STATEMENT OF ENVIRONMENTAL EFFECTS

UPGRADE OF SERVICES FOR THE MERRITTS MOUNTAIN HOUSE RESTAURANT
THREDBO ALPINE RESORT
KOSCIUSZKO NATIONAL PARK

MARCH 2022

Project: 59-21

Dabyne Planning Pty Ltd

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This report has been prepared by:

Ivan Pasalich
Principal
Dabyne Planning Pty Ltd

MARCH 2022

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1. INTRODUCTION

Dabyne Planning Pty Ltd has been engaged by Event Hospitality & Entertainment Pty Ltd (Event) to prepare a Statement of Environmental Effects to accompany a Development Application (DA) to the NSW Department of Planning & Environment.

The DA relates to the proposed upgrade of services including water, sewer and electricity for the approved Merritts Mountain House restaurant (MMH) redevelopment, Thredbo Alpine Resort.

The MMH redevelopment was approved in June 2019 under DA 9757.

The proposed services are located predominantly within an access road corridor and within previously disturbed land with a small area of native vegetation to be disturbed. The proposed works are required to provide improved water supply to the redeveloped restaurant, upgraded sewer pipeline and electrical supply to the UV water treatment building, which is proposed to be extended as part of the project.

The location of the upgraded services has been reviewed by an Accredited Ecologist, Aboriginal Archaeologist and Geotechnical Engineer and are considered to comprise of minimal impacts and are acceptable to proceed as proposed.

A detailed description of the proposal is provided in Section 3 of the report.

The purpose of this SEE is to:

- describe the land to which the DA relates.
- describe the form of the proposed works.
- define the statutory planning framework within which the DA is to be assessed and determined; and
- assess the proposed development against the matters for consideration listed under Section 4.15(1) of the Environmental Planning and Assessment Act, 1979 (EP&A Act, 1979).

2. THE SITE AND LOCALITY

2.1 The Locality

The subject site is located within the Thredbo Alpine Resort, approximately 35kms from Jindabyne. Access to the resort is achieved via the Alpine Way.

The location of Thredbo is illustrated in context with the regional locality below:

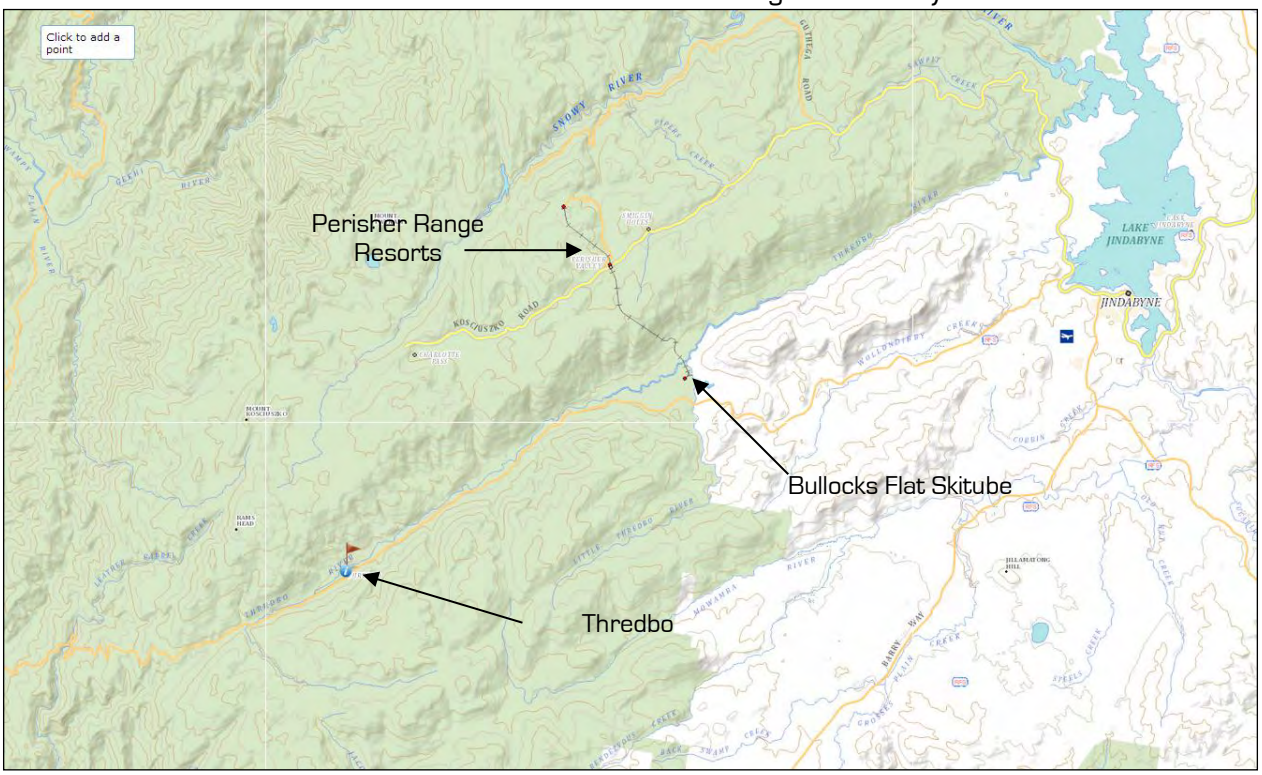

Figure 1: Context of the site within the Region

2.2 The Site

The MMH is located at the bottom of the Merritts ski area and Cruiser Chairlift and at the top of the recently installed Merritts Gondola.

The approved redeveloped restaurant will be located in the same location as the current restaurant, with a larger footprint.

The Merritts access road provides vehicle access to the site from the Friday Flat area and Friday Drive.

The proposed upgrades services are predominantly located within the access road corridor.

The location of these works is illustrated in figure's 2 & 3 below, with photos provided in Appendix A.

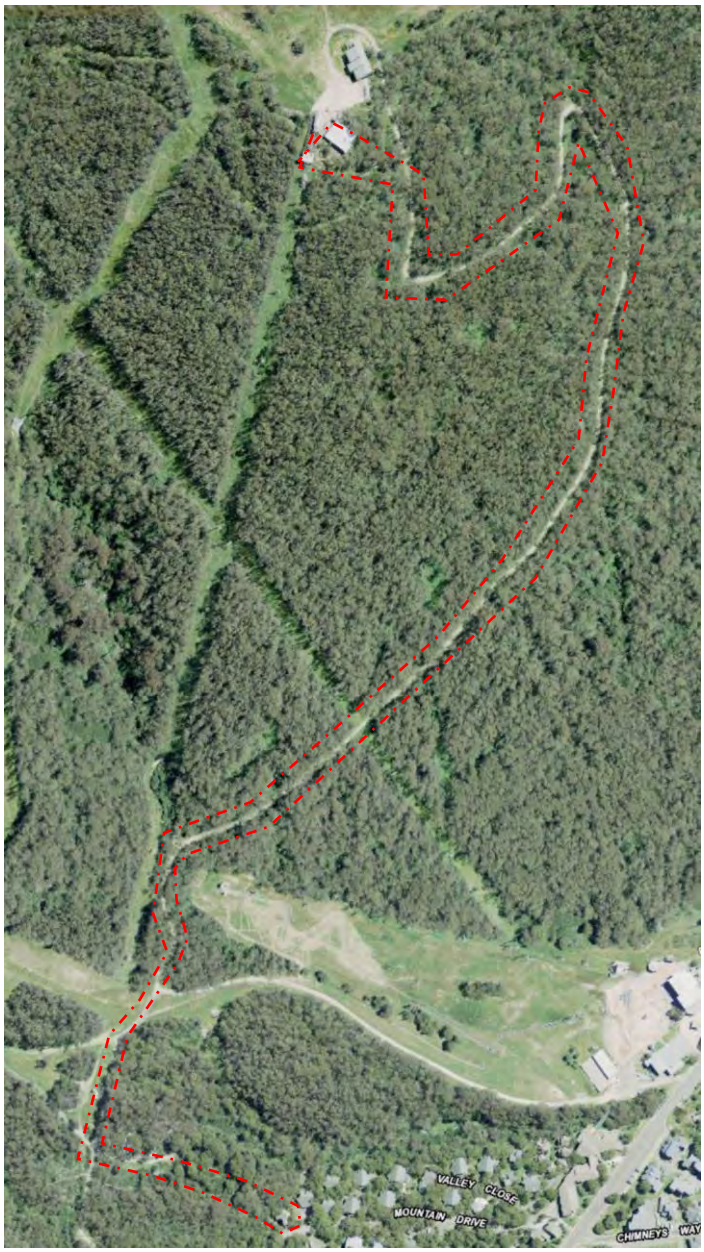

Figure 2: Location of the subject works in relation to the resort

The proposed extension to the existing UV water treatment building is identified in figure 3, located on its uphill western side.

Figure 3: Location of the proposed extension to the UV water treatment building

3. DESCRIPTION OF THE DEVELOPMENT

3.1 General Description

The purpose of the development is to upgrade the services to the MMH in anticipation for its redevelopment, as approved under DA 9757.

Upgraded Water Supply:

To provide an improved and reliable water supply to the redeveloped MMH, a new water pipeline is proposed between the current UV water treatment building and the restaurant.

The water supply pipe will be 100mm in diameter.

The location of the proposed upgraded water pipeline is shown in the Site Plans provided separately with the DA, with photos provided in Appendix A.

Upgraded Sewer Pipeline:

To provide an upgraded sewer pipeline from the redeveloped MMH into the existing sewer pipeline, the section of sewer pipeline between the restaurant building and High Noon Ski Run is proposed to be replaced with a 75mm pipe.

The sewer pipeline will be installed within the same trench as the water pipeline.

Two additional conduits for other services will be installed within the same trench to further limit impacts on the environment for future services.

The location of the proposed upgraded sewer pipeline is shown in the Site Plans provided separately with the DA, with photos provided in Appendix A.

Upgraded Electricity Supply:

The extension of the UV water treatment building for additional pump equipment requires an upgraded electricity supply, that will remain in ownership of KT (not Essential Energy). The proposed electricity cable will be installed underground and follow the previously disturbed corridor down to Merritts Creek.

The existing pedestrian bridge over the creek will be utilised so that the creek is not impacted. On the eastern side of the creek, the upgraded electricity will be located within disturbed land adjacent to the road and chalet and connect into the existing electricity pillar.

The trench for the electricity mains is only small at 300mm x 600mm in depth. The width of the disturbance will be up to 4m through this corridor.

The location of the proposed upgraded services and the pedestrian bridge are shown in the Site Plans provided separately with the DA and the photos provided in Appendix A.

Extension of the UV Water Treatment Building:

The existing UV water treatment building is required to be extended to accommodate the additional pump equipment. The building will be extended to the west (high side) and will be 3.5m x 3.88m, covering 13.58m^2. The building will be clad in Colorbond to match the existing building.

3.2 Construction Timing

The proposed construction timing of the project has been scheduled to start in October 2022 and be completed by the end of April 2023. This is critical to the operation of the resort for the 2022/23 summer.

3.3 Access

Access to the site is achieved via the existing summer access road.

4. KEY MATTERS FOR CONSIDERATION

4.1 Fauna and Flora

The proposed works are located predominantly within highly disturbed access corridors. Where the works are not located within the access roads, they have been designed to follow partly disturbed corridors, only impacting upon approximately 100m^2 of native vegetation (entirely Sub-Alpine Woodland).

These impacts have been assessed by Ryan Smithers, Senior Ecologist, Eco Logical Australia with correspondence provided in Appendix B.

This assessment has identified that *'proposal will not result in any substantial adverse impacts on native vegetation communities or associated fauna habitats, nor will there be any impacts on flora species of conservation significance, important fauna habitats, habitat connectivity or any other biodiversity values of conservation significance'*.

The assessment concluded that the *'proposed works will not result in any adverse impacts on threatened species, populations or ecological communities and will not have a significant impact on these entities pursuant to the NSW Biodiversity Conservation Regulation 2016 or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999'*.

4.2 Aboriginal Cultural Heritage

An 'Aboriginal Cultural Heritage Due Diligence Assessment' has been undertaken by Past Traces Heritage Consultants, which is provided in full in Appendix C.

The assessment was undertaken following the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales produced by the NSW Office of Environment and Heritage (OEH). The Due Diligence process was followed to ensure compliance with the code.

This process included a search of the AHIMS database covering 1km surrounding area centred on the project area, a review of previous studies, a landscape assessment and a site visit.

Based on the assessment the impacts from the project were identified as follows:

- No known Aboriginal objects or places will be impacted by the proposed works.
- No known Aboriginal objects or places are present in the project area.
- No areas of high potential to contain unrecorded Aboriginal objects or places are present in the project area.

In conclusion, the report determined that the proposal can proceed with no additional archaeological investigations and that no area of potential archaeological deposits or heritage sites have been identified within the development area and the potential for Aboriginal objects within the development area has been assessed as low.

5. ENVIRONMENTAL AND PLANNING LEGISLATION

5.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

5.1.1 SECTION 4.15(1)(a)(i) – ENVIRONMENTAL PLANNING INSTRUMENTS

The only applicable Environmental Planning Instrument to the proposed development and site is State Environmental Planning Policy (Precincts – Regional) 2021 (SEPP Regional Precincts). The relevant clauses contained within SEPP Regional Precincts and Chapter 4 Kosciuszko National Park and alpine resorts are addressed below:

Section 4.9 - Land Use Table:

The land use table for Thredbo Alpine Resort specifies that a *'food outlet'*, is permissible with consent.

This is defined as:

Food outlet *means premises, such as a restaurant or café, in which meals or light refreshments are served to the public for profit or reward, including such premises that are used for live entertainment or dancing.*

The MMH is a food outlet as defined and is therefore permissible with consent. Accordingly, the provision of upgraded services to a food outlet is permissible.

