

Review of Snowy Mountains Special Activation Precinct Master Plan 2022 – Thredbo Sewer Trunk Main Rehabilitation

This review has been prepared in response to the Request for Information received via email from the Department of Planning, Housing and Infrastructure (DPHI) on 13 December 2024.

Email Reference: *RE: Development Application (PAN-494710): New application has been submitted* from Mark Brown (Team Leader, Assessments, Alpine Resorts Team).

- a) *The Statement of Environmental Effects should provide additional detail in Part 3 on:...*
- *Snowy SAP and technical studies*
 - *Further consideration of the SAP master plan and technical studies*
 - *Ecology*
 - *Heritage*
 - *Flooding*
 - *Infrastructure capacity*

Review of Snowy SAP Master Plan Performance Criteria

Table 1: Snowy SAP Master Plan Performance Criteria Review

Snowy Mountains Special Activation Precinct Master Plan 2022	
10.1 Land Use Performance Criteria	Comment
A. Development is to be permissible and consistent with the Master Plan, Precincts—Regional SEPP, Alpine Development Control Plan, Kosciuszko National Park Plan of Management, and the National Parks and Wildlife Act.	Infrastructure is permissible. The development is for maintenance and rehabilitation of existing sewer infrastructure.
B. In considering the suitability of the development, the consent authority must be satisfied that the development meets the performance criteria and development controls in this Master Plan and in the Alpine Development Control Plan.	There is no current Alpine Development Control Plan, therefore consideration of this criteria cannot be achieved.
C. Development consent can only be issued for development in the Alpine Precinct where: <ul style="list-style-type: none"> i. the uses will support the diversification of the Alpine Precinct’s tourism offering and year round economic viability. ii. the uses will not compromise the environmental, heritage and cultural values of the Alpine Precinct. iii. the uses will not exceed the established carrying capacity of the Alpine Precinct. 	The proposal is for maintenance and rehabilitation of existing underground sewer infrastructure that is critical to resort operations. The works will not compromise the environmental, heritage or cultural values of Thredbo.
D. The location of future development should align with the relevant structure plan and be focused on land marked ‘Development area’. Where development is proposed on land outside these	The proposal is for maintenance and rehabilitation of existing infrastructure.

Snowy Mountains Special Activation Precinct Master Plan 2022	
areas, additional technical investigation may be required.	
E. Development for new or upgraded accommodation will meet the indicative sub-precinct yields and visitor thresholds set out in the Kosciuszko National Park Plan of Management and leasing arrangements. Refer also to Chapter 14 of this Master Plan.	Not applicable – the works are not for new or upgraded accommodation.
10.2 Alpine Resorts Performance Criteria	Comment
A. Development should contribute to visitor attraction and village experience through: <ul style="list-style-type: none"> i. the prioritisation of infill development. ii. improvements to pedestrian and active transport connections. iii. creation and implementation of active street frontages. 	Not applicable due to the nature of the works – maintenance and rehabilitation of existing sewer
B. Development should integrate public transport opportunities and should create gateways and nodes to create a sense of place and community in Alpine Resort sub-precincts.	
C. Development should provide a range of tourist accommodation offerings and seasonal worker accommodation.	
D. Development should be designed to reduce on-site power consumption and improve environmental performance.	
E. Development should be designed to contribute to the alpine character of the Alpine Resorts and reflect the alpine landscape and natural environment.	
10.3 Alpine Accommodation Performance Criteria	Comment
A. Development should be sensitively designed and integrated into the sensitive environment and landscaping, appropriately responding to the topography of the Alpine terrain.	Not applicable due to the nature of the works – maintenance and rehabilitation of existing sewer infrastructure.
B. Development should incorporate public transport opportunities, where possible, and provide adequate on-site parking.	
C. Development should provide adequate on-site amenities and services.	
D. Development should be designed to support and enable the ultimate growth in each Alpine Accommodation sub-precinct, including the design and provision of infrastructure and services.	
E. Development should connect to and improve shared trail and year-round recreational activities	
10.4 Alpine Experience Performance Criteria	Comment
A. Public transport or mass transit connections should be integrated into the design of new	

