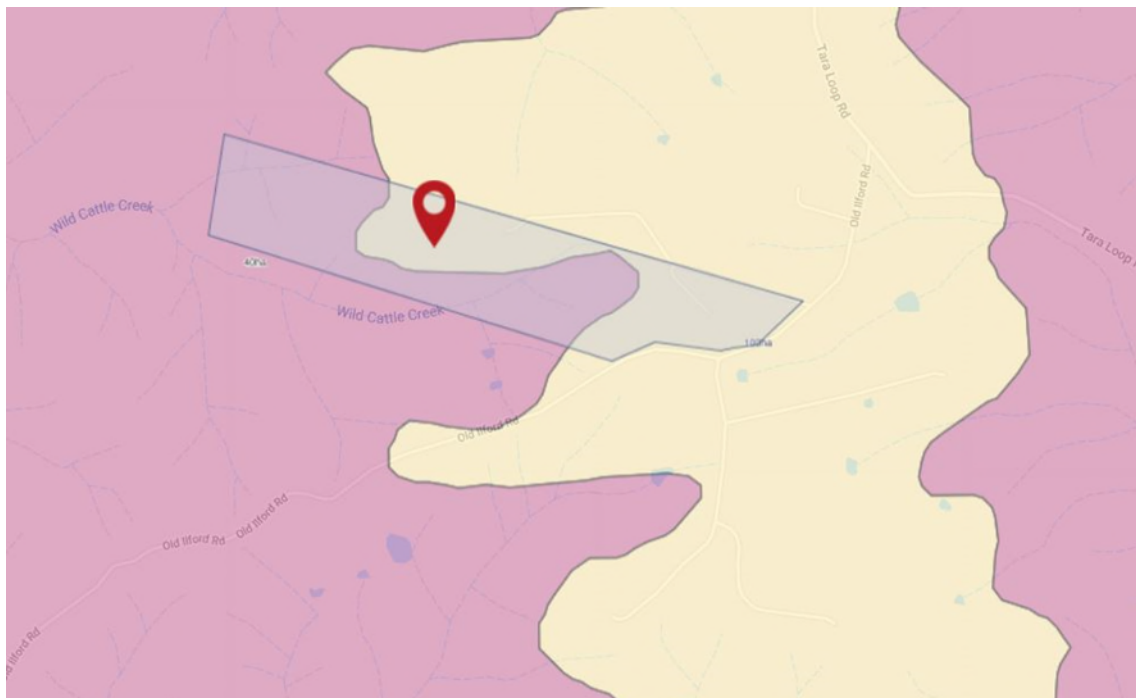


Figure 3-6 – Lot Size Map (minimum areas for subdivision)

4 Review under Section 4.15

4.1 Characterisation of the Use

4.1.1 Review of definitions

The current approved use is Recreation Facility (Outdoor) which is defined as:

recreation facility (major) means a building or place used for large-scale sporting or recreation activities that are attended by large numbers of people whether regularly or periodically, and includes theme parks, sports stadiums, showgrounds, racecourses and motor racing tracks.

While this use does cover the core aspects of the development it is not considered to be an ideal descriptor of the land use, which although it hosts relatively large numbers of people once per year, is more regularly used for smaller-scale visitation of a scientific nature. Accordingly, it is proposed that the approved use be changed to:

environmental facility means a building or place that provides for the recreational use or scientific study of natural systems, and includes walking tracks, seating, shelters, board walks, observation decks, bird hides or the like, and associated display structures.

This use would incorporate the structures utilised for the telescopes (refer Plan 2 and Document J), together with the other uses of the site. In addition, the core use of the site for astronomical observations is considered to be the scientific study of natural systems. Wiruna is Designated Observatory DO3-50 in recognition of its contributions to research, education and community use.

Consideration was given to community facilities, which is defined as:

community facility means a building or place:

- (a) owned or controlled by a public authority or non-profit community organisation, and
- (b) used for the physical, social, cultural or intellectual development or welfare of the community,

but does not include an educational establishment, hospital, retail premises, place of public worship or residential accommodation.

While this use would also cover the proposal, environmental facility is preferred as the “best fit” overall.

4.1.2 Permissibility

The use “environmental facility” is permissible with consent under Mid-Western Regional Local Environmental Plan 2012 within the Primary Production zone being “Any other development not specified in item 2 or 4”.

4.1.3 Consistency with Zone Objectives

In term of consistency with the Objectives of the Zone, each zone objective is reviewed below:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.

Comment: The land has minimal capability for primary industry production, which is, and would be unaffected by the development.

- To encourage diversity in primary industry enterprises and systems appropriate for the area.

Comment: This objective is not relevant to the development.

- To minimise the fragmentation and alienation of resource lands.