Section 4.12 - Matters for consideration:

Matter for Consideration	Response
S.4.12 (1) In determining a development application that relates to land to which this Chapter applies, the consent authority must take into consideration any of the following matters that are of relevance to the proposed development—	
(a) the aim and objectives of this Chapter, as set out in section 4.1,	*The proposed upgraded services are considered to be consistent with the aims and objectives of the Policy.*
(b) the extent to which the development will achieve an appropriate balance between the conservation of the natural environment and any measures to mitigate environmental hazards (including geotechnical hazards, bush fires and flooding),	*The proposed development does not require any measures to mitigate environmental hazards that would impact on the conservation of the natural environment.*

(c) having regard to the nature and scale of the development proposed, the impacts of the development (including the cumulative impacts of development) on the following— (i) the capacity of existing transport to cater for peak days and the suitability of access to the alpine resorts to accommodate the development, (ii) the capacity of the reticulated effluent management system of the land to which this Chapter applies to cater for peak loads generated by the development, (iii) the capacity of existing waste disposal facilities or transfer facilities to cater for peak loads generated by the development, (iv) the capacity of any existing water supply to cater for peak loads generated by the development,	*The proposed upgraded services allow for the existing water and sewer services to be replaced and upgraded. This provides improved water security to the redeveloped restaurant and better sewer connection.* *This will not impact upon the overall capacity of the reticulated effluent management system or existing water supply for the resort.*
(d) any statement of environmental effects required to accompany the development application for the development,	*This Statement of Environmental Effects satisfies this sub-clause.*
(e) if the consent authority is of the opinion that the development would significantly alter the character of the alpine resort—an analysis of the existing character of the site and immediate surroundings to assist in understanding how the development will relate to the alpine resort,	*The proposed upgraded services are considered compatible with the existing resort infrastructure and consistent with the existing character of the site, being a ski resort.*
(f) the Geotechnical Policy—Kosciuszko Alpine Resorts (2003, Department of Infrastructure, Planning and Natural Resources) and any measures proposed to address any geotechnical issues arising in relation to the development	*A Form 4 Certificate has been prepared by a Geotech Engineer and will be provided separately with the DA.*
(g) if earthworks or excavation works are proposed—any sedimentation and erosion control measures proposed to mitigate any adverse impacts associated with those works,	*Excavation works are required for the trenching of the services and the additions to the UV water treatment building. Sedimentation and erosion control measures as outlined in the SEMP provided separately, will mitigate any adverse impacts associated with such works.*
(h) if stormwater drainage works are proposed—any measures proposed to mitigate any adverse impacts associated with those works,	*No stormwater drainage works are required as part of the proposed works. Only the small extension to the UV water treatment building will disperse rainwater to the ground.*

(i) any visual impact of the proposed development, particularly when viewed from the Main Range,	*The only visible component of the proposal is the small extension to the UV water treatment building. This has been designed to be compatible with the existing building.* *The building is not visible from the main range due to its location.*
(j) the extent to which the development may be connected with a significant increase in activities, outside of the ski season, in the alpine resort in which the development is proposed to be carried out,	*The proposed works will not increase activities outside of the ski season.*
(k) if the development involves the installation of ski lifting facilities and a development control plan does not apply to the alpine resort: (i) the capacity of existing infrastructure facilities, and (ii) any adverse impact of the development on access to, from or in the alpine resort,	*The development does not involve the installation of a ski lift.*
(l) if the development is proposed to be carried out in Perisher Range Alpine Resort: (i) the document entitled Perisher Range Resorts Master Plan, as current at the commencement of this Policy, that is deposited in the head office of the Department, and (ii) the document entitled Perisher Blue Ski Resort Ski Slope Master Plan, as current at the commencement of this Policy, that is deposited in the head office of the Department,	*Not applicable.*

(m) if the development is proposed to be carried out on land in a riparian corridor: (i) the long term management goals for riparian land, and (ii) whether measures should be adopted in the carrying out of the development to assist in meeting those goals.	*The proposed services upgrade located within the access road, will crossover a tributary to Merritts Creek, north-east of the Gondola Mid-Station.* *As the services will be wholly located within the road, then it will sit above the culvert, therefore not impacting upon the creek below.* *This location is shown in figure 4 below.* *Below the UV water treatment building, the electrical supply is required to be upgraded and cross Merritts Creek. To avoid direct impacts on the creek, the electrical conduit will be attached to the pedestrian bridge.* *This location is shown in figure 4 below.* *The proposed trenching will be required to be managed by sediment and erosion controls as set out in the SEMP provided separately.*
(2) The long term management goals for riparian land are as follows:	
(a) to maximise the protection of terrestrial and aquatic habitats of native flora and native fauna and ensure the provision of linkages, where possible, between such habitats on that land.	*Protection of terrestrial and aquatic habitats will be achieved by the location of the services within the road corridor (above the culvert) and use of the pedestrian bridge and implementing sediment and erosion controls as set out in the SEMP provided separately.*
(b) to ensure that the integrity of areas of conservation value and terrestrial and aquatic habitats of native flora and native fauna is maintained,	
(c) to minimise soil erosion and enhance the stability of the banks of watercourses where the banks have been degraded, the watercourses have been channelised, pipes have been laid and the like has occurred.	
(3) A reference in this clause to land in a riparian corridor is a reference to land identified as being in such a corridor on a map referred to in section 4.4.	

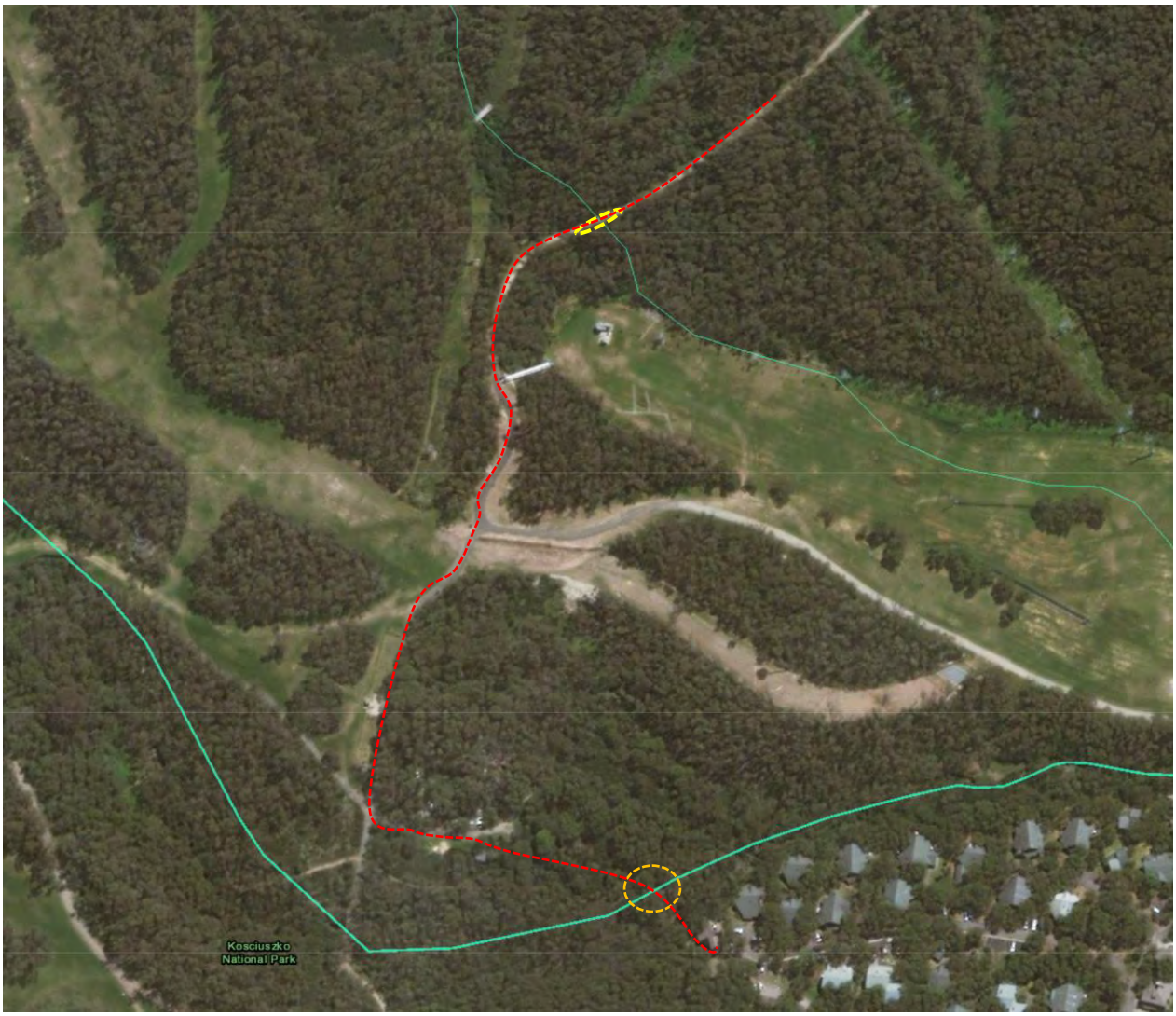

Figure 4: Location of the proposed services in relation to the mapped watercourses
(Source: Water Management (General) Regulation 2018 Hydroline Spatial Data 1.0 Map)

5.1.2 SECTION 4.15(1)(a)(ii) – DRAFT ENVIRONMENTAL PLANNING INSTRUMENTS

There are no draft Environmental Planning Instruments that are applicable to the site or proposed development.

5.1.3 SECTION 4.15(1)(a)(iii) – DEVELOPMENT CONTROL PLANS

There are no Development Control Plans applicable to the Kosciuszko Alpine Resorts under the SEPP Regional Precincts.

5.1.4 SECTION 4.15(1)(a)(iiia) – PLANNING AGREEMENTS

There are no Planning Agreements applicable to the Kosciuszko Alpine Resorts under the SEPP Regional Precincts.

5.1.5 SECTION 4.15(1)(a)(iv) – REGULATIONS

The development application has been made in accordance with the requirements contained in the Environmental Planning and Assessment Regulation 2021.

5.1.6 SECTION 4.15(1)(b) – LIKELY IMPACTS

Natural Environment:

The likely impacts from the proposed development on the natural environment are expected to be minimal given the highly disturbed nature of the majority of the services corridor and the partly disturbed nature where they are located outside of the access roads.

Built Environment:

The impacts on the built environment are expected to be minimal, as the infrastructure is predominantly underground and upgrades/ replaces the existing infrastructure already in place.

The only built structure is the extension to the UV water treatment building, which would have a minimal impact

Social and Economic impacts in the locality:

The social and economic impacts from the upgraded services are positive, by providing the redeveloped MMH both improved water and sewer connections, additional pumping equipment with upgraded electricity supply.

Without these upgrades, the redevelopment of the MMH would be limited.

5.1.7 SECTION 4.15(1)(c) – SUITABILITY OF THE SITE

The subject site is considered suitable for the proposed works.

5.1.8 SECTION 4.15(1)(d) –SUBMISSIONS

The proposed development is to be notified in accordance with the Departments Community Participation Plan.

5.1.9 SECTION 4.15(1)(e) – THE PUBLIC INTEREST

The above assessment has demonstrated that the proposal satisfies the objectives and relevant sections prescribed under Chapter 4 of the Regional Precincts SEPP.

Consequently, the proposed development is considered to be within the public interest.

5.1.10 SECTION 4.46 – INTEGRATED DEVELOPMENT

The proposed development is located within 40m of a watercourse known as Merritts Creek, and its tributary, as shown above in figure 4.

As the works are located within waterfront land of a mapped watercourse, a Controlled Activity Approval (CAA) may be required under S.91 of the Water Management Act, 2000 unless the Natural Resource Access Regulator (NRAR) deems the proposed services upgrade to be of a minor nature.

If a CAA is required, then the development is Integrated Development under S.4.46 of the EP&A Act 1979.

5.2 BIODIVERSITY CONSERVATION ACT, 2016

The Biodiversity Conservation Act 2016 and Local Land Services Amendment Act 2016 together with the Biodiversity Conservation Regulations 2017 were enacted on the 25 August 2017 and came into effect on the 25 February 2018.

A review of the subject site in relation to the Biodiversity Values Map shows that the location of the proposed works is not mapped as comprising high biodiversity value as set out in Appendix B.

Regarding the clearing threshold, the site is located within a National Park and is zoned E1 – National Park under the Snowy River Local Environmental Plan, 2013 (SR LEP, 2013).

Consequently, the site does not have a minimum lot size, under the SR LEP 2013.

Therefore, the clearing threshold is predicated on the lot size of the subject site.

As the proposed clearing is well below the lowest clearing threshold, the Biodiversity Offsets Scheme will not be triggered.

As identified above and in Appendix B, the project is will not impact on any threatened flora, important fauna habitats, habitat connectivity or any other biodiversity values of conservation significance. Therefore, no further assessment is required under the BC Act.

6. CONCLUSION

The approved redevelopment of the MMH requires services to be upgraded, including water and sewer.

This can be achieved by installing pipelines within access roads and mostly disturbed corridors.

To provide additional pumping equipment, the UV water treatment building is required to be extended and provided additional power supply.

This has been designed to minimise impacts by aligning the services through previously disturbed corridors.

To ensure that all the environmental and associated legislation is complied with and fulfilled, the proposed development has been considered in regard to Section 4.15 of the Environmental Planning and Assessment Act, 1979, Biodiversity Conservation Act, 2016, Water Management Act, 2000 and Chapter 4 of the State Environmental Planning Policy (Precincts – Regional) 2021.

The proposal has been found to be consistent with the above legislation and relevant Environmental Planning Instrument, as detailed in this SEE.

The proposed upgrade of services is necessary for the redevelopment of the restaurant. They have been designed and located to provide the necessary operational outcomes, whilst minimising impacts on the environment.

APPENDIX A

PHOTOS

Figure 1: Location of where the services will connect

Figure 2: Services corridor, adjacent to building

Figure 3: Existing disturbed access corridor to be used for services corridor (looking downslope)

Figure 4: Existing disturbed access corridor to be used for services corridor (looking upslope)

Figure 5: Existing disturbed access corridor to be used for services corridor, (looking upslope)

Figure 6: Partly disturbed corridor to be used for services corridor (looking downslope)

Figure 7: Services to cross the old ski run

Figure 8: Services to follow the access road

Figure 9: Services to follow the access road, past the Gondola mid-station

Figure 10: Services to cross High Noon ski run

Figure 11: Water supply to follow the access road, adjacent to Gondola

Figure 12: Water supply to head east, following the existing access road down to the UV water treatment building (looking downslope)

Figure 13: Water supply to follow the existing access road (looking upslope)

Figure 14: Water supply to connect into enlarged UV water treatment building

Figure 15: Existing UV water treatment building to be extended on its western uphill side

Figure 16: Electricity supply to be upgraded and following previous disturbed corridor

Figure 17: Electricity supply to be attached to underside of pedestrian bridge, avoid crossing the creek

Figure 18: Electricity supply to connect into network at the end of Woodridge

Figure 19: Electricity supply to connect into existing pillar

APPENDIX B

FAUNA AND FLORA ASSESSMENT

5/20 Canty Street
Narooma
NSW 2546
t: (02) 4302 1266

Date: 5 April 2022

Our ref: 20940

Event Hospitality and Entertainment Pty Ltd
GPO Box 1609
Sydney NSW 2001

Attention: Ben Devaney

Dear Ben,

Services Upgrade, Merritts Mountain House, Thredbo

As requested, I have reviewed the proposed impacts on vegetation and fauna habitats associated with the proposed upgrades of services to the Merritts Mountain House, as shown in Figures 1-3 below and photos 1-4.