Snowy Mountains Special Activation Precinct Master Plan 2022	
developments, particularly in Alpine Resort and Alpine Accommodation sub-precincts.	Not applicable due to the nature of the works – maintenance and rehabilitation of existing sewer infrastructure.
B. Transport development must provide safe, reliable and accessible connections into and around the Kosciuszko National Park.	
C. Development should be designed and staged to support and enable the ultimate growth of accommodation and attractions in the Alpine Region.	
D. Development of new and upgraded shared trails and paths should provide appropriate facilities and amenities.	
E. Development should provide adequate car parking as part of a range of transport solutions (including the provision of accessible parking spaces).	
F. Visitor attractions must be supported by appropriate amenities, facilities and car parking and must minimise its impact to the natural environment.	
G. Visitor attractions should be designed and staged to support and enable the ultimate growth of attractions in the Alpine Region.	
Environment and Sustainability – Chapter 11 11.1 Biodiversity Performance Criteria	Comment
A. All development is to apply the avoid, minimise and offset methodology.	Refer to the Flora and Fauna Assessment provided with this application.
B. Development is to avoid threatened ecological communities and threatened species habitat; such vegetation should not be removed. Development may occur in these areas if it is for essential infrastructure.	Refer to the Flora and Fauna Assessment provided with this application.
C. Development should be focused on colocation and infill to minimise biodiversity impacts.	The proposal is for maintenance and rehabilitation of existing infrastructure within a disturbed corridor.
D. Development should be concentrated in and around already disturbed areas. Where possible, development should provide a buffer between areas of high ecological value and buildings and structures.	The proposal is for maintenance and rehabilitation of existing infrastructure within a disturbed corridor.
E. Development should consider the biodiversity impacts of bushfire asset protection zones (APZ) and associated vegetation management.	Not applicable.
F. Development must offset any impacts to biodiversity through direct management measures within Kosciuszko National Park and should be related to the biodiversity impacted.	No offsets proposed.
G. Riparian corridors must be preserved while ensuring consistency with the proposed Flooding and Drainage Strategy for the Precinct.	Minimising impacts within the riparian corridor of Thredbo river has been a key consideration in the planning and

Snowy Mountains Special Activation Precinct Master Plan 2022	
	construction methods. Refer to the project description, waterfront land assessment and flora and fauna assessment provided with this application.
H. Any revegetation or planting within Kosciuszko National Park should follow the Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park.	All disturbed areas will be rehabilitated in accordance with the Rehabilitation Guidelines as outlined in the SEMP.
11.2 Geotechnical Performance Criteria	Comment
A. Development must address the requirements of the Geotechnical Policy – Kosciuszko National Park (DPNIR, 2003). This includes: i. development on land covered by the geotechnical maps, under the above policy must ensure the requirements of the policy are met. ii. development on land not covered by the geotechnical maps under the above policy must ensure the requirements of the policy are met and should also use the risk susceptibility mapping to inform the requirements and design of development.	Refer to the Geotechnical Assessment and Form 4 provided with this application.
B. Development must include an assessment of geotechnical risks.	
C. Buildings and structures must be designed to accommodate the specific geotechnical risks identified for the site.	
D. Excavations required for new developments must consider the potential to cause widespread slope instability and ensure appropriate mitigation measures are implemented to minimise and manage risk.	
11.3 Flood Risk Management Performance Criteria	Comment
A. The Flood Planning Level is the 1% AEP plus 500mm freeboard to ensure consistency across the Precinct. Development must generally occur outside the Flood Planning Level unless it can demonstrate that risks can be suitably managed. This allows for the maintenance of flood function and to avoid adverse effects on flood behaviour to the detriment of other properties or the environment of the floodplain.	Not applicable due to nature of proposal – maintenance and rehabilitation of existing sewer infrastructure not located within flood impact area.
B. Development within the Flood Planning Level should demonstrate that: i. all structures are constructed with flood compatible building components below the 1% AEP flood level plus 500mm freeboard. ii. all structures are designed to withstand the forces of floodwater, debris and buoyancy up to 1% AEP flood plus 500mm freeboard.	