Comment: No subdivision is proposed, and no fragmentation of resource lands has or would occur.

- To minimise conflict between land uses within this zone and land uses within adjoining zones.

Comment: The use has operated satisfactorily for many years, with no neighbour complaints. The use is compatible with the adjoining land uses, which consist of natural systems and limited grazing with dwellings.

- To maintain the visual amenity and landscape quality of Mid-Western Regional by preserving the area's open rural landscapes and environmental and cultural heritage values.

Comment: The development has minimal visibility from public areas or from adjoining properties. Accordingly there would be no impact on the landscape values which consist of a mosaic of cleared and timbered land with scattered structures including dwellings and various rural sheds. The environmental values of the land of Moderate Terrestrial Biodiversity would be unaffected, apart from very minor proposed clearing, and the use of controlled burns within the firebreak. It is intended that the unused portions of the site be maintained as natural systems. The site also has a cultural value as a "dark sky" area, with excellent viewing characteristics. It is suggested that Council give consideration to incorporating the "dark skies" clause of the Standard Instrument to acknowledge this attribute, which has significant tourism potential.

- To promote the unique rural character of Mid-Western Regional and facilitate a variety of tourist land uses.

Comment: The use contributes to the unique rural character of the locality and also consists of a tourist-related use. Although not generally open to members of the broader public, the development attracts consistent visitor numbers to the area.

In summary, the development more than satisfies the objectives of the zone.

4.2 State Environmental Planning Policies

A review was undertaken of the SEPPs and the following policies are considered applicable:

4.2.1 State Environmental Planning Policy – Biodiversity and Conservation

This SEPP addresses clearing in non-rural areas, the Murray River, water catchments, foreshores and waterways and also koala habitat, amongst other matters. Of relevance to this application is koala habitat.

Koala Habitat

The site is heavily timbered over the majority of the land. Members of the Society have not recorded any koala sightings, noting that the vast majority of member activity is on cleared areas, or the periphery of timbered areas.

A review of Council's website has not established any koala habitat mapping. A further search was made of the NSW state government habitat mapping. The site is part of the north-west slopes koala mapping unit. A search of available data did not identify the site as containing habitat suitable for Koalas.

In addition, a search was made of the Bionet website, with a 10km x 10km search area established based on the location of the property and searching on "all animals". No koala sightings have been recorded within this search area.

As negligible clearing is proposed, only the lopping of some trees, and there is no history of koala visitation, it is not considered that the proposal would have any significant impact on koala habitat (whether core or otherwise) and accordingly no formal review of koala habitat nor koala management plan is considered necessary.

The search results are shown on the Figure following:

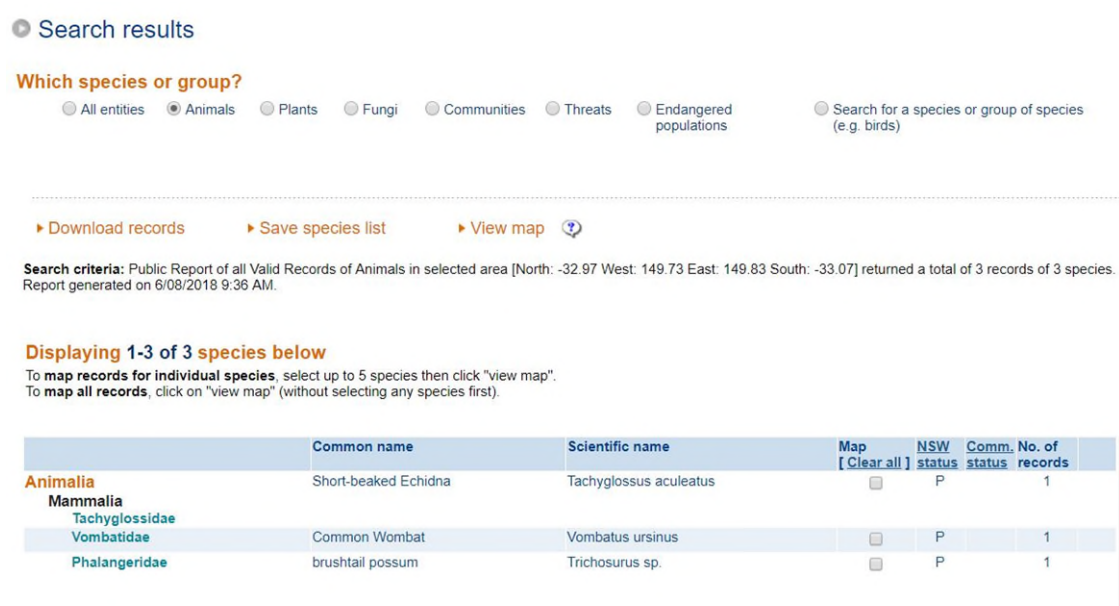


Figure 4-1– Bionet Search

4.2.2 State Environmental Planning Policy (Primary Production) 2021

The SEPP addresses state significant agricultural land, farm dams, livestock industries, aquaculture, various specific areas. The site is not state significant agricultural land. In this respect the site has insignificant agricultural value.