I understand that the proposed works involve minor clearing in association with:

- Trenching for sewer and water lines from the Mountain House to the existing Merritts Road.
- Minor clearing around the existing UV station for a small extension to accommodate new pumping equipment.
- Trenching for a new power conduit to be run from the new pump house to an electrical pillar at Woodridge. The new conduit will follow the same line as existing services. As such, only small amounts of regrowth vegetation removal will be required during trenching
- The disturbance corridor for trenching within undisturbed areas will be up to 4 m wide.

The remainder of the proposed works will be located entirely within existing roads and other highly disturbed areas that are devoid of native vegetation, as shown in Figures 1-3 and Photo 2.

The proposed works will not affect directly or indirectly any area of land mapped within the Biodiversity Values Map as defined in the NSW *Biodiversity Conservation Regulation 2017* (BC Reg), as shown in Figure 4.

Direct impacts on flora and fauna arising from the proposal will predominantly comprise the removal or further disturbance to less than 100m^2 of native vegetation (entirely Subalpine Woodland). The vegetation removal will largely be limited to shrubs and groundcovers, however the removal or pruning of three or four small Snow Gums is also likely.

Indirect impacts associated with the proposal are expected to be minor as:

- The footprint of the proposed direct impacts is relatively small.
- The areas affected are already disturbed or are on the margins of disturbed areas.
- The proposal will be implemented using low impact methods and with appropriate safeguards.

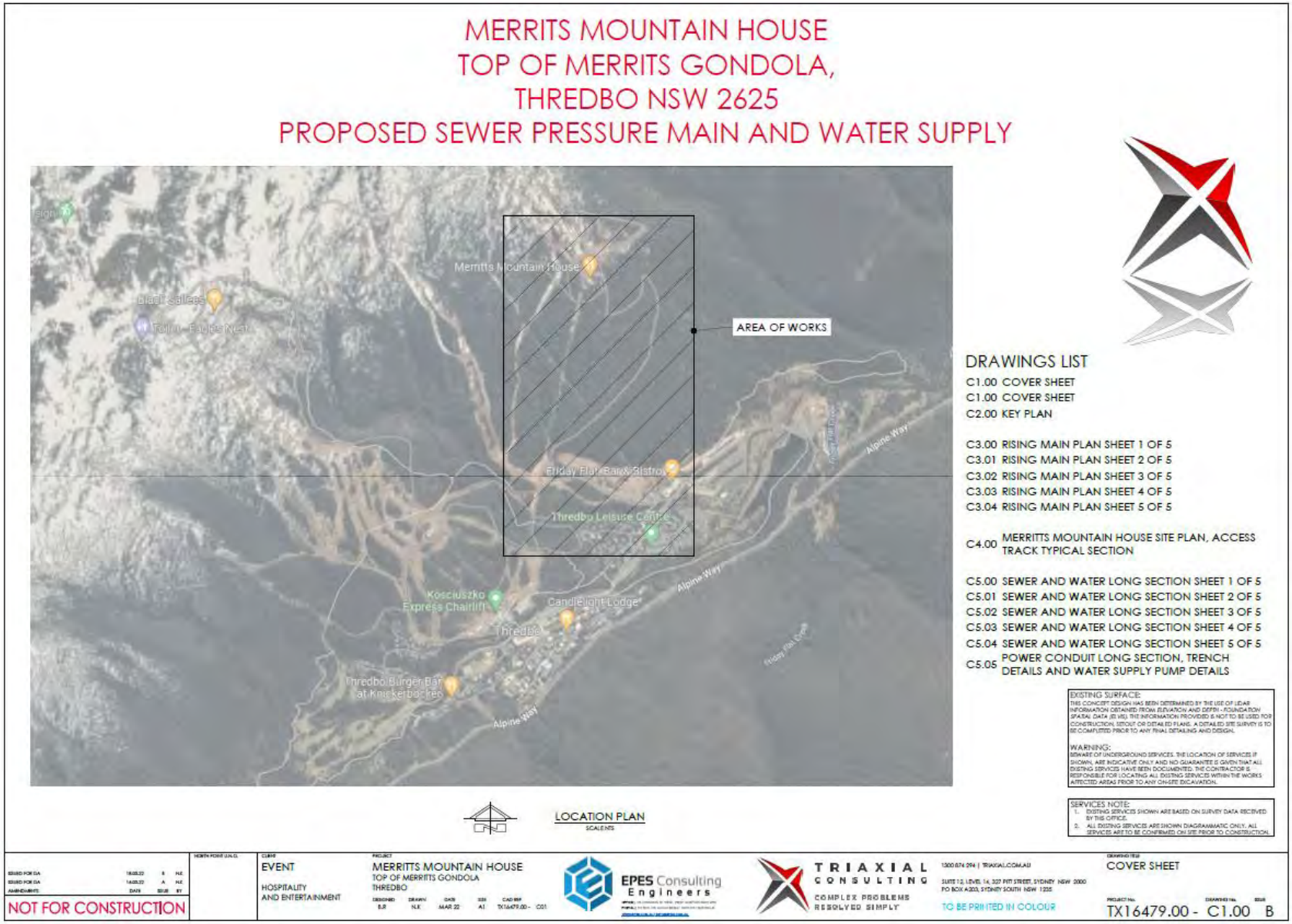

Figure 1: Site plan

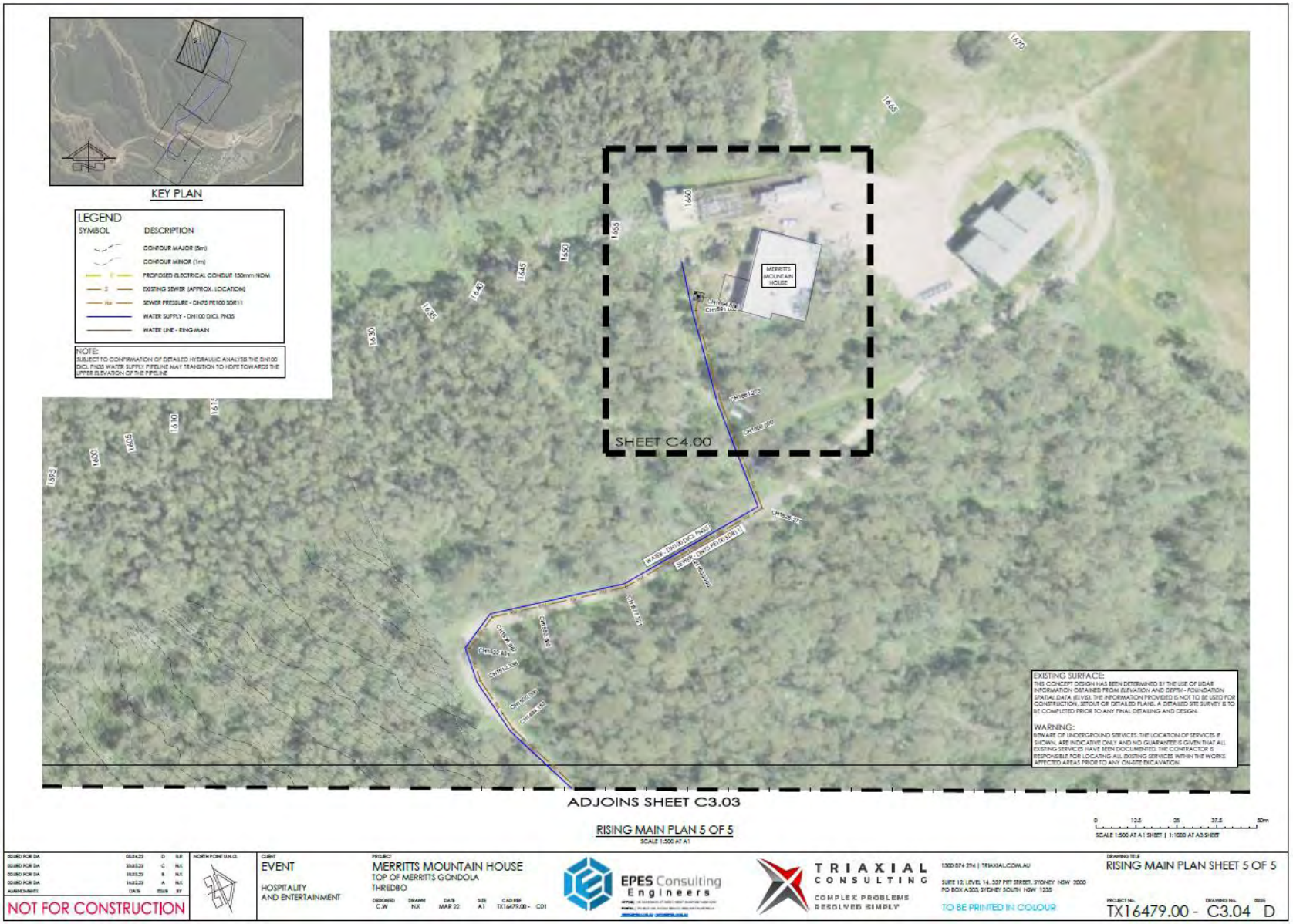

Figure 2: Detailed site plan 1

Figure 3: Detailed site plan 2

Photo 1: The sewer and water line will traverse an already disturbed area of Subalpine Woodland between the Mountain House and the Merritts Road.

Photo 2: The vast majority of the trenching will be within existing roads.

Photo 3: A few square meters of shrubs and the sapling next to the existing UV building will need to be removed for the proposed pump house extension.

Photo 4: The new power supply to the pump house will follow the existing conduit route.

Photo 5: The trenching for the power supply will need to manage impacts on an active wombat burrow between the pump house and Merritts Creek.

Photo 6: The power supply will be attached to the pedestrian bridge over Merritts Creek thus avoiding any impacts on the creek.

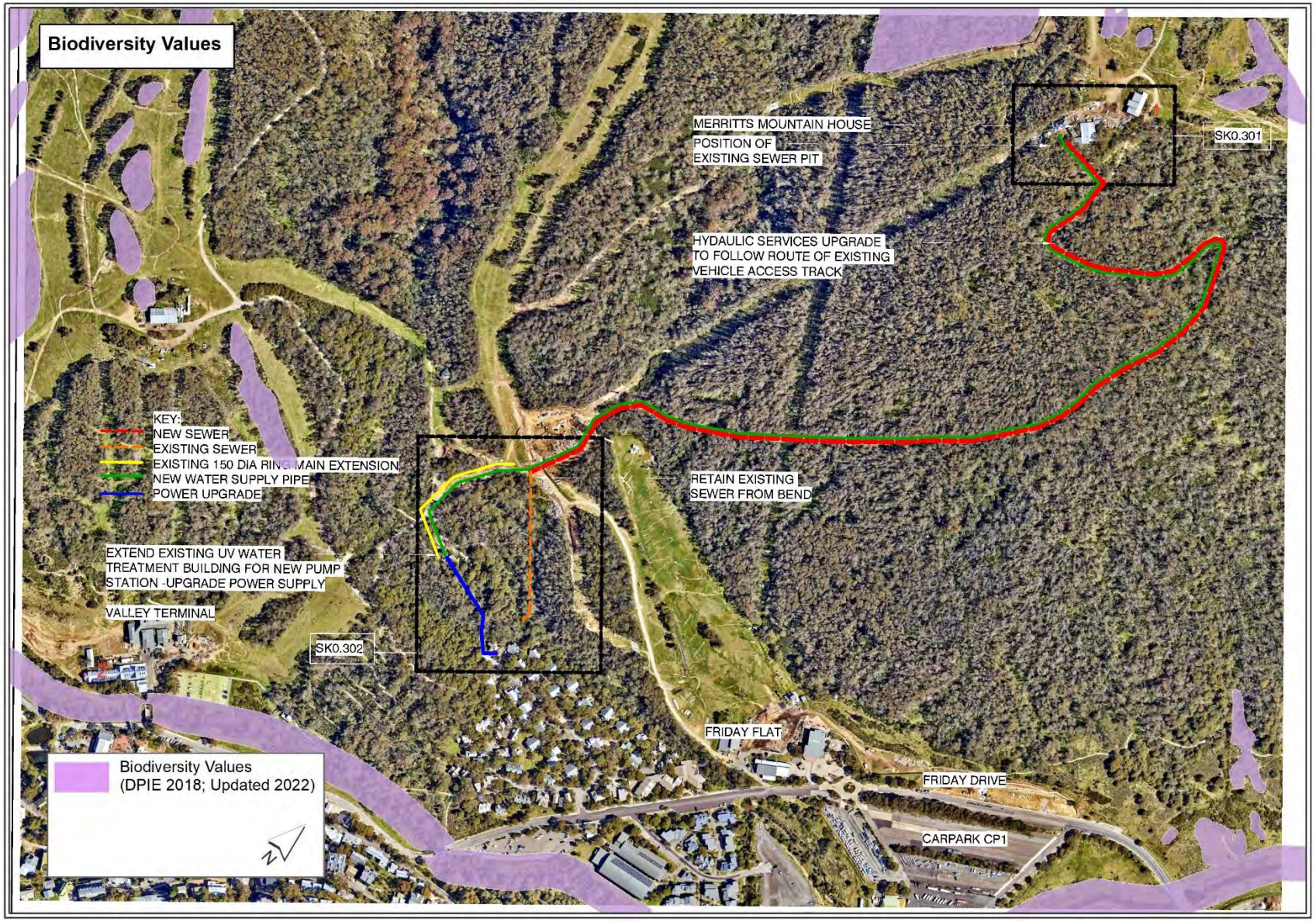

Figure 4: The proposed development in relation to the biodiversity values map.

Impacts on vegetation communities

Subalpine Woodland dominates the study area and surrounds and is the most common community within the subalpine area in the locality and region. It is the most dominant community within the Thredbo Resort area covering an estimated 443 ha (Ecology Australia 2002). It equates with Plant Community Type (PCT) 644 - *Alpine Snow Gum - Snow Gum shrubby woodland at intermediate altitudes in northern Kosciuszko NP, South Eastern Highlands Bioregion and Australian Alps Bioregion*.