Snowy Mountains Special Activation Precinct Master Plan 2022	
C. Development within the Probable Maximum Flood area should demonstrate that:	
i. all emergency and evacuation infrastructure is to be constructed with flood compatible building components below Probable Maximum Flood level plus 500mm freeboard.	
ii. all emergency and evacuation infrastructure structures are to be designed to withstand forces of floodwater, debris, and buoyancy up to Probable Maximum Flood plus 500mm freeboard.	
iii. development must be sited, designed and located to avoid or mitigate the flood risk to people, property and infrastructure such that: <ul style="list-style-type: none"> • flood risk is managed through site-specific built form and design. • sensitive, vulnerable and critical uses are avoided in the floodplain. 	
D. Development should mitigate the impacts of local overland flooding through the provision of adequate site drainage systems, where possible.	
E. Development must consider and plan for emergency evacuation situations to ensure the safety of all areas within the Probable Maximum Flood extent.	
11.4 Water Quality Performance Criteria	Comment
A. Maintain or improve the ecological condition of waterbodies and their riparian zones in catchments over the long term.	The proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
B. Development in the Alpine Precinct should implement on-site water management and water quality systems through: <ul style="list-style-type: none"> i. the capture and re-use of water on-site. ii. the treatment of water on-site with any water discharged back into catchments having a neutral or beneficial effect on water quality. iii. incorporating water sensitive urban design principles into the development's-built form and landscaping, where possible. 	Temporary erosion and sediment controls will be installed onsite during construction as required.
C. The quality of stormwater discharged into receiving catchments must be pre-development quality or better in relation to pH, total suspended solids, total phosphorus, total nitrogen and gross pollutants. The quality of water should aim to meet the following targets: <ul style="list-style-type: none"> i. Total Suspended Solids: 85% reduction. ii. Total Phosphorus: 60% reduction. iii. Total Nitrogen: 45% reduction. 	
D. The quality of water discharged into receiving catchments should maintain electrical conductivity levels. Water quality should aim to maintain an	

Snowy Mountains Special Activation Precinct Master Plan 2022	
electrical conductivity below the 30 $\mu\text{S}/\text{cm}$ ANZG 2018 Guideline value for upland rivers of South-East Australia.	
E. Monitor macroinvertebrates to ensure they are consistently within Band A of the NSW AUSRIVAS model.	Not applicable due to nature of proposal.
F. Erosion and sediment control should be managed during construction to ensure impacts to waterways are minimised in accordance with Managing Urban Stormwater Soils and Construction, also known as the Blue Book (current edition).	Controls will be implemented during construction in accordance with the Blue Book and SEMP.
G. Discharge of wastewater and/or contaminated stormwater to watercourses or waterways is not permitted unless otherwise specified in an environmental protection licence issued under the Protection of the Environment Operations Act 1997. Development must obtain the appropriate water licenses in accordance with the Water Act 1912 and the Water Management Act 2000 and consider the relevant Water Sharing Plan.	Noted.
11.5 Bushfire Performance Criteria	Comment
A. Development is to: i. minimise perimeters exposed to the bushfire hazard. ii. minimise vegetated corridors that permit the passage of bushfire towards development. iii. provide for the siting of future development away from ridge-tops and steep slopes, within saddles and narrow ridge crests. iv. ensure capacity of existing infrastructure (such as roads and utilities) can accommodate the increase in demand during emergencies as a result of the development.	Not applicable given nature of the proposal – maintenance and rehabilitation of existing sewer infrastructure.
B. Asset Protection Zones are to be provided and maintained between a bushfire hazard and future development and are designed to address the relevant bushfire attack mechanisms.	
C. Adequate access is to be provided from all properties to the wider road network for park users emergency services and to provide access to hazard vegetation to facilitate bushfire mitigation works and fire suppression.	
D. Development is to minimise levels of radiant heat, localised smoke and ember attack through development design and siting.	
E. The subdivision of land and location of developments should consider the future uses of land and the inclusion of roads into Asset Protection Zones	