In summary, the development is considered to be consistent with the principles of the SEPPs and accordingly the SEPPs do not present any obstacles to the consideration or approval of the proposal.

4.3 Regional Plans and Strategies

The following regional plans and strategies apply to the area:

4.3.1 Central West and Orana Regional Plan 2041

The vision of the plan is

A healthy, connected and resilient region, with a prosperous economy.

The development is consistent with this vision, as it contributes to economic diversity and also takes advantage of a reasonably central location within NSW.

The opportunities identified for Midwestern Regional Council, which is within the Orana sub-region, are:

- making available diverse, sustainable, adaptable and affordable housing options through effective land use planning
- respecting and enhancing the historic character and aesthetic appeal of the towns and villages within the Region
- providing infrastructure and services to cater for the current and future needs of our community
- supporting the attraction and retention of a diverse range of businesses and industries
- working with key stakeholders to minimise the impacts and leverage opportunities of State Significant Development
- identifying opportunities for Mid-Western Regional Council as the wider region's economy diversifies, significant investment occurs in the Central–West Orana REZ and leveraging its accessibility to the Hunter Valley and Dubbo

The development would contribute to the tourism industry, while not causing any impediment to agribusiness or mining. Tourism is seen to be a developing feature of the area, with additional tourism being generated in future years on the back of emerging markets. While there is no explicit tourism target market with the development, it is anticipated that it would continue to attract similar numbers of domestic visitors. Organised tours may be a possibility in the future, although there are no current plans for these.

The development is reviewed against the relevant objectives of the Plan:

Objective 10 – Protect Australia's first Dark Sky Park

Although Mid-Western Council has not adopted the relevant LEP clause, this is an important aspect of the development, which reinforces the Dark Sky Park concept. It is considered that representations should be made to Council to incorporate the Dark Sky clause in the LEP. Representations should also be considered to the Department of Planning and Environment to implement a sub-radius around Wiruna. The current clause is:

5.14 Siding Spring Observatory—maintaining dark sky

- (1) The objective of this clause is to protect observing conditions at the Siding Spring Observatory by promoting lighting practices that minimise light pollution.
- (2) **Light emissions—general considerations for all development.** Before granting development consent for development on land to which this Plan applies, the consent authority must consider whether the development is likely to adversely affect observing conditions at the Siding Spring Observatory, taking into account the following matters—
 - a) the amount and type of light to be emitted as a result of the development and the measures to be taken to minimise light pollution,
 - b) the impact of those light emissions cumulatively with other light emissions and whether the light emissions are likely to cause a critical level to be reached,

- c) whether outside light fittings associated with the development are shielded light fittings,
- d) the measures to be taken to minimise dust associated with the development,
- e) the *Dark Sky Planning Guideline* published in the Gazette by the Planning Secretary.

(3) **Development on land within 18 kilometres of observatory.** Development consent is required for all lit development on land less than 18 kilometres from the Siding Spring Observatory.

(4) The consent authority must consult with the observatory director before granting development consent to lit development on land less than 18 kilometres from the Siding Spring Observatory.

(5) The consent authority must not (except with the concurrence of the Planning Secretary) grant development consent to development on land less than 18 kilometres from the Siding Spring Observatory if the consent authority considers that the development is likely to result in any one or more of the following—

- (a) an outside light fitting other than a shielded light fitting,
- (b) an outside light fitting emitting light of more than—
 - (i) if the development is on land less than 12 kilometres from the Siding Spring Observatory—900 lumens, or
 - (ii) in any other case—1,800 lumens,
- (c) more than 4 shielded outside light fittings,
- (d) light of more than 7,200 lumens being emitted.

(6) The consent authority must not grant development consent to lit development on land less than 18 kilometres from the Siding Spring Observatory unless the consent authority is satisfied that the development will incorporate designs that minimise light pollution and measures that will prevent the escape of light at night through skylights, windows or other openings.

(7) **Development on land 18 kilometres or more from observatory.** The consent authority must not (except with the concurrence of the Planning Secretary) grant development consent to development on land that is 18 kilometres or more from the Siding Spring Observatory if the consent authority considers that the development is likely to result in the emission of light of 1,000,000 lumens or more.