Within the development footprint the canopy is dominated by regrowth *Eucalyptus pauciflora* (Snow Gum) and to a lesser extent *Eucalyptus stellulata* (Black Sallee). The understorey includes shrubs such as *Bossiaea foliosa* (Leafy Bossiaea), *Olearia phlogopappa* (Dusty Daisy-bush), *Tasmannia xerophila* subsp. *xerophila* (Alpine Pepperbush), and *Ozothamnus secundiflorus* (Cascade Everlasting). The groundcover is typically sparse given the density of the understorey and includes patches of species such as *Poa ensiformis* (Purple-sheathed Tussock-grass), *Poa fawcettiae* (Smooth Blue Snowgrass), *Asperula gunnii* (Mountain Woodruff), *Senecio gunnii*, *Stellaria pungens*, *Dianella tasmanica* (Tasman Flax-lily), *Geranium potentilloides* var. *potentilloides*, *Acaena novae-zelandiae* (Bidgee Widgee), *Goodenia hederacea* subsp. *alpestris, Polystichum proliferum* (Mother Shield Fern) and *Poa helmsii* (Broad-leaved Snowgrass).

The vegetation within the development footprint is disturbed in places and includes a range of weed species such as *Rubus fruiticosus* (Blackberry), *Festuca rubra* (Red Fescue), *Agrostis capillaris* (Browntop Bent), *Acetosella vulgaris* (Sheep Sorrel), *Achillea millefolium* (Yarrow), and *Hypochaeris radicata* (Flatweed).

Impacts on threatened ecological communities

The proposed development will not affect any threatened ecological communities (TEC). The Subalpine Woodland does not comprise any TEC.

Impacts on flora species of conservation significance

No threatened flora species, or flora species identified on the schedules of the Kosciuszko National Park Plan of Management (KNPPOM) (DEC 2006), were recorded within the development footprint during the survey period and none are expected to occur there.

Impacts on fauna habitats

The development footprint provides a very small amount of known or potential habitat for a range of native fauna species, including threatened species, such as Broad-toothed Rat, Gang-gang Cockatoo, Olive Whistler, Pink Robin and Flame Robin. Similar habitats are widespread in adjacent areas, and elsewhere within the locality, and will continue to be available to these species. The impacts associated with the proposal are limited to the removal or modification of a very small amount of native vegetation (less than 0.01 ha) and a few trees none of which provide important fauna habitats. Some sheltering and foraging habitat will be affected. However, this is a very small proportion of the sheltering and foraging habitat available in the areas immediately surrounding the development footprint, and the loss or modification of this habitat is not likely to adversely impact on fauna generally, or any threatened species.

The proposal will affect one wombat burrow. Recommendations are provided below to minimise impacts on this wombat burrows during the construction phase of the proposal.

The proposal will not result in substantial modifications to the hydrological environment nor will it create barriers which prevent the movement and dispersal of fauna species. Similar developments have been undertaken over the years within and in areas immediately adjacent to the development footprint, and elsewhere within the NSW Alps, with negligible impacts on the hydrological environment and associated ecosystems.

Under these circumstances, the impacts of the proposal on fauna habitats are relatively minor and acceptable. The potential impact of the proposal on threatened fauna have been assessed further (Appendix A) pursuant to relevant statutory assessments.

Recommendations

To further mitigate the potential impacts of the proposal, the following recommendations for impact mitigation and amelioration are suggested.

Vegetation and habitat management

- All disturbance should be kept to the minimum required to achieve the proposal
- The proposed works should be constructed and implemented in accordance with best practice design standards to ensure that there are no adverse modifications to the hydrological environment that may impact on surrounding vegetation and associated habitats
- Appropriate safeguards should be in place during the proposed works to limit the potential for invasive plants or pathogens, chemicals or any other pollutants to enter the environment in association with the proposed development
- Prio to the commencement of the proposed works, a wombat management plan should be prepared to manage impacts on the active wombat burrow that was detected below the UV building.

Sediment control

- Appropriate sediment control measures should be implemented prior to any construction work for the proposal and retained in place until exposed areas of soil or vegetation are stabilised and/or revegetated
- Sediment control measures are to have particular regard to the prevention of any sedimentation of watercourses or vegetation communities adjoining the study area.

Rehabilitation

- Rehabilitation activities should be consistent with the resort areas rehabilitation guidelines (NGH Environmental 2007)
- Only weed-free straw or natural thatch/litter should be used in sediment control activities.

Conclusion

The proposed works will not result in any adverse impacts on threatened species, populations or ecological communities and will not have a significant impact on these entities pursuant to the NSW *Biodiversity Conservation Regulation 2016* or the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

The proposal will not result in any substantial adverse impacts on native vegetation communities or associated fauna habitats, nor will there be any impacts on flora species of conservation significance, important fauna habitats, habitat connectivity or any other biodiversity values of conservation significance.

Should you require any further information please contact me on 4476 1151 or 0422 802 447.

Regards,

Ryan Smithers
Senior Ecologist

References

Department of Environment and Conservation. 2006. *Plan of Management Kosciuszko National Park*. Department of Environment and Conservation, South Sydney.

Ecology Australia. 2002. *Kosciuszko Resorts Vegetation Assessment*. A report for Planning NSW.

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Appendix A : Test of significance

Test of significance pursuant to section 7.3 of the BC Act: Five-part test

An assessment of the effects of the proposal on threatened species, populations and ecological communities which may be directly or indirectly affected by the proposal may be carried out by applying the five factors from Section 7.3 of the BC Act.

This test of significance is presented below for the threatened fauna species:

- *Mastacomys fuscus* (Broad-toothed Rat)
- *Cercartetus nanus* (Eastern Pygmy-possum)
- *Callocephalon fimbriatum* (Gang-gang Cockatoo)
- *Petroica phoenicea* (Flame Robin)
- *Pachycephala olivacea* (Olive Whistler)
- *Petroica rodinogaster* (Pink Robin)

(a) in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,

Broad-toothed Rat *Mastacomys fuscus* (known occurrence)
The Broad-toothed Rat generally occurs in two widely separated areas in NSW, the Barrington Tops area and the wet alpine and subalpine heaths and woodlands of the Kosciuszko NP and adjacent areas. The species lives in a complex of runways through dense vegetation of wet grass, sedge or heath and under the snow in winter. Home range size is thought to range between approximately 0.1 ha and 0.27 ha. Individuals nest alone over summer but congregate in communal nests during winter. The species is thought to be locally common in the alpine and high subalpine tracts of the Snowy Mountains area (Green 2002), where suitable habitats are present.

The study area provides a very small amount of potential foraging and sheltering habitat for the Broad-toothed Rat.

The proposed development will affect some potential habitat for the species, however, it will affect only a very small amount of the potential habitat for the species in the Thredbo Resort area. The proposed development will not affect any key resources for the species, and the habitats immediately adjoining the study area will continue to be available to the species after the implementation of the proposed development. As such, the proposed development is unlikely to adversely affect a significant proportion of the home range of any Broad-toothed Rat individuals.

The proposed development will not result in habitat fragmentation which could isolate individuals or a population of the Broad-toothed Rat.

Under these circumstances, the proposed development is considered unlikely to disrupt the life cycle of the Broad-toothed Rat such that a viable local population is likely to be placed at risk of extinction.

Eastern Pygmy-possum *Cercartetus nanus* (potential occurrence)

The Eastern Pygmy-possum is found in wet and dry eucalypt forest, subalpine woodland, coastal banksia woodland and wet heath. Pygmy-Possums feed mostly on the pollen and nectar from Banksias, Eucalypts and understorey plants and will also eat insects, seeds and fruit. The presence of Banksia sp. and Leptospermum sp. are an important habitat feature. Small tree hollows are favoured as day nesting sites, but nests have also been found under bark, in old bird nests and in the branch forks of tea-trees. The Eastern Pygmy-possum appears to be mainly solitary, each individual using several nests, with males having non-exclusive home-ranges of about 0.68 hectares and females about 0.35 hectares. They are mainly nocturnal. The Eastern Pygmy-possum is found in south-eastern Australia, from southern Queensland to eastern South Australia and in Tasmania. In NSW it extends from the coast inland as far as the Pilliga, Dubbo, Parkes and Wagga Wagga on the western slopes. There are a few records of the species from Kosciuszko National Park, mainly from lower altitudes, however the species has been recorded at 1800 m. It is possible that the Eastern Pygmy-possum occurs in the subalpine and montane habitats of the Thredbo Resort area although it has not been recorded there.

The proposed works are unlikely to adversely affect a significant proportion of the home range of any individual Eastern Pygmy-possum given the very small area of potential habitat to be affected. Disturbances during construction are likely to encourage any individuals that may be within the disturbance corridor, to move away.

The proposal is highly unlikely to disrupt the life cycle of the Eastern Pygmy-possum such that a viable local population of the species is likely to be placed at risk of extinction.

Gang-gang Cockatoo *Callocephalon fimbriatum* (known occurrence)

In New South Wales, the Gang-gang Cockatoo is distributed from the south-east coast to the Hunter region, and inland to the central and southern tablelands and south-west slopes. In summer, this species is generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In winter, the Gang-gang Cockatoo may occur at lower altitudes in drier more open eucalypt forests and woodlands, and is often found in urban areas. It may also occur in sub-alpine Snow Gum woodland and occasionally in temperate rainforests.

The species is regularly observed at Thredbo in montane and subalpine areas in the region and was heard calling near the study area during the survey period. Whilst the species may forage within the study area, it would not breed there given the absence of suitable nesting habitat. Given the extensive forests within the locality, breeding and roosting habitat is likely to be relatively abundant.

The study area provides a very small area of suitable foraging resources for the species. The foraging resources (generally eucalypt trees) to be removed in association with the proposed development would not be important for the species, given the extent of foraging resources in the Thredbo Resort area.

Under these circumstances, the proposed development will not disrupt the life cycle of the Gang-gang Cockatoo such that a viable local population of the species is likely to be placed at risk of extinction.

Flame Robin *Petroica phoenicea* (known occurrence)

The Flame Robin is found in south-eastern Australia (Queensland border to Tasmania, western Victoria and south-east South Australia). In NSW it breeds in upland moist eucalypt forests and woodlands, often on ridges and slopes, in areas of open understorey. It migrates in winter to more open lowland habitats such as grassland with scattered trees and open woodland on the inland slopes and plains. There are numerous records of the species throughout the NSW Alps, and the species was observed in the study area during the survey period. It is well known from the Thredbo Resort area and is one of the most common birds of open habitats outside of the winter period.

The proposal will affect a very small amount of potential nesting and foraging habitat for the species. This is negligible in the context of the extensive areas of similar habitat within the Thredbo Resort area that will not be affected by the proposed development and which will continue to be available to the species. The species is not sedentary and undertakes substantial seasonal migrations, reducing the species dependence on any specific area of known or potential habitat.

Under these circumstances, the proposed development is unlikely to disrupt the life cycle of the Flame Robin such that a viable local population of the species is likely to be placed at risk of extinction.

Olive Whistler *Pachycephala olivacea* (likely occurrence)

The Olive Whistler is found in south-eastern Australia (Queensland border to Tasmania, western Victoria and south-east South Australia). In the NSW Alps, it is associated with areas of tall dense heath, particularly riparian Tea-tree scrubs. It breeds in the thick understorey of moist eucalypt forests and subalpine woodlands. It migrates in winter to lowland habitats. There are numerous records of the species throughout the NSW Alps including within the Thredbo Resort area where it is considered a common resident.

The proposed development will result in the loss of a small amount of potential foraging and breeding habitat for the Olive Whistler. Whilst this comprises an adverse impact on the species, the habitat to be removed is very small relative to the extensive areas of similar habitat which occurs within the Thredbo Resort area and elsewhere in the locality. Extensive areas of potential habitat for the species are contiguous with the study area in the extensive Subalpine Woodland and Subalpine Riparian Scrub within the Thredbo Valley. The species is highly mobile and considered to be common within the Thredbo Valley and the Thredbo Valley population is considered to be contiguous with other populations to the north and south (MGP 1996).

Under these circumstances it is considered unlikely that the proposed development would affect the life cycle of the Olive Whistler such that a viable local population of the species is likely to be placed at risk of extinction.

Pink Robin *Petroica rodinogaster* (potential occurrence)

The Pink Robin is common in Tasmania, uncommon in Victoria and rare in NSW. It is known to breed in low numbers in Kosciuszko National Park, including in a small patch of Mountain Ash forest which occurs approximately 260 m to the west of the study area (MGP 1996). During the non-breeding period the species has been observed in more open areas including trees on the edge of Thredbo golf course.

Surveys for Pink Robins within the Thredbo Lease area in 1986 and 1987 (Margules Partners 1987) demonstrated the high fidelity of Pink Robins with deep sheltered gullies supporting Mountain Ash forest

in that each of the three nests detected occurred in such habitats, and no Pink Robins were observed more than 150 m from these habitats during the breeding season.

Whilst the proposed will affect a small amount of potential foraging habitat for the species, it is highly unlikely to affect breeding, given the species demonstrated high fidelity with preferred breeding habitats.

Under these circumstances, the proposal is considered unlikely to disrupt the life cycle of the Pink Robin such that a viable local population of the species is likely to be placed at risk of extinction.

(b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,

There are no endangered or critically endangered ecological communities within the study area.

(c) in relation to the habitat of a threatened species or ecological community:

(i) the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and

The proposed development will impact on only a very small area (0.01 ha) of potential habitat for the Broad-toothed Rat and Eastern Pygmy-possum will not affect any known Broad-toothed Rat communal nesting or likely breeding sites. The proposed development will result in the modification of a very small amount of potential foraging and breeding habitat (0.01 ha) for the Flame Robin and Olive Whistler, and only a very small amount of potential foraging habitat for the Gang-gang Cockatoo and Pink Robin.

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and

The proposed development primarily involves a narrow band of clearing of understorey and groundcover vegetation. The proposed clearing will not sever connectivity between the fauna habitats within the study area and contiguous habitats, or isolate any fauna populations which may occur within the study area. The disruptions to connectivity between fauna habitats will be minor. This is considered highly unlikely to sever connectivity between habitats even for relatively immobile species with small home ranges such as some small mammals and reptiles.

The effects of the action proposed on habitat connectivity will be minor and the native fauna which may occur within the study area from time to time, will continue to be able to traverse the study area.

(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,

The potential Broad-toothed Rat habitats to be affected comprise a small area of marginal habitat relative to the extensive areas of similar and superior habitats provided by contiguous vegetation. The alpine, subalpine and montane heaths in the locality provide superior habitat for the species than the habitats

within the study area. No evidence of any important communal nesting sites was observed within the study area. Under these circumstances, the habitats to be affected are not considered to be particularly important for Broad-toothed Rat.

The habitat to be removed by the proposal is highly unlikely to be important to the long-term survival of the Eastern Pygmy-possum in the locality given that it comprises only a relatively small amount of potential habitat for the species relative to the extensive areas of remnant forest, woodland and heath within the locality and that there are no records of the species within the Thredbo Resort area.

In the context of the extent of similar habitat available for the Gang-gang Cockatoo, Olive Whistler, Pink Robin and Flame Robin in the Thredbo Resort area and elsewhere in the locality, the habitats within the study area are not considered to be important.

d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),

The proposed development will not affect any area of outstanding biodiversity value.