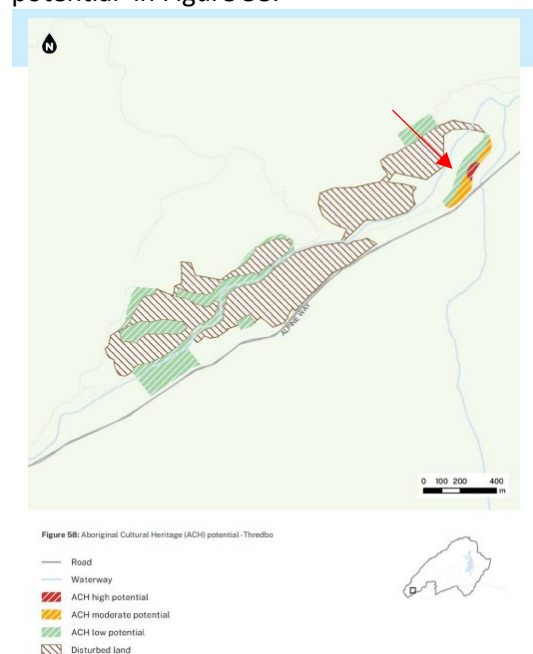
Snowy Mountains Special Activation Precinct Master Plan 2022	
11.6 Sustainability and Climate Change Performance Criteria	Comment
A. Development must be inclusive and sustainable and promote year round use.	The development is for the maintenance and rehabilitation of existing sewer infrastructure that is critical for resort operations.
B. Development should preserve the Precincts landscape, cultural, heritage and biodiversity values by avoiding and minimising impact.	The Development has been designed to minimise impacts within the locality.
C. Development should support sustainable and active transport opportunities and integrate open space. Buildings are to express a strong commitment to ESD principles and incorporate passive design, optimal orientation, effective sun shading, cross ventilation and open plan living. This should be evident in the external architectural expression.	Not applicable given nature of the proposal – maintenance and rehabilitation of existing sewer infrastructure.
D. Development should comply with applicable sustainability tools and programs for design, construction and operation.	Not applicable given nature of the proposal – maintenance and rehabilitation of existing sewer infrastructure.
E. Consideration must be given to climate responsiveness and resilience. Climate change risks, hazard and opportunities must be considered in the design, construction and operation of development within the Precinct.	The Development is for the maintenance and rehabilitation of existing sewer infrastructure. Geotechnical hazards have been considered as part of the application.
F. Operators, lessees and licensees within the Precinct must prepare and maintain an Environmental Management System in accordance with ISO14001:2015 – Environmental management systems and the requirements of the Plan of Management for Kosciuszko National Park	KT will continue to manage its operations in accordance with the existing EMS for Thredbo until the new framework in accordance with ISO14001:2015 – Environmental management systems and the requirements of the Plan of Management for Kosciuszko National Park is implemented across the Alpine Resorts.
Places and Landscape – Chapter 12	Comment
12.1 Aboriginal and Cultural Heritage Performance Criteria	
A. Areas of Aboriginal cultural heritage (included as part of the environmentally sensitive areas map) should not be developed. Development may occur in these areas if it is for essential infrastructure and where further Aboriginal cultural heritage assessment will be undertaken to appropriately mitigate and manage any impacts to Aboriginal cultural heritage items, places or areas.	The development is not located within an area identified on the environmentally sensitive areas map.
B. Aboriginal culturally significant places and sites should be integrated with areas of environmental significance and green space (where appropriate) across the Precinct. This may continue to evolve as greening opportunities across the Precinct are established	Not applicable