(8) The consent authority must consult with the observatory director before granting development consent to development for the purposes of a dwelling house, secondary dwelling or dual occupancy on land that is 18 kilometres or more from the Siding Spring Observatory if the consent authority considers that the development is likely to result in a dwelling having—

- (a) an outside light fitting other than a shielded light fitting, or
- (b) more than 7 shielded outside light fittings or more than 5 such light fittings that are not automatic light fittings.

(9) The consent authority must consult with the observatory director before granting development consent to development (other than development for the purposes of a dwelling house, secondary dwelling or dual occupancy) on land that is 18 kilometres or

more from the Siding Spring Observatory if the consent authority considers that the development is likely to result in the emission of light of 50,000 lumens or more.

(10) **Granting concurrence.** The Planning Secretary must take the following into account in deciding whether to grant concurrence under this clause—

- (a) any comments made by the observatory director in relation to the development,
- (b) the effect the development would have on observing conditions at the Siding Spring Observatory,
- (c) the quantity of artificial light in the night sky measured through a telescope at the Siding Spring Observatory on or about the date the development application is made and the relationship of that level to the critical level,
- (d) whether any public interest in permitting the development outweighs the public interest in preserving the observing conditions at the Siding Spring Observatory.

(11) A reference in this clause to light emitted as a result of development for the purposes of a building or work includes light emitted from any other building or work that is to be used as part of or in connection with that building or work.

(12) A requirement in this clause to consult with the observatory director in respect of development is a requirement to give written notice of the development to the observatory director and to take into account any comments received from the observatory director within 21 days after the notice is given.

(13) Clause 4.6 does not allow development consent to be granted for development that would contravene this clause.

(14) In this clause—

automatic light fitting means a light fitting that is activated by a sensor and switches off automatically after a period of time.

critical level means the level at which the quantity of artificial light in the night sky measured through a telescope at the Siding Spring Observatory is greater than—

- (a) if the telescope is inclined at 30 degrees from the horizon—10% of the surface brightness of the night sky attributable to natural light sources, at the time of the solar cycle when the sky is at its darkest, or
- (b) if the telescope is inclined at 90 degrees from the horizon—3% of the surface brightness of the night sky attributable to natural light sources, at the time of the solar cycle when the sky is at its darkest.

horizontal plane, in relation to a light fitting, means the horizontal plane passing through the centre of the light source (for example, the bulb) of the light fitting.

light pollution means brightening of the night sky caused by artificial light.

lit development means development that is likely to result in the emission of light.

observatory director means the Director of the Research School of Astronomy and Astrophysics at the Australian National University.

outside light fitting means a light fitting that is attached or fixed outside, including on the exterior, of a building.

shielded light fitting means a light fitting that does not permit light to shine above the horizontal plane.

Siding Spring Observatory means the land owned by the Australian National University at Siding Spring and the buildings and equipment situated on that land.

(15) This clause is a compulsory provision for the purposes of clause 4A of the *Standard Instrument (Local Environmental Plans) Order 2006*.

The area of the Dark Sky Park is shown in the Figure from the Regional Plan following:



Figure 4-2 – Dark Sky Park (Regional Plan Extract)

Objective 22: Support a Diverse Visitor Economy

As mentioned above, the development would make a modest contribution to tourism.

4.3.2 Midwestern Regional Economic Development Strategy

The development is consistent with the first aim of the Strategy, which is:

Develop a Mature and Diversified Tourism Sector recognising the Region's strong and mature winery reputation and building a diverse offering including sports and heritage tourism.

in that it provides diversity in the regional visitation experience. Experience tourism is strongly supported by the strategy and consideration is being given to limited tours for visitors outside the Society. These would be dependent on the capacity of the organisation to provide volunteer guides on-site. During the Star Party a number of non-members attend.

In summary, the development is not inconsistent with the strategy and consideration is being given to increased involvement in the tourism sector.

4.4 Midwestern Regional Local Environmental Plan 2012

The proposal is subject to Midwestern Regional LEP 2012. Issues of permissibility and characterisation have been addressed in Section 4.1 of this report and accordingly this section will address other specific clauses of the LEP.

Clause 5.11 – Bushfire Hazard Reduction

This does not require consent, and is undertaken to manage fuel loads on the property in accordance with the Wiruna Bushfire Emergency Management and Evacuation Plan. This is particularly the case for the managed woodland area, as shown on the plans.

Clause 5.14 – Siding Spring Observatory – Maintaining Dark Sky

It is noted that this clause has not been adopted within the LEP. It is suggested that Council give consideration to the protection of dark sky assets within the local government area.

Clause 6.4 – Groundwater Vulnerability

The development is not affected by this clause, being well outside the mapped areas.