(e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.

The proposed development will remove 0.01 ha of remnant native vegetation. Whilst this constitutes the Key Threatening Process 'Clearing of native vegetation', the contribution to this key threatening process is relatively minor considering the extent of remnant forest in the locality and the extant extent of the vegetation communities that will be affected.

EPBC Act Significant Impact Criteria

The EPBC Act Administrative Guidelines on Significance set out 'Significant Impact Criteria' that are to be used to assist in determining whether a proposed action is likely to have a significant impact on matters of national environmental significance. Matters listed under the EPBC Act as being of national environmental significance include:

- Listed threatened species and ecological communities;
- Listed migratory species;
- Wetlands of International Importance;
- The Commonwealth marine environment;
- World Heritage properties;
- National Heritage places;
- Nuclear actions; and
- Great Barrier Reef.

Specific 'Significant Impact Criteria' are provided for each matter of national environmental significance except for threatened species and ecological communities in which case separate criteria are provided for species listed as endangered and vulnerable under the EPBC Act.

Threatened and migratory species listed under the EPBC Act that are considered likely or potentially to occur within the study area are given in Appendix A of the Report. The only Commonwealth listed species which is considered to have the potential to occur within the study area is the Broad-toothed Rat.

The relevant Significant Impact Criteria have been applied to determine the significance of impacts associated with the proposal.

Matters to be considered	Impact
any environmental impact on a World Heritage Property or National Heritage Places;	No. The proposal does not impact on a World Heritage Property or a National Heritage Place as addressed in the SEE. (listed natural: Australian Alpine National Parks and Reserves; nominated historic: Snowy Mountains Scheme NSW).
any environmental impact on Wetlands of International Importance	No. The proposal will not affect any part of Ramsar wetland.
any impact on Commonwealth Listed Critically Endangered or Endangered Species;	No. The proposal will not impact any Commonwealth listed endangered species.
Any impact on Commonwealth Listed vulnerable Species;	Yes. The study area provides potential habitat for one Commonwealth listed vulnerable species: the Broad-toothed Rat. The significant impact criteria in terms of the vulnerable species are discussed below: a. lead to a long-term decrease in the size of an important population of a species. Whilst the proposed action will affect some potential habitat for the Broad-toothed Rat, it will affect only a very small amount of the potential habitat for the species. As such, the proposal is considered highly unlikely to adversely affect a significant proportion of the home range of one or more Broad-toothed Rat individuals and will not result in habitat fragmentation which could isolate individuals or a population of the Broad-toothed Rat. The noise and vibration associated with the proposal is likely to temporarily deter any Broad-toothed Rat individuals that may be near the affected areas. As such, it is unlikely that any individuals would be unintentionally killed during the implementation of the proposed action. Under these circumstances the proposed action will not lead to a long-term decrease in the size of an important population of the Broad-toothed Rat. b. reduce the area of occupancy of an important population It is highly likely that the Broad-toothed Rat will continue to occur within the study area after the implementation of the proposed action. The species continues to be locally common in the Thredbo Resort Area where there have been many similar and larger developments over many decades. As such, the proposed action is highly unlikely to reduce the species area of occupancy. c. fragment an existing important population into two or more populations The proposed action will not fragment an existing important population of the Broad-toothed Rat into two or more populations. d. adversely affect habitat critical to the survival of a species No habitat within the study area is critical to the survival of the Broad-toothed Rat. e. disrupt the breeding cycle of an important population The proposed action and affected area are too small to disrupt the breeding cycle of a population of the Broad-toothed Rat. f. modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline The proposed action will not modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the Broad-toothed Rat is likely to decline. g. result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat

Matters to be considered	Impact
	The proposed action will not result in invasive species that are harmful becoming established in habitat for the Broad-toothed Rat. h. interferes substantially with the recovery of the species. Whilst there have been documented declines in some Broad-toothed Rat populations within the Snowy Mountains, these declines have been attributed to environmental factors such as major bushfire events and early snow thaws, and not impacts of the nature of those proposed. In any case, the local population of the Broad-toothed Rat appears to continue to be relatively large on the basis of the abundance of the species' scats throughout the Thredbo Resort Area. The species continues to occur in suitable habitats within the Thredbo Resort Area, including within the village. As such, it is considered highly unlikely that proposed action will substantially interfere with the recovery of the Broad-toothed Rat.
Any impact on a Commonwealth Endangered Ecological Community	No. The proposal will not impact any Commonwealth listed endangered ecological communities.
Any environmental impact on Commonwealth Listed Migratory Species;	No. The proposal will not have any adverse impacts on any listed migratory species.
Does any part of the Proposal involve a Nuclear Action;	No. The project does not include a Nuclear Action.
Any environmental impact on a Commonwealth Marine Area;	No. There are no Commonwealth Marine Areas within the study area.
In addition, any direct or indirect impact on Commonwealth lands	No. The project does not directly or indirectly affect Commonwealth land.

APPENDIX C

ABORIGINAL CULTURAL HERITAGE DUE DILLIGENCE ASSESSMENT

Aboriginal Cultural Heritage Due Diligence Assessment

Merritts Mountain House Restaurant, Thredbo – Services Upgrade

Report Prepared for Event Hospitality and Entertainment Ltd

11 March 2022

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email: office@pasttraces.com.au

Document Control

Revision	Date	Author	Reviewed
V1.	24/02/2022	N. Cracknell	L.O'Brien
V2.	11/03/2022	L.O'Brien	

Disclaimer

Past Traces Pty Ltd has undertaken this assessment in accordance with the relevant Federal, State and Local Government legislation. Past Traces accepts no liability for any damages or loss incurred as a result of use for any purpose other than that for which it was commissioned.

Restricted Information

Information contained within this report is culturally sensitive and should not be made publically available. The information that is restricted includes (but is not limited to):

- Maps, Mapping Grid Reference Co-ordinates or images for Aboriginal heritage sites, places and objects.
- Location or detailed information regarding places of Aboriginal cultural significance, as expressed or directed by Representative Aboriginal Organisations, Aboriginal elders, or members of the wider Aboriginal community.
- Other culturally appropriate restricted information as advised by Aboriginal representatives and traditional knowledge holders.

Information in the report covered by the above categories should be redacted before being made available to the general public. This information should only be made available to those persons with a just and reasonable need for access.

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CONTENTS

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EXECUTIVE SUMMARY

Event Hospitality & Entertainment Limited, operators and managers of Thredbo Alpine Resort, are seeking to upgrade and augment the facilities of the Resort. The proposal involves the upgrade of the existing services i.e water, sewer and/or electricity for the Merritt's Mountain House Restaurant at Thredbo.

The proposal consists of:

- Removal of topsoils
- Subsurface impacts in the form of trenching for the proposed sub-surface services i.e water, sewer and/or electricity.

This report provides Aboriginal heritage due diligence advice for the services upgrade of the Merritt's Mountain House Restaurant Thredbo NSW. The current restaurant was constructed in the 1960s and an upgrade to its services is needed to maintain operational requirements. The proposed upgrade will involve the removal of topsoils and the digging of a trench for the sub-surface services line. The study area is shown on Figure 1 and the proposed services line footprint in Figure 2.

This Due Diligence heritage assessment has been undertaken in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010a) to provide Event Hospitality & Entertainment Limited with information on heritage constraints to inform the sewer upgrade process.

Based on a review of previous reports and an Aboriginal Heritage Information Management Systems (AHIMS) search, no heritage sites and no areas of Potential Archaeological Deposit (PAD) were identified within the project area.

Field survey was undertaken across the project area in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b). The field survey covered the entire project area, with particular focus on areas of previous impacts, access roads and landforms with potential. Ground visibility was high at the time of field survey, due to the majority of the project area following the centre of the access road.

There were no Aboriginal or Historical heritage sites and no areas of PAD identified as a result of this assessment.

As a result of the field survey and background research completed for the project, the following recommendations have been developed:

- No heritage sites and no areas of Potential Archaeological Deposit (PAD) were identified within the project area based on a review of previous reports and the pedestrian field survey of the project area.
- The development proposal should be able to proceed with no additional archaeological investigations. No areas of potential archaeological deposits or heritage sites have been

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identified within the development area and the potential for Aboriginal or historical heritage objects within the development area has been assessed as low.

- It is an offence to disturb an Aboriginal site without an AHIP as all Aboriginal objects are protected under the NSW National Parks and Wildlife Act 1974. Should any Aboriginal objects be encountered during works then works must cease and a heritage professional contacted to assess the find. Works may not recommence until cleared by NSW Heritage.
- Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation. This would include consultation with the RAPs for the project and may include further field survey.

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1 INTRODUCTION

Event Hospitality & Entertainment Limited, operators and managers of Thredbo Alpine Resort, are seeking to upgrade and augment the facilities of the Resort. The proposal involves the upgrade of the existing services i.e water, sewer and/or electricity for the Merritt's Mountain House Restaurant at Thredbo.

The proposal consists of:

- Removal of topsoils
- Subsurface impacts in the form of trenching for the proposed sub-surface services i.e water, sewer and/or electricity.

This report provides Aboriginal heritage due diligence advice for the sewerage line upgrade of the Merritt's Mountain House Restaurant Thredbo NSW. The current restaurant was constructed in the 1960s and an upgrade to its services line is needed to maintain operational requirements. The proposed upgrade will involve the removal of topsoils and the digging of a trench for the sub-surface services line. The study area is shown on Figure 1 and the proposed impact footprint in Figure 2.

These works are high impact and would have a negative impact on any Aboriginal heritage located within the project boundary. Aboriginal heritage sites may be located on the surface or subsurface in areas of high potential for the preservation of archaeological remains of past usage by Aboriginal groups.

To assess the potential impacts of the proposed works on Aboriginal heritage this Due Diligence Heritage Assessment has been undertaken.

This Due Diligence heritage assessment has been undertaken in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010a) to provide Event Hospitality & Entertainment Limited with information on heritage constraints to inform the sewer upgrade process

1.1 PROJECT OBJECTIVES

The due diligence assessment is being undertaken to complete the following objectives:

1. Review of the NSW Heritage, Aboriginal Heritage Information Management System (AHIMS), to identify any recorded heritage sites within the project area.
2. Review of historic registers to identify any historic heritage.
3. Review of previous reports in area to develop predictive model of site location
4. Assess landforms present in project area against predictive model to determine potential for heritage sites and determine level of disturbance

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5. Complete site visit to visually inspect impact areas or areas assessed as holding potential based on predictive model and record any identified heritage sites. The site visit will also document levels of disturbance within project area.
6. Complete due diligence report with management recommendations to avoid or minimise impacts within the project area.

1.2 ABORIGINAL CONSULTATION

No consultation with the local Aboriginal community has been undertaken. Consultation with the Aboriginal community is not a requirement of the Due Diligence Code of assessment, which is undertaken at the preliminary planning stage of the project.

If the assessment finds that impacts to Aboriginal heritage will occur as a result of the development then consultation will be undertaken with the relevant Local Aboriginal Land Council (LALC) and the wider Aboriginal community, in accordance with the consultation guidelines required by NSW Heritage.

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Figure 1: Regional Context

Legend

Project Area

N

1:100,000

0 1.25 2.5 5

Kilometers
Coordinate System:
GDA 1994 MGA Zone 55

Imagery: © NSW Spatial Services

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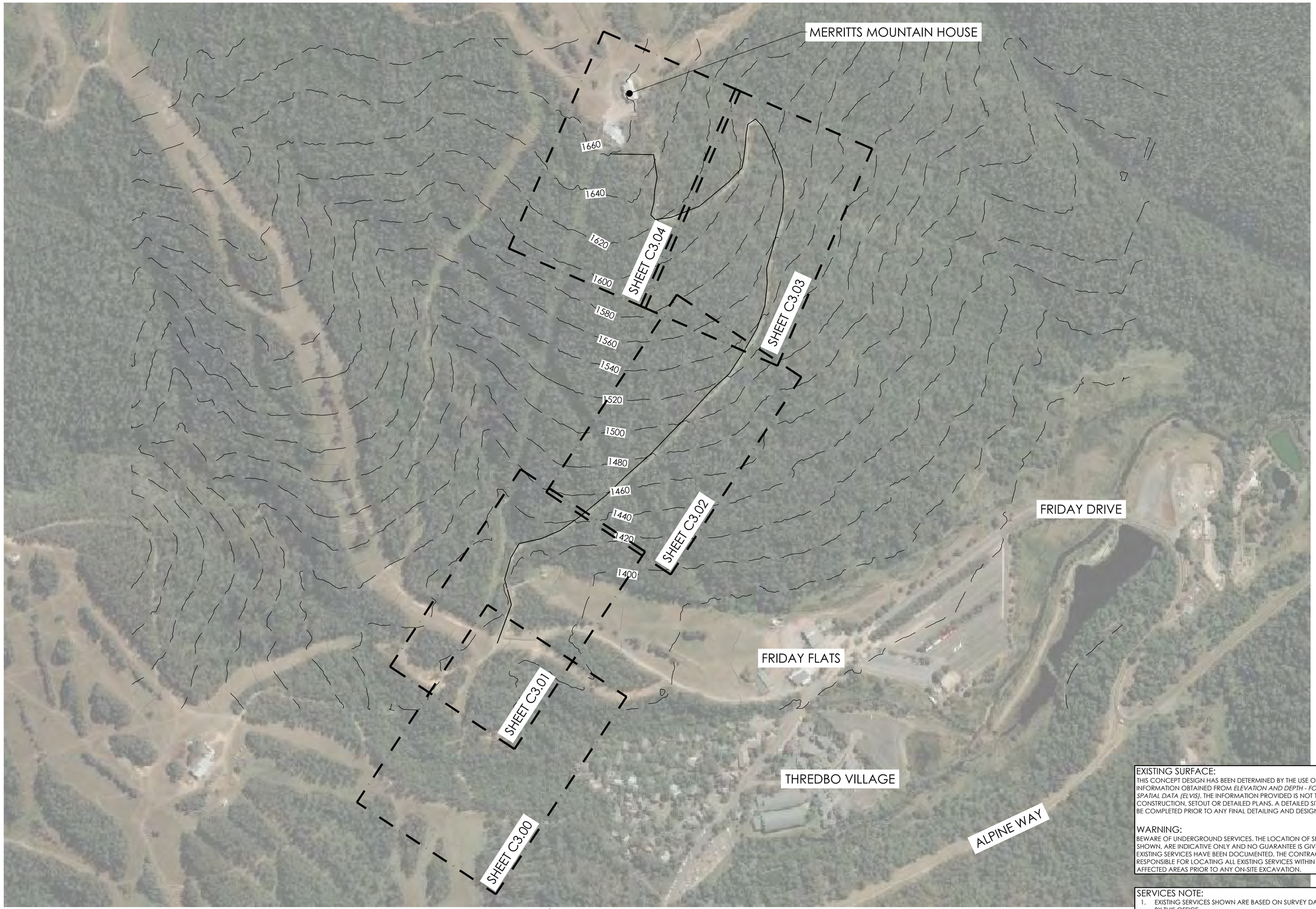

KEY PLAN
N.T.S.