Snowy Mountains Special Activation Precinct Master Plan 2022

i. development within areas identified as ‘disturbed land’ do not require any further investigation beyond considering the potential for subsurface archaeological deposits. If current disturbances are considered to cover intact archaeological deposits, further investigation should take place that may include test excavation. Should development encounter any unexpected finds during construction, the procedures under the relevant unexpected finds protocol should be followed.

ii. works within areas identified as “moderate ACH potential’ or ‘high ACH potential’ should be avoided. Where development will impact these areas, further Aboriginal cultural heritage assessment must be undertaken. This assessment should include a visual inspection, possibly test excavation if warranted, and participation from the Aboriginal community.

It is difficult to determine from the quality of the maps provided in the Master Plan where the areas of ACH potential apply within the resort. It appears part of the site may be located within an area mapped as ‘Low potential’ in Figure 58.



The Due Diligence prepared by Past Traces (2024) concluded there are no known heritage sites or areas of PAD within the project area. There are no heritage constraints on the project.

D. Development planned on land in which an Aboriginal object is located should be supported by a heritage impact assessment which should be prepared to assess the extent to which a proposed development would harm Aboriginal objects.

No Aboriginal objects are located within the development site, refer to the Due Diligence (Past Traces 2024) provided with this application.

E. If impact to an Aboriginal object is unavoidable, an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the National Parks and Wildlife Act 1974 would be required.

Not applicable.

12.2 Historic Heritage Performance Criteria

Comment

A. Development in areas defined as ‘disturbed land’ can occur without further historic heritage investigation however must consider neighbouring heritage items and broader heritage values.

The development will not impact on any historic heritage. The development site is located within a highly disturbed easement.

B. Development on land where a heritage item is situated, that is a heritage item or is on land adjacent to a heritage item must prepare a statement of heritage impact.

C. Development in areas defined as ‘high risk’

Snowy Mountains Special Activation Precinct Master Plan 2022

or 'moderate risk' requires further heritage assessment where the development is likely to materially have a major affect on a heritage item or its value. Development is considered to have a materially major affect if it involves:

- i. the full or partial demolition of a building.
- ii. major alterations or additions.
- iii. major adverse impacts, such as the removal of significant fabric, obscuring key views or dominating a heritage item, or the removal of evidence of significant historical associations; and
- iv. impact to significant archaeological deposits.

D. Development in areas defined as 'high risk' or 'moderate risk' requires further heritage assessment where the development is likely to materially have a minor affect on a heritage item or value. Development is considered to have a minor affect if it involves (but is not limited to):

- i. repairs or restoration to fabric.
- ii. installation of fire safety equipment.
- iii. installation of disabled access.
- iv. replacement of awnings, balconies, etc.
- v. installation of signage or fencing.
- vi. excavation of areas without archaeological potential.
- vii. erection of temporary structures.
- viii. installation of safety and security equipment.

E. Where development is likely to materially have a major effect on a heritage item or value, further heritage assessment is required. This heritage assessment includes:

- i. a visual inspection to determine the existing heritage values.
- ii. an archaeological assessment (if appropriate).
- iii. preparation of a statement of heritage impact.

F. Where development will have minor effect on a heritage item or value, a heritage assessment may be required. This heritage assessment may include: a visual inspection to determine the existing heritage values.

- i. an archaeological assessment (if appropriate).
- ii. use of a previously prepared heritage study if applicable.