Clause 6.5 - Terrestrial Biodiversity

The timbered portions of the site are generally identified as being the subject of this clause, as indicated on the overlay map Figure 3-3. The land is of moderate, rather than high sensitivity. The core provisions of the clause, together with responses are outlined below:

- (1) The objective of this clause is to maintain terrestrial biodiversity by:
 - (a) protecting native fauna and flora, and
 - (b) protecting the ecological processes necessary for their continued existence, and
 - (c) encouraging the conservation and recovery of native fauna and flora and their habitats.

Comment: The vast majority of the site is not identified for active use. This consists of all the areas identified as “moderate biodiversity sensitivity” with the exception of the eastern-most portion, which is utilised for informal camping. This eastern portion is defined by the existing fire break.

- (2) This clause applies to land identified as “Moderate Biodiversity Sensitivity” or “High Biodiversity Sensitivity” on the [Sensitivity Biodiversity Map](#).

Comment: The land is mapped as “moderate”.

- (3) Before determining a development application for development on land to which this clause applies, the consent authority must consider:
 - (a) whether the development is likely to have:
 - (i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and
 - (ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and
 - (iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and

- (iv) any adverse impact on the habitat elements providing connectivity on the land, and
- (b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

Comment: By maintaining the vast majority of the site under natural systems, the development maintains the ecological value and significance of fauna and flora on the land. No specific species of concern are currently known to exist on the land.

It is proposed that the unutilised portions of the site be under active management, in particular to monitor and address any noxious weeds, together with undertaking controlled burn activities in a “patchwork” fashion to mimic prior systems operating on the land.

The only areas of disturbance are the proposed area for minor tree lopping to obtain and maintain good view angles from the observing areas; and secondly, the informal camping area, which is both defined by and protected by a firebreak. These areas are on the periphery of the woodland areas of the site, and in the case of the camping area consist of a projection from the main woodland area with grazing country on three sides.

No aspects of the development would interfere with, or weaken potential wildlife corridors on the land.

The following measures are proposed for the management of the areas of the land under natural systems:

1. Restrict development to already cleared, or partially cleared areas with the exception of minor tree lopping (as shown on Plan 6) to facilitate view angles from main observation area (refer Plan 6) and to manage vegetation within the existing camping area and associated firebreak.
 2. Restrict informal camping to the area east of the firebreak and in the immediate proximity of the existing dwelling.
 3. Undertake controlled burning, in conjunction with the RFS to moderate fuel loads, including in the informal camping area, and to promote biodiversity in the balance of the site. (See Wiruna Burnoff Report 2018, Document E).
 4. Nominate the core vegetated areas of the site as an area to be conserved as shown on Plan 1 Existing Overall Property Usage Diagram.
 5. Actively manage noxious weeds, in conjunction with biodiversity officers in the area.
- (4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:
- (a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or
 - (b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or
 - (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

Comment: The development is largely existing, and any proposed additional structures would be located on already cleared areas of the site. As the site is largely developed, the focus is on mitigation of environmental impacts.

In summary, the key management tools are:

1. Limit access to and the use of undisturbed areas of the site except as required for active site management including inspection and treatment of noxious weeds and vegetation fuel load management.
2. Maintain waste disposal systems, in particular the on-site sewage treatment facility and grey water soak-away in good order so as to avoid any free surface water and also to avoid the spread of any pathogens
3. Remove all solid waste from the site, rather than being burned or buried on the site.
4. Keep vehicle use to defined tracks and areas, noting that vehicle use would occur on grassed areas used with the star party camping area (mixed weekend camping area, temporary shown on Plan 1).
5. Manage the use of fire on the site, in particular to ensure that regular controlled burning is conducted to manage fuel loads and promote biodiversity; and ensure that any campfires are:
 - a. Located in constructed campfires with a clear curtilage of 3 metres, or are in cleared areas of land with a managed grass curtilage of 3 metres
 - b. Attended at all times when alight.
 - c. Actively extinguished to “cool ash” condition.
6. Maintain, develop and update, through a continuous review model, management plans for the site, including:
 - a. Wiruna Bushfire Emergency Management and Evacuation Plan
 - b. Wiruna Property Management Plan
 - c. Star Party Management Plan.
7. Ensure thorough and consistent site induction processes occur for members and visitors as set out in the Management Plans.

Clause 6.9 – Essential Services

This clause requires the provision of various essential services as part of any development approval. Set out below is the servicing strategy for the site, presented against the relevant service headings:

- (a) the supply of water,

Comment: Potable water is supplied from roof-water, captured in tanks. Water supplies are regularly tested, in particular prior to events, to ensure water quality is acceptable for human use. “First flush” diverters are to be utilised on tanks used for potable water supply. Water is also collected and stored for bushfire purposes, specifically from the main hall and the farm dwelling roofs. The bushfire fighting water would be a dedicated supply. In the case of a severe or prolonged drought, water would be trucked in to meet the demands of a major event such as the Star Party. Water supplies are also available from the on-site dam for firefighting and other similar non-potable purpose.