EXISTING SURFACE:
THIS CONCEPT DESIGN HAS BEEN DETERMINED BY THE USE OF LIDAR INFORMATION OBTAINED FROM *ELEVATION AND DEPTH - FOUNDATION SPATIAL DATA (ELVIS)*. THE INFORMATION PROVIDED IS NOT TO BE USED FOR CONSTRUCTION, SETOUT OR DETAILED PLANS. A DETAILED SITE SURVEY IS TO BE COMPLETED PRIOR TO ANY FINAL DETAILING AND DESIGN.

WARNING:
BEWARE OF UNDERGROUND SERVICES. THE LOCATION OF SERVICES IF SHOWN, ARE INDICATIVE ONLY AND NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES HAVE BEEN DOCUMENTED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING SERVICES WITHIN THE WORKS AFFECTED AREAS PRIOR TO ANY ON-SITE EXCAVATION.

SERVICES NOTE:
1. EXISTING SERVICES SHOWN ARE BASED ON SURVEY DATA RECEIVED BY THIS OFFICE.
2. ALL EXISTING SERVICES ARE SHOWN DIAGRAMMATIC ONLY. ALL SERVICES ARE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR DA	18.03.22	B	N.K
ISSUED FOR DA	16.03.22	A	N.K

NOT FOR CONSTRUCTION

NORTH POINT U.N.O.

CLIENT
EVENT

HOSPITALITY
AND ENTERTAINMENT

PROJECT
MERRITTS MOUNTAIN HOUSE
TOP OF MERRITTS GONDOLA
THREDBO

DESIGNED	DRAWN	DATE	SIZE	CAD REF
B.R	N.K	MAR 22	A1	TX16479.00 - C01

EPES Consulting Engineers
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PO BOX A203, SYDNEY SOUTH NSW 1235

TO BE PRINTED IN COLOUR

DRAWING TITLE
KEY PLAN

PROJECT No. TX16479.00 - DRAWING No. C2.00 ISSUE B

2 DESKTOP ASSESSMENT RESULTS

2.1 AHIMS SEARCH

A search of the NSW Heritage AHIMS database was undertaken on the 11/01/2022 (AHIMS Search Id 650625) covering the area of (GDA94 Latitude, Longitude) -36.51, 148.29 to -36.49, 148.32 centred on the project area. The extensive search revealed no previously recorded heritage sites within the project area with 10 sites within the wider search area.

The sites located in this region are provided in Table 1 and consist of isolated finds or low-density scatters of stone artefacts and conform to the wider site predictive model for the Thredbo Valley/Kosciusko area (NOHC 2000, Grinsbergs 2008, Ironbark 2013). This model predicts a site location model of small sites located on level ground in proximity to water sources, or on level areas of spur lines and ridge crests amongst mountainous areas. This predictive model is discussed in more detail in Section 2.2. The location of previously recorded sites in relation to the current project area are shown in Figure 3.

Table 1. AHIMS Sites in vicinity of Project Area in GDA94 MGA55

Site ID	Site name	Easting	Northing	Site features	Recorders
61-6-0081	Golf Course Extention Site 1;	616403	5959244	Artefact : -	Ms.N Fuller
61-6-0099	Ramshead Creek 1;	617263	5959734	Artefact : -	Mr.Kelvin Officer
61-6-0100	Ramshead Creek 2;	618022	5959681	Artefact : -	Mr.Kelvin Officer
61-6-0103	EDI 1	616013	5958704	Artefact : -	Charles Dearling Archaeological and Cultural Heritage Consultants
61-6-0121	Merrits Creek 1	616963	5959684	Artefact : -	Mr.Alistair Grinbergs
61-6-0082	Merritts Trail;Site 1;	617663	5959684	Artefact : -	Ms.N Fuller
61-6-0083	Merritts Park, Site 1;	617913	5959894	Artefact : -	Ms.N Fuller
61-3-0065	Friday Flat IF-1	616213	5959144	Artefact : 1	P Saunders
61-6-0104	Friday Flat 2	616933	5959784	Artefact : 1	Kerry Navin, Mr.Kelvin Officer
61-3-0062	Alpine Way 7	617043	5959514	Artefact : -	Kerry Navin

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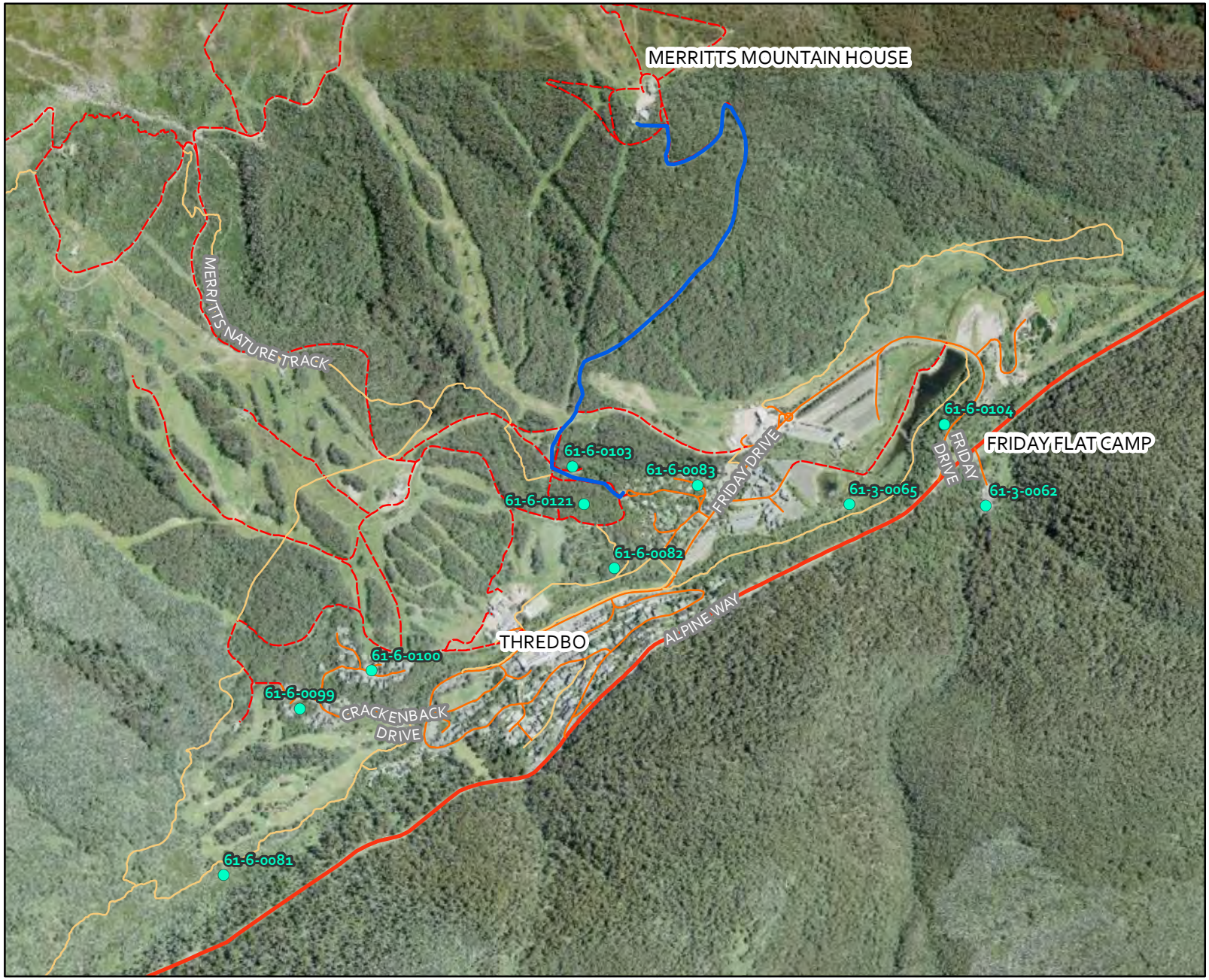

Figure 3: AHIMS Sites

Legend

- AHIMS Site
- Project Area

N

1:15,000

0 125 250 500

Meters
Coordinate System:
GDA 1994 MGA Zone 55

Past Traces Heritage Consultants

2.2 PREVIOUS HERITAGE STUDIES

A number of heritage studies have been undertaken in the immediate area of the Thredbo Valley. These have been mainly small scale and development focused. Studies covering a larger area and generating models of occupation have been undertaken in the Perisher Valley (NOHC 2000) and Thredbo (Ironbark 2013). A review of this large body of work has been undertaken to provide context and site location modelling for the project area. The most relevant reports for the current project are summarised below.

Geering (1983) undertook field survey and assessment of the Bullocks Flat area for the Skitube development. The assessment recorded twelve isolated artefacts and three artefact scatters. Paton (1984) completed a further assessment including excavation of test pits in areas of high potential and in areas based on modelling considered to hold low potential, such as steeper slopes. None of the test pits revealed any artefacts and Paton concluded that the modelling based on areas of level ground near creek lines (Flood 1980) was correct in this location.

Paton (1985) completed a survey along the Thredbo River valley between the Ranger Station and Dead Horse Gap for the Alpine Way upgrade. This survey covered a range of differing landforms located on site on area of level ground amongst spur line.

Walkington (1988) completed a survey for a proposed 33kV powerline from Bullocks Flat to Thredbo identifying 11 artefact scatters and two isolated finds. Almost all of the sites found were situated on gently sloping ground such as spurs elevated above the river.

Paton (1988) surveyed the Thredbo Valley for a fibre optic cable route again crossing differing topographies in the area. Paton located a further two site during this assessment which supported his earlier location model.

Fuller (1988) completed a survey of the proposed development areas in Thredbo Village recording seven archaeological sites all consisting of isolated finds or small artefact scatters. The sites were located in level areas on basal and midslopes. Fuller concludes that all of the sites are typical of high altitude sites in being low-density artefact scatters (1988:7).

Navin and Officer completed two surveys of the Thredbo valley, one for the Alpine Way in 1992 and the other for the Thredbo Alpine Village in 1994. A number of small sites were located, conforming to the site models being isolated finds or small artefact scatters located on level areas or gradual slopes within basal contexts.

Dearling (1997) surveyed a 2 hectare area, for a proposed ski run at Thredbo. He located one site (#61-6-103), which consisted of five artefacts. It was situated on a cleared service road on the crest of a spur in a minor saddle with Merritt's Creek to the south and an unnamed creek to the north. The level location and proximity to creek lines again conform to the modelling for the region. This site is the closest to the current project area but well outside of any area of impact.

NOHC in 2000 completed a large scale and extensive field surveys and subsurface testing of landforms for the Perisher Blue Ski Resort. This study resulted in the development of a site location model which is equally applicable to the Thredbo region as similar topography and landscape features are present. Navin Officer Heritage Consultants concluded that the strongest site determinants were:

- Relatively level, well drained ground
- Shelter from prevailing weather patterns (mainly from the west and northwest)
- Avoidance of cold air drainage contexts
- Preference for terrain which facilitates pedestrian access and through travel
- Proximity to exploitable resources such as open woodland, grassland and herb fields and Bogong moth aestivation sites (2000:41).
- Majority of sites would be small artefact scatters of less than 15 artefacts, found throughout landscape
- Larger sites (minority) would be located on crests of ridges and major spur lines or more commonly on basal valley slopes. The larger sites decreased in artefact density the higher the location from the basal slopes (NOHC 2000:41).

Dibden (2003) completed a survey of proposed upgrade works for Antons and Sponnars T-bars at Thredbo. No sites were found, due to previous disturbance from clearing, land modification for grooming of ski slopes and the fact that the study corridor was located on steep, mid to upper slopes with low archaeological potential (2003:1).

Aecom (Formerly HLA) throughout 2004 and 2005 completed a series of survey and excavations for a proposed works depot at Friday Flat, located on level basal slopes and within a recorded site location (NOHC 1992). The excavations were placed in six differing locations and recovered 99 artefacts.

Grinsbergs (2008) completed a survey for the proposed multi-use trail from Bullocks Flat to Thredbo which identified 21 sites, comprising 11 artefact scatters, nine isolated artefacts and a grinding groove as well as two areas of potential archaeological deposit. Based on the site locations Grinbergs concludes that general model of site location for the valley was applicable and reflective of the archaeological situation.

Ironbark Heritage (2013) completed a due diligence assessment for the Thredbo Mountain Bike Trails which included the development of a GIS Slope analysis model. This assessment showed slopes of more than 10 degrees as not being conducive to Aboriginal usage and holding low potential for sites and subsurface deposits. Comparison of the current project area to the slope analysis model shows the majority of the alignments within the low potential areas.

NGH (2017) completed an Aboriginal heritage due diligence assessment for the Thredbo Mountain Bike Trails covering three new trail locations. The terrain features within the project area were mostly steep slopes, with few potential areas of sensitive landforms. No sites or areas of potential were identified, and the study concluded that the potential for the presence of Aboriginal sites is low due to the level of disturbance associated with previous ski slope work and the general steepness of the terrain.

2.2.1 Predictive Model

Based on a review of previous heritage studies and based on NOHC model, the following predictive model has been developed. Factors taken into consideration in the model are:

- Site distribution in relation to landscape features within the project area
- Consideration of site type and densities likely to be present within the project area
- Potential Aboriginal use of natural resources present or once present within the project area
- Opportunities for movement through the landscape
- Soil properties.

Table 2 Site Prediction Model

Probability	Site Type	Definition	Landform
Moderate	Isolated finds and surface scatters of stone artefacts	Stone artefacts ranging from single artefact to high numbers	Creek lines and spur crests. Thredbo River is located in the valley below.
Low	Potential Archaeological Deposits (PADS)	Area considered on landform to hold higher potential for unidentified subsurface deposits	Varies, but most frequent on elevated terraces along creek lines and spurlines, no such features present as area features a steep descent
Low	Culturally Modified Trees (CMTs)	Trees which have been modified by scarring, marking or branch twining	May be present on old remaining trees – Most old growth trees have been removed
Nil	Rock Engravings	Images engraved on flat rock surfaces	Escarpments, rock platforms or rock shelters - not present
Nil	Stone arrangements	Arrangements of stones by human intention, including circles lines or patterns.	Crest lines or large ceremonial areas on creekflats, - not present
Nil	Stone quarries/Ochre sources	Quarry sites where resources have been mined.	Any landform that has not been disturbed – not present
Nil	Axe grinding grooves	Grooves in stone caused by the grinding of stone axes	Usually in creek lines, as water is used as abrasive with sand - not present
Nil	Burials	Burials of Aboriginal persons	Usually requiring deep sandy soils on eastern facing slopes – not present
Nil	Aboriginal places	A place that hold significance to Aboriginal people	Any landform, identified through consultation with RAPs and historical sources

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2.3 LANDFORM AND DISTURBANCE LEVEL ASSESSMENT

The project area consists of a gentle gradient area on the lower boundary of Merritt's spur line which generally steeply descends from the upper slopes to mid slopes and into the Thredbo valley. The project area begins on the spur line interface where the landform then descends steeply across mid slopes. The area currently holds the chairlift terminal, current water, electricity and sewer lines and other underground services as shown on Figure 4.