- (b) the supply of electricity,

Comment: The property is not connected to the grid, but is served by solar power with portable generators used for supplementary power as required. This has proven adequate in the past.

- (c) the disposal and management of sewage,

Comment: Sewage is managed predominantly through an existing on-site sewage treatment facility that serves the main amenities buildings adjoining the main hall. This has received development consent, but it is understood has not been licensed under the Local Government Act. It is proposed that this be rectified as part of the current application.

The approved dwelling also includes an on-site waste disposal facility. It is not known if this has been licensed under the Local Government Act.

There is also a “long drop” toilet facility on-site, on the edge of the woodland area. This is utilised predominantly when the Star Parties are held. It both provides a supplementary facility, and avoids excessive “shock loads” on the on-site treatment facility. The “long drop” is not in an area of groundwater sensitivity and is well-removed from farm dams or waterways, with the nearest being some 125m away, to the south, and not down-slope. The nearest down-slope open waterway is a dam on the property itself, which is some 120m away from the grey water soak-away and some 190m from the on-site waste disposal facility soak-away trench.

(d) stormwater drainage or on-site conservation,

Comment: Most roof water is captured for either potable water supplies or for firefighting. Other water is disposed of away from the structures, so as not to affect building footings.

(e) suitable road access.

Comment: The property has good public road access, with the main access being from Ilford, thence via the Tara Loop Road, and Old Ilford Road. Old Ilford Road extends to the south-west, ultimately re-joining the Ilford-Solfala Road. Access to the property is via a well-constructed internal driveway along the northern boundary together with various internal access roads within the core activity area of the site. These are all-weather and are easily traversed by two-wheel drive vehicles.

A secondary track, in part through a neighbouring property, though protected by a right-of-way, provides access to the farmhouse and thence to the brow of the hill of the secondary observation area. These tracks are traversable using a two-wheel drive vehicle. Issues of vehicular access are further reviewed in the Wiruna Bushfire Emergency Management and Evacuation Plan for the site.

4.5 Development Control Plans

The proposal is subject to the Midwestern Regional DCP 2013 (Amendment 5). The relevant clauses together with commentary are outlined below:

Part 5 Development Standards

5.1 Car Parking

The use is not a nominated use in terms of parking standards. In practice, parking demands are minimal, except when the site is utilised for events. For smaller events (i.e the monthly new-Moon weekends), parking is allowed where convenient, including the gravelled area near the meeting hall, clear areas within the managed woodland adjacent to semi-permanent caravans and tents, and on open grassed areas including the Main Observing Field and adjacent to the dwelling.

For the Star Party, parking is as above with the parking of camp vehicles restricted to the camping area closest to Old Ilford Road. Vehicles are not to be parked on the Main Observing Field.

During the Star Party, all vehicle parking is managed by marshals, as outlined in the Star Party Event Management Plan. Parking spaces for persons with disabilities may

be reserved at any time, by arrangement, in the vicinity of the Meeting Hall. The spaces would comply with Australian Standard 2890.

5.2 Flooding

The site is not known to be prone to flooding, being just off the minor ridge along which Old Ilford Road runs.

5.3 Stormwater Management

The rural nature of the site minimises the need for stormwater management. Roof water flows are generally captured for use as potable water or for firefighting, and other minor discharges are taken sufficiently clear of buildings to avoid risk to footings.

Minor overland flow from the internal road network is known to occur, in particular around the kitchen and eating shelters, however this is managed through a catch-drain.

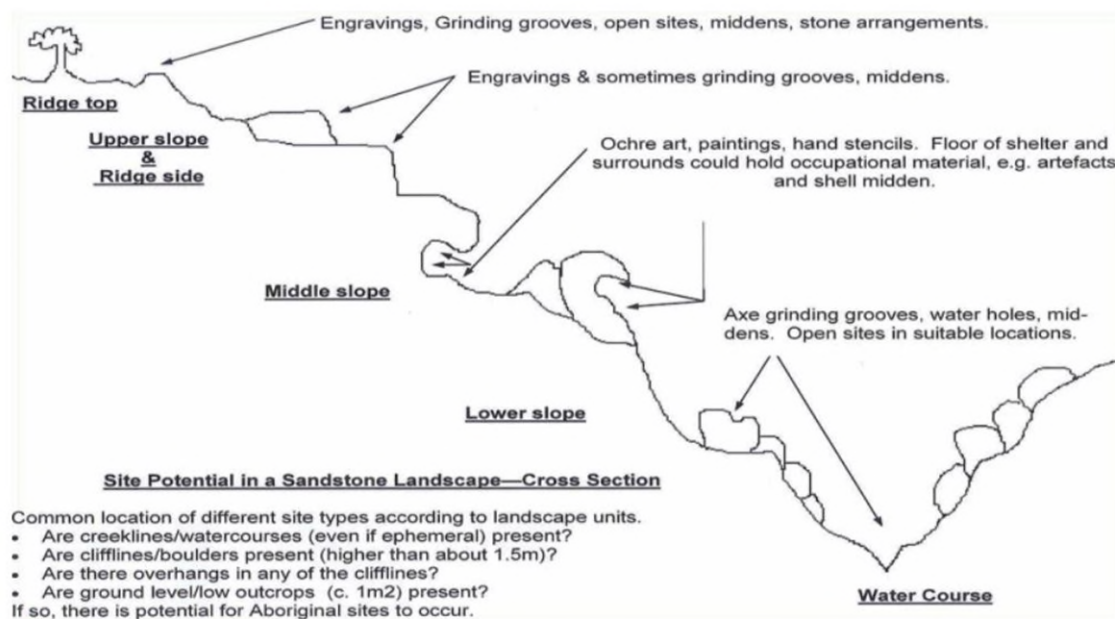
5.4 Environmental Controls

Aboriginal Archaeology

Consideration has been given to the likelihood of Aboriginal archaeological relics on the site. This was reviewed using the Office of Environment and Heritage Aboriginal Sites Decision Support Tool and the website from the Aboriginal Heritage Office “Identifying Aboriginal Sites”¹. Although predominantly intended for a regional scale review, the tool does provide some broad-brush indications of likelihood.

The areas of the site under or proposed for active use were visually reviewed against the “Identifying sites” exemplars provided on the Aboriginal Heritage website “Identifying Aboriginal Sites”.

The existing and proposed development areas are located well away from watercourses, and have been utilised in the past for agricultural purposes. The likelihood of such relics is considered low. The site is not located on a major ridge, and is therefore considered unlikely to contain open sites. There are no cliff-lines, overhangs or significant rock outcrops occurring. (See the Figure following for site potential principles).



¹ <http://www.aboriginalheritage.org/sites/potential/> accessed 12 August 2018.

Figure 4-3 – Identifying Aboriginal Sites

Bushfire Management

The site has significant bushfire hazard, due to the density of vegetation. A comprehensive Bushfire Report is attached (Document A) and the Bushfire Emergency Management and Evacuation Plan (Document B). The key elements to bushfire management are as follows:

1. Evacuation is the main management tool, in accordance with the protocols in the Wiruna Bushfire Emergency Management and Evacuation Plan. Triggers are a total fire ban, a Catastrophic fire danger, or a fire event within the vicinity of the site. On exiting the property via the main driveway, two evacuation paths exist via the public road system to reach Ilford Sofala Road, one north, and one south with the northernmost path preferred as the southern route is convoluted and of poor quality (refer diagram in the Wiruna Bushfire Emergency Management and Evacuation Plan).
2. The main hall has been configured as a defendable refuge, in the event that evacuation is not possible. The building is to have an Asset Protection Zone (APZ) of 40m. The building has been upgraded to BAL 12.5 under AS 2939.
3. With the exception of the main hall, no buildings or structures are expected to be defended. This includes the farmhouse, except during events. The farmhouse access requirements are not in accordance with Planning for Bushfire Protection although with its use as accommodation and a “camping node” during events, it may need to be able to function as a refuge. Accordingly, the house is proposed to be upgraded to BAL 29 on the aspect facing the main fire source feature and BAL 12.5 elsewhere with an Asset Protection Zone (APZ) of 40m.

All recommendations of the Wiruna Bushfire Report are recommended for incorporation as conditions of consent, and into the relevant Management Plans.

The development has been reviewed under Section 4.46 (was Section 91) of the Environmental Planning and Assessment Act, 1979. The site does not trigger the requirements for integrated development under the *Rural Fires Act 1997* as no subdivision is proposed. Further, the use of the land is not a trigger under special fire protection purposes as set out in Section 100B. Clause 47 of the *Rural Fires Regulation 2022* was also reviewed. The development does not include any of the prescribed purposes under this Clause. Accordingly, no Bushfire Safety Authority is required.

Riparian and Drainage Lines

Riparian and drainage lines are identified from the 1:25000 topographic map. All streams shown on the map were reviewed, and no part of the development would encroach within 40m of the bank of a stream. See the Figure following.



Figure 4-4 – 40m Riparian Buffer

Accordingly, the proposal does not consist of integrated development and no water use approval, water management work approval or activity approval are required under *Water Management Act, 2000*.