Review of previous sites located in the vicinity indicates a site location model based on level areas in proximity to water resources such as small creek lines or level areas along spur lines and ridge crests (NOHC 2000, Ironbark 2013). The location of the current restaurant is positioned on a level area along spur line with the steep descent along the service line route consisting of low potential terrain such as steep slopes and spurs.

The impact corridor has been universally disturbed by previous trenching, vegetation removal and road construction. The proposed services upgrade replicates the existing infrastructure alignment. These previous construction works have removed topsoils and disturbed soil profiles, thus removing potential for Aboriginal sites to remain within these locations. Construction of the services line upgrade are confined to these areas of previous impact as can be seen in Figure 4.

Due to the high degree of disturbance the location of the Merritt's Restaurant service line upgrade is considered to hold low potential for any Aboriginal heritage sites to have survived these previouis construction activities.

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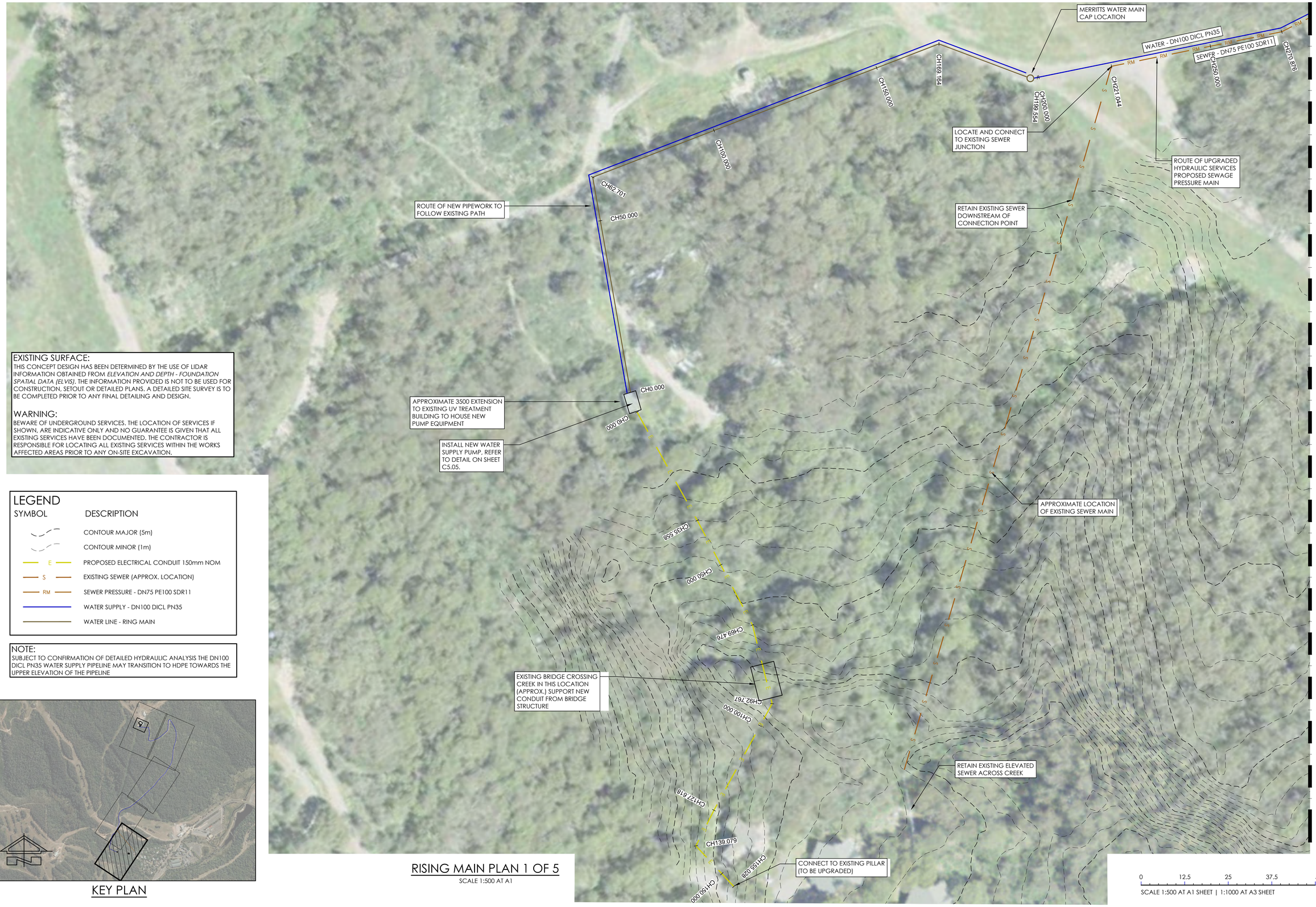

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LEGEND

SYMBOL	DESCRIPTION
	CONTOUR MAJOR (5m)
	CONTOUR MINOR (1m)
E	PROPOSED ELECTRICAL CONDUIT 150mm NOM
S	EXISTING SEWER (APPROX. LOCATION)
RM	SEWER PRESSURE - DN75 PE100 SDR11
	WATER SUPPLY - DN100 DICL PN35
	WATER LINE - RING MAIN

NOTE:
SUBJECT TO CONFIRMATION OF DETAILED HYDRAULIC ANALYSIS THE DN100 DICL PN35 WATER SUPPLY PIPELINE MAY TRANSITION TO HDPE TOWARDS THE UPPER ELEVATION OF THE PIPELINE

KEY PLAN

RISING MAIN PLAN 1 OF 5

SCALE 1:500 AT A1

0 12.5 25 37.5 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR DA	05.04.22	D	B.R
ISSUED FOR DA	23.03.22	C	N.K
ISSUED FOR DA	18.03.22	B	N.K
ISSUED FOR DA	16.02.22	A	N.K

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CLIENT
EVENT
HOSPITALITY AND ENTERTAINMENT

PROJECT
MERRITTS MOUNTAIN HOUSE
TOP OF MERRITTS GONDOLA
THREDBO

DESIGNED	DRAWN	DATE	SIZE	CAD REF
C.W	N.K	MAR 22	A1	TX16479.00 - C01

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RISING MAIN PLAN SHEET 1 OF 5

PROJECT No. TX16479.00 - DRAWING No. C3.00 ISSUE D

ADJOINS SHEET C3.00

ADJOINS SHEET C3.02

MERRITTS WATER MAIN CAP LOCATION

WATER - DN100 DICL PN35

SEWER - DN75 PE100 SDR11

LOCATE AND CONNECT TO EXISTING SEWER JUNCTION

ROUTE OF UPGRADED HYDRAULIC SERVICES PROPOSED SEWAGE PRESSURE MAIN

RETAIN EXISTING SEWER DOWNSTREAM OF CONNECTION POINT

EXISTING CULVERT CROSSINGS. DETAILS OF NEW PIPE CROSSINGS TO BE CONFIRMED AT CC STAGE

CH150.000
CH169.164
CH199.554
CH200.000
CH221.044
CH250.000
CH270.876
CH281.389
CH300.000
CH307.800
CH335.886
CH350.000
CH354.479
CH376.274
CH400.000
CH403.477
CH450.000
CH450.598
CH494.755
CH500.000
CH500.435
1400
1405
1410
1415
1420
1425
1430

KEY PLAN

LEGEND

SYMBOL	DESCRIPTION
	CONTOUR MAJOR (5m)
	CONTOUR MINOR (1m)
E	PROPOSED ELECTRICAL CONDUIT 150mm NOM
S	EXISTING SEWER (APPROX. LOCATION)
RM	SEWER PRESSURE - DN75 PE100 SDR11
	WATER SUPPLY - DN100 DICL PN35
	WATER LINE - RING MAIN

NOTE:
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RISING MAIN PLAN 2 OF 5

SCALE 1:500 AT A1

0 12.5 25 37.5 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

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ISSUED FOR DA	23.03.22	C	N.K
ISSUED FOR DA	18.03.22	B	N.K
ISSUED FOR DA	16.02.22	A	N.K
AMENDMENTS	DATE	ISSUE	BY

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CLIENT
EVENT

HOSPITALITY
AND ENTERTAINMENT

PROJECT
MERRITTS MOUNTAIN HOUSE
TOP OF MERRITTS GONDOLA
THREDBO

DESIGNED	DRAWN	DATE	SIZE	CAD REF
C.W	N.K	MAR 22	A1	TX16479.00 - C01

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RISING MAIN PLAN SHEET 2 OF 5

PROJECT No.	DRAWING No.	ISSUE
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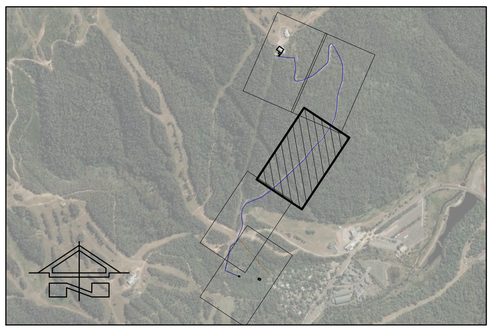
1500 1495 1490 1485 1480 1475 1470 1465 1460 1455 1450 1445

WATER - DN100 DICL PN35

SEWER - DN75 PE100 SDR11

RM

CH550.000 CH597.808 CH600.000 CH627.754 CH650.000 CH697.512 CH700.000 CH740.845 CH750.000 CH778.490 CH800.000 CH819.826 CH850.000



KEY PLAN

LEGEND

SYMBOL	DESCRIPTION
	CONTOUR MAJOR (5m)
	CONTOUR MINOR (1m)
E	PROPOSED ELECTRICAL CONDUIT 150mm NOM
S	EXISTING SEWER (APPROX. LOCATION)
RM	SEWER PRESSURE - DN75 PE100 SDR11
	WATER SUPPLY - DN100 DICL PN35
	WATER LINE - RING MAIN

NOTE:
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RISING MAIN PLAN 3 OF 5

SCALE 1:500 AT A1

0 12.5 25 37.5 50m

SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR DA	05.04.22	D	B.R
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AND ENTERTAINMENT

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TOP OF MERRITTS GONDOLA
THREDBO

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C.W	N.K	MAR 22	A1	TX16479.00 - C01

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RISING MAIN PLAN SHEET 3 OF 5

PROJECT No. TX16479.00 - DRAWING No. C3.02 ISSUE D

ADJOINS SHEET C3.04

ADJOINS SHEET C3.02

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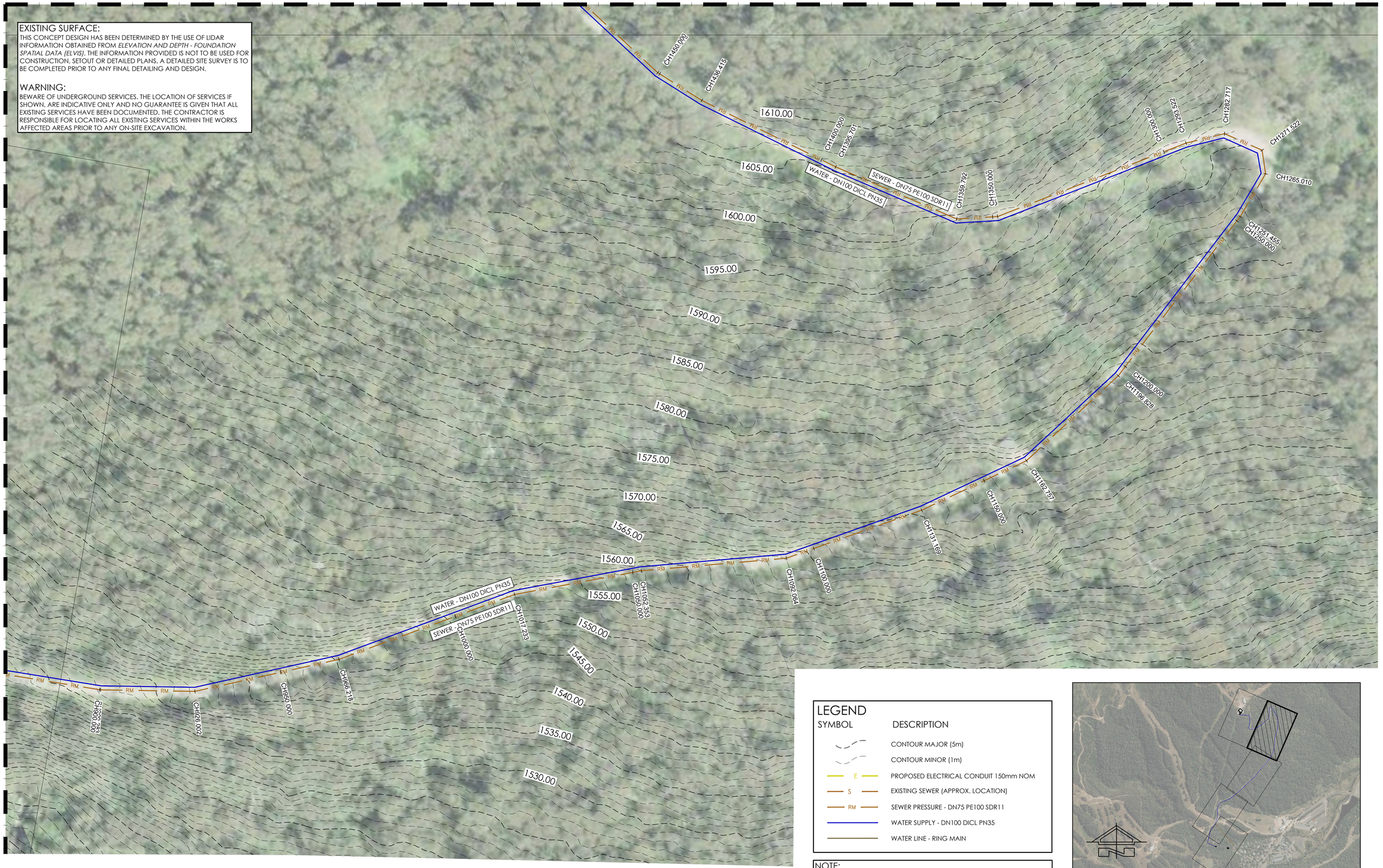

RISING MAIN PLAN 4 OF 5
SCALE 1:500 AT A1

LEGEND

SYMBOL	DESCRIPTION
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	CONTOUR MINOR (1m)
E	PROPOSED ELECTRICAL CONDUIT 150mm NOM
S	EXISTING SEWER (APPROX. LOCATION)
RM	SEWER PRESSURE - DN75 PE100 SDR11
	WATER SUPPLY - DN100 DICL PN35
	WATER LINE - RING MAIN

NOTE:
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KEY PLAN

0 12.5 25 37.5 50m
SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR DA	05.04.22	D	B.R
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ISSUED FOR DA	18.03.22	B	N.K
ISSUED FOR DA	16.02.22	A	N.K

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HOSPITALITY AND ENTERTAINMENT

PROJECT
MERRITTS MOUNTAIN HOUSE
TOP OF MERRITTS GONDOLA
THREDBO

DESIGNED	DRAWN	DATE	SIZE	CAD REF
C.W	N.K	MAR 22	A1	TX16479.00 - C01

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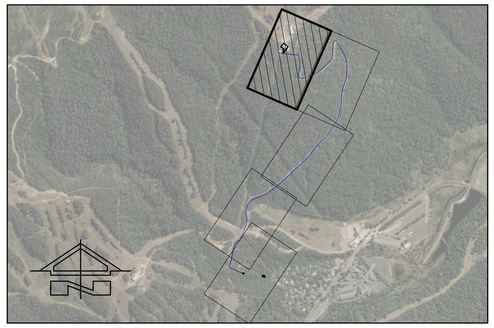
RISING MAIN PLAN SHEET 4 OF 5

PROJECT No. TX16479.00 - DRAWING No. C3.03 ISSUE D



KEY PLAN

LEGEND

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	WATER LINE - RING MAIN

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1670
1665
1660
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1640
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1630
1615
1610
1605
1600
1595

MERRITTS MOUNTAIN HOUSE

CH1694.556
CH1691.059
CH1661.273
CH1650.000
CH1626.271
CH1600.000
CH1577.321
CH1550.000
CH1534.987
CH1522.931
CH1512.338
CH1500.000
CH1494.152

WATER - DN100 DICL PN35
SEWER - DN75 PE100 SDR11

SHEET C4.00

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RISING MAIN PLAN 5 OF 5
SCALE 1:500 AT A1

0 12.5 25 37.5 50m
SCALE 1:500 AT A1 SHEET | 1:1000 AT A3 SHEET

AMENDMENTS	DATE	ISSUE	BY
ISSUED FOR DA	05.04.22	D	B.R
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EVENT

HOSPITALITY
AND ENTERTAINMENT

PROJECT
MERRITTS MOUNTAIN HOUSE
TOP OF MERRITTS GONDOLA
THREDBO

DESIGNED	DRAWN	DATE	SIZE	CAD REF
C.W	N.K	MAR 22	A1	TX16479.00 - C01

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RISING MAIN PLAN SHEET 5 OF 5

PROJECT No. TX16479.00 - DRAWING No. C3.04 ISSUE D

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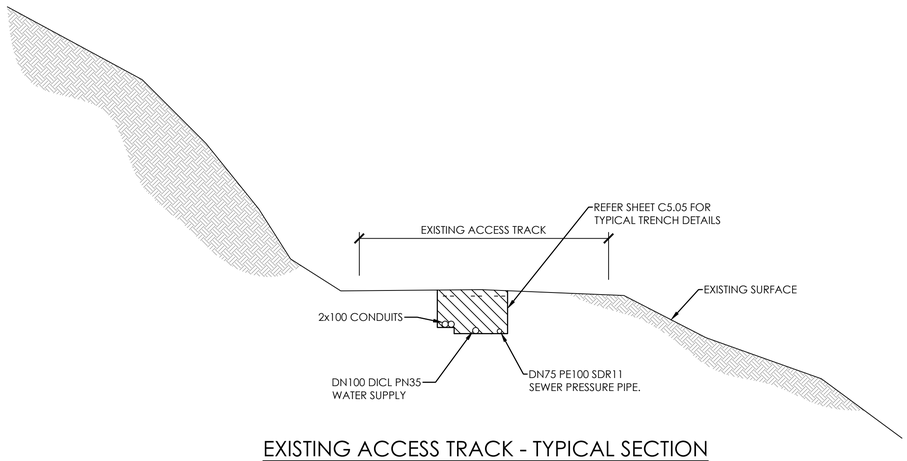
MERRITTS MOUNTAIN HOUSE SITE PLAN
SCALE 1:200 AT A1



EXISTING ACCESS TRACK - TYPICAL SECTION
SCALE 1:50

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ISSUED FOR DA	16.02.22	A	N.K
AMENDMENTS	DATE	ISSUE	BY

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TO BE PRINTED IN COLOUR

DRAWING TITLE
MERRITTS MOUNTAIN HOUSE SITE PLAN, ACCESS TRACK TYPICAL SECTION

PROJECT No. TX16479.00 - DRAWING No. C4.00 ISSUE B

3 FIELD SURVEY RESULTS

A field survey of the project area was undertaken on the 17th February 2022 to verify the findings of the desktop review of landforms and disturbance. The aim of the investigation was to identify heritage objects or places of potential archaeological Deposit (PAD). Based upon the background research, known Aboriginal site patterning, and current aerial photography, the entire upgrade corridor was inspected.

All surveyed areas and items of interest were recorded on a topographic map of the study area (using a GPS and GDA 94 coordinates), along with levels of visibility, erosion, soil conditions, and evidence of land disturbance.

Ground surface visibility (GSV) is the percentage of ground surface that is visible during the field inspection. GSV increases in areas of exposures such as stock impact trails, roads, gates and along areas of erosion such as creek banks and dam walls. As a result surveys undertaken in areas with high exposure rates result in a more effective survey coverage.

The site visit resulted in the following findings.

3.1.1 Ground Surface Visibility

GSV over most of the study area was exceptionally high due to sparse vegetation coverage and that much of the project area followed the access road with high disturbance levels. Bare earth was visible in large exposures and across the project area the average GSV was estimated at 80%. Due to the sparse vegetation, large areas of exposed ground were present along the road and in levelled areas of prior construction.

Exposures were common at a moderate frequency across the project areas with large areas of bare soils with natural quartz gravels and shales visibly present. These conditions are optimal for the identification of Aboriginal stone artefacts. The conditions at the time of the field survey are shown in plates 1 to 6.

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Plate 1: Vehicle track at the point where the trench connects with the main line, where the pipeline then runs through the centre of the road (Facing South)

Plate 2: The vehicle track at (MGA55) 617198. 5960835 (Southeast)

Plate 3: Mid station for the gondola, highly disturbed setting (South)

Plate 4: Exit point from Mid Station, highly disturbed area where the services lines continue beneath the existing gondola corridor (Southwest)

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Plate 5: Pipeline route through trees, where the 0.5m deep pipe will replicate existing infrastructure trench (Southeast)

Plate 6: Area of high disturbance on west side of the Thredbo River (West)

3.1.2 Results - Aboriginal and Historical Heritage Sites

No areas of Aboriginal or historical heritage were identified during the field survey despite constant rate of exposures and low vegetation coverage. No known heritage sites will be affected by the proposed development.

3.1.3 Results - Areas of Potential Archaeological Deposit (PAD)

Areas of PAD are defined as landforms that hold higher potential than their surrounds to contain subsurface deposits of past Aboriginal occupation. Based on a review of previous studies completed for the region, areas of PAD would be located in association with waterways (1st or 2nd order streams) on level ground or along spur crest and ridge lines.

There were no high potential landform present within the project area.
The impacted areas are generally steep with a low potential for subsurface deposits, which is reinforced by the highly disturbed nature of the services corridor.

3.1.4 Summary

As a result of the field survey of impact areas and background research, it is considered that the project has low potential to impact on unrecorded Aboriginal or Historical heritage sites, or areas of PAD. No Aboriginal or historical heritage sites or areas of PAD were recorded or identified as a result of the assessment and no areas of high or moderate sensitivity are present in the development area based on previous research and modelling.

The project are holds high level of disturbance with previous placement of constructed roads and infrastructure.

No Known heritage impacts will result from the proposal.

4 IMPACT ASSESSMENT

The impacts from the services upgrade for the Merritt's Mountain House Restaurant will be confined within the current corridor of previous construction disturbance. The area is generally characterised by steep slopes and areas of previous trenching and construction which has removed original topsoils. This location has also been heavily affected by the trenching of previous services and construction which involved earthworks, removal and levelling of topsoils and vegetation removal.

As a result of the desktop assessment, it is considered that the project has low potential to impact on unrecorded Aboriginal heritage sites or areas of PAD.

No Aboriginal heritage sites or areas of PAD were recorded or identified as a result of the assessment.

No areas of high sensitivity are present in the development area based on the landform and previous impacts in the area. Areas within the project area where slopes are gentler have been impacted by previous land shaping and construction of facilities.

Based on the assessment the impacts from the project are as follows:

- No known Aboriginal objects or places will be impacted by the proposed works.
- No known Aboriginal objects or places are present in the project area.
- No areas of high potential to contain unrecorded Aboriginal objects of places are present in the project area.

The Code provides a flowchart of six questions to identify the presence of and potential harm to Aboriginal heritage. These questions and their applicability to the project are shown in Figure 5. The responses to these questions determine if further heritage investigations are required.

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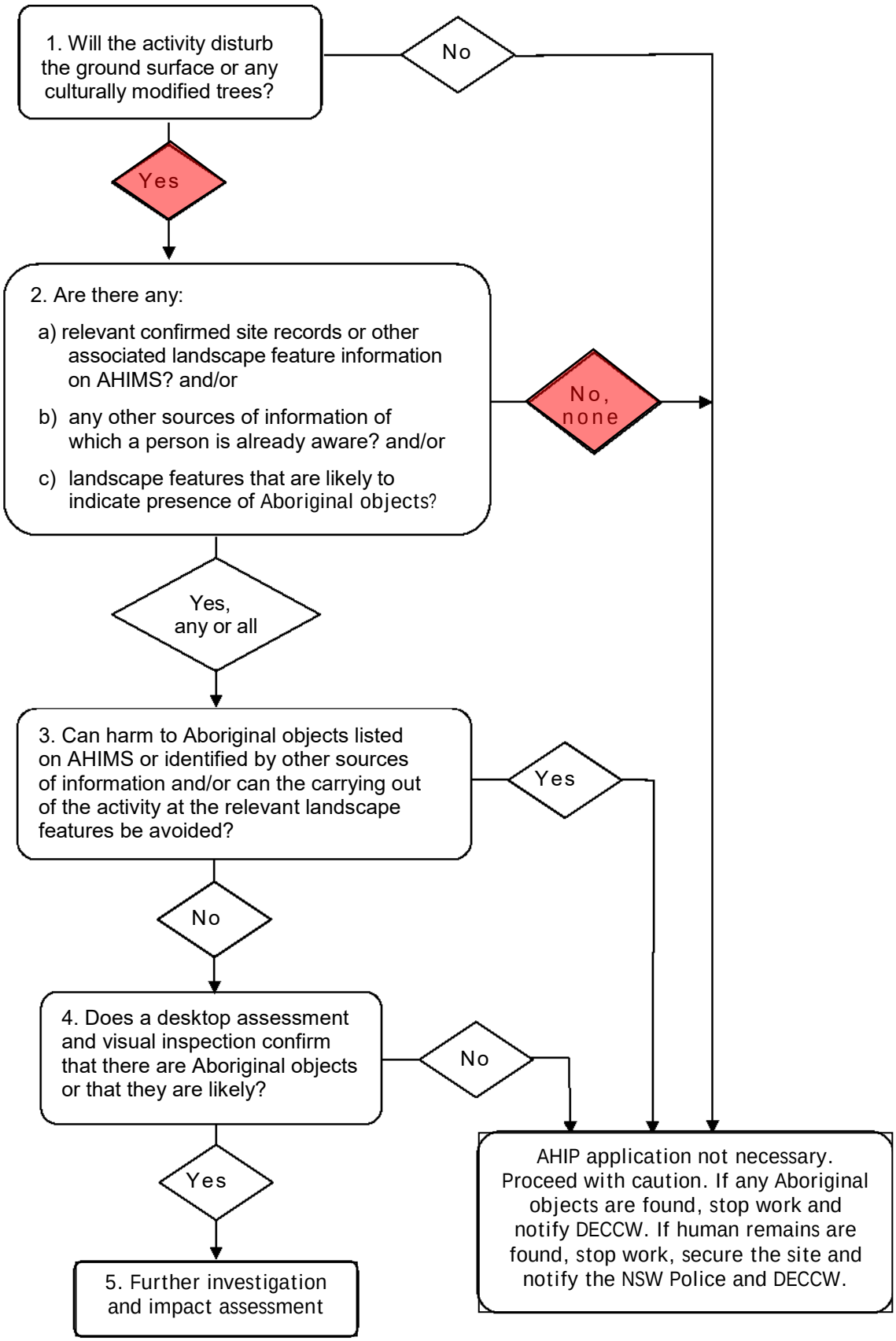
Figure 5. Due Diligence Flow Diagram (OEH 2010:10 – Due Diligence Code of Practice)



4.1 RECOMMENDATIONS

Based on this due diligence assessment the following actions are recommended for the project.

Recommendation 1: Works to proceed without further heritage assessment with caution.

- No heritage sites and no areas of Potential Archaeological Deposit (PAD) were identified within the project area based on a review of previous reports and the pedestrian field survey of the project area.

Recommendation 2: Discovery of Unidentified Aboriginal cultural material during works.

Under the *NPW Act 1977,* all Aboriginal places and objects are protected from harm, even if they have not been previously identified during the assessment process. If Aboriginal material is discovered during works then the steps as outlined below should be followed:

- All work must cease in the vicinity of the find and project manager notified immediately.
- A buffer zone of 10m should be fenced in all direction of the find and construction personnel made aware of the 'no go' zone.
- NSW Heritage must be notified of the find and advice sought on the proper steps to be undertaken.
- After confirmation with NSW Heritage a heritage consultation should be engaged to undertake assessment of the find and provide appropriate management recommendations to the proponent.

Recommendation 3: Alteration of impact footprint

Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation.

Implementation of the above management recommendations will result in low potential for the project to impact on heritage values or result in damage to heritage sites.

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