Pollution and Waste Management

Waste streams consist of the following:

1. Sewage – this is disposed of either through one of the on-site waste management systems or, alternatively, through a “long drop” toilet facility.
2. Grey Water – Kitchen – this is disposed of through a rubble soak-away facility in the vicinity of the kitchen shelter.
3. Food scraps – These are disposed of through bagging and removal off-site to an approved waste management facility.
4. Recyclables – These include paper, cardboard, and identified plastic and glass containers. Where these have a deposit refund, they are disposed of through a collection centre where refunds are issued. Otherwise, they are disposed of as recyclables through an approved waste management facility.
5. Other general waste – This is bagged and disposed of to an approved waste management facility.

The site is not mapped as being within an area of ground water vulnerability.

Threatened Species and Vegetation Management

This is managed under the Biodiversity Conservation Act, 2016. The fundamental approach taken is consistent with the Act being “avoid, minimise, offset”.

No trees are proposed for removal as part of this application apart from the necessary APZ clearing. Limited lopping, to achieve a 5-degree view angle, is proposed in the vicinity of the main observing area, as shown on Plan 6. These areas total less than 1 hectare.

Further, with the exception of the informal camping area, within the bushland protected by the firebreak, no portions of the development would be occurring on timbered portions of the site. A review of rare and endangered species has been undertaken, and there are no known triggers for these, or for endangered ecological communities under the Federal environmental legislation. Accordingly, it is submitted that a formal flora and fauna study is not required as part of the application.

The proposal to retain and manage the bulk of the site in a natural condition provides a very substantial offset for the minor areas of affected vegetation.

Building in Saline Environments

The proposed garage and bunkhouse are to be slab on ground development. A general site walk was undertaken in accordance with “*Site Investigations for Urban Salinity (2002)*” No evidence of saline soils has been detected on-site in terms of impacts on existing structures nor by way of “scalds” or similar on any areas of the site. No vegetation die back was observed. Further, there is no evidence of shallow groundwater.

On the basis of the initial review, it is considered that the salinity risk of the property is low.

Part 6 Development in Rural Areas

6.4 Tourist and Visitor Accommodation

For clarity, it is confirmed that the accommodation on the site is ancillary to the primary use, and not a use in its own right. In particular, the bunkhouse and camping accommodation is required only to support the use of the site for an Environmental Facility and not for any other purpose. In particular, the accommodation is not utilised for commercial purposes, but is for the sole use of members and their invited visitors.

4.6 Other Merit Considerations

4.6.1 Event Management

The proper management of events is a key element in the safe operation of the site, and operating the site in a way that minimises environmental and amenity impacts. Event management is outlined in the Wiruna Property Management Plan (for smaller events) and the Star Party Event Management Plan for the annual Star Party. These are provided in Documents C and D.

The conceptual approach taken to these management plans is that of continuous review. They are “living documents” that are updated on an annual basis to reflect both evolving best practice and also to incorporate experiences gained from each event.

4.7 The suitability of the site for the development

On the basis of the reports and investigations provided with this application the development is considered appropriate within the zone and context. Environmental and event management can be satisfactorily addressed and, accordingly, it is considered that the site is suitable for the proposed use.

4.8 Any submissions made in accordance with this Act or the regulations

At the time of lodgement of this application, no written submissions have been made. Any submissions made during any notification period would be addressed.

4.9 The public interest

There is considerable attention being paid to promoting STEM subjects, in particular to school-age people. The Astronomical Society, as part of its operations, has a strong focus on educating its members in both natural systems and also the use of equipment necessary to study those systems. For example, many members construct their own

telescopes and also design and develop ancillary systems. This educational role is strongly in the public interest as it supports the development of an interest in science and natural systems.

The public interest is also served through the gathering in the area, on a regular basis, of members of the Society and their invited guests. This provides a base of regular visitation to the region, with the attendant benefits to the local economy.

5 Conclusions

The development represents a suitable use within the area and is considered worthy of planning support.

APPENDIX – List of Accompanying Plans and Documents

Plans

1. Existing Overall Property Usage Diagram
2. Existing Property Detail A
3. Existing Property Detail B
4. Existing Property Detail C
5. Detail D – Proposed New Development
6. Lopping Zones
7. Elevations (typical)

Documents

- A. Wiruna Bushfire Report
- B. Wiruna Bushfire Emergency Management and Evacuation Plan
- C. Wiruna Property Management Plan August 2021
- D. Star Party Event Management Plan August 2021
- E. Wiruna Burnoff Report Aug 2018
- F. South Pacific Star Party Information 2019
- G. Wiruna Sites Policy 2020
- H. Safety Flip Chart
- I. Wiruna Safety Information Brochure 2021
- J. Main Observing Field Management Plan 2023