G. Development that is likely to have a materially major or minor effect on a heritage item or its value must:

- i. identify the impacts to the heritage values of an item or place.
- ii. demonstrate the need for the impact and

Snowy Mountains Special Activation Precinct Master Plan 2022	
how alternatives to the impact have been considered. iii. demonstrate how the adverse impacts will be minimised or mitigated.	
H. Development adjacent to a heritage item should ensure impacts to the heritage item are minimised, including through the provision of appropriate curtilages. There may be opportunities to reduce the curtilage to some heritage items if it can be demonstrated the development will not have a significant impact on the heritage item or its value.	
I. Heritage items must be used for purposes that are appropriate to their heritage significance, including adaptive re-use where appropriate.	
J. Development is to ensure long-term heritage conservation outcomes are retained or interpreted to reflect the history of heritage items and places.	
K. Development should through development or upgrades remove inappropriate or unsympathetic alterations and additions to heritage items and reinstate significant missing details and building elements, where possible.	
12.3 Landscape, Character and Open Space Performance Criteria	Comment
A. Development should be designed to sensitively integrate into the landscape and should respond appropriately to the topography and climate of the Alpine Precinct.	The proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
B. Development should protect, conserve and enhance the Alpine Precinct's natural environment and create a green infrastructure network, where possible.	The proposal is for the maintenance and rehabilitation of existing sewer infrastructure within a highly disturbed easement.
C. Landscaping and public open spaces should include plantings of native species found in surrounding plant communities, which aim to achieve the re-establishment of biodiversity in addition to aesthetic appeal and enhancement of the functionality of an area.	Not applicable
D. Revegetation and new plantings should follow the Rehabilitation guidelines for the Resort Areas of Kosciuszko National Park.	All disturbed areas will be rehabilitated in accordance with the Rehabilitation Guidelines as outlined in the SEMP.
E. Development should integrate stormwater management infrastructure with open spaces, where possible.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
12.4 Built Form Performance Criteria	Comment
General criteria for all development in the Alpine Region	
A. Buildings should be efficient, well designed and successfully integrated with the surrounding landscape. This will be achieved by:	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.

Snowy Mountains Special Activation Precinct Master Plan 2022	
<p>i. ensuring building bulk, orientation and design contributes to the energy efficiency of buildings, particularly with respect to thermal comfort.</p> <p>ii. ensuring new buildings are located within existing disturbed areas to minimises impacts on vegetation and natural processes.</p> <p>iii. siting development within existing disturbed areas to limit clearing and the expansion of new development areas.</p> <p>iv. incorporating climate resilient design principles in new development.</p> <p>v. applying suitable rehabilitation and native landscaping.</p> <p>vi. incorporating preparedness for natural hazards and climate change into development design.</p> <p>ensuring development creates activated public domain spaces and provides safe and accessible pedestrian connections between buildings, appropriate for all seasons.</p>	
B. Site earthworks must respond to local topography and geotechnical characteristics and be appropriate for the intended land use.	Earthworks will be carried out in accordance with best practice methods and recommendations outlined in the Geotechnical Assessment prepared by Assetgeoenviro (2024).
For village centres and public domain	Comment
A. Development should create an integrated streetscape where active frontages promote movement between the private and public realms.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
B. Building entries should connect to an accessible (providing equitable access to all pedestrians) pedestrian network through design features, wayfinding, and landscape treatments.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
C. Development should integrate and provide public seating, shelter and lighting to contribute to increased activity and safety in the public realm.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
D. Development should provide human-scale buildings ensuring building envelopes allow adequate solar access and views, including ensuring significant views to natural features are protected.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
E. Development should provide for year-round weather protection that reduces the impacts of wind and snow accumulation in winter and provides adequate shade in summer.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
F. Development should provide clearly defined and separate pedestrian and vehicle entries to minimise conflicts.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
G. Development should allow for snow clearing and adequate interface with oversnow vehicles, where appropriate.	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.

Snowy Mountains Special Activation Precinct Master Plan 2022	
Chapter 13	Comment
13.1 Transport Network Performance Criteria	
A. Transport infrastructure should integrate the public transport network with the existing road network by:	Not applicable – the proposal is for the maintenance and rehabilitation of existing sewer infrastructure.
i. ensuring public transport stops are strategically located and provide adequate allweather shelter and accessibility.	
ii. minimising vehicle conflict with active transport and public transport routes.	
B. Development must provide operational access and egress for emergency services and occupants.	
C. Development should integrate active transport connections that promote movements between the Alpine resorts, where possible.	
D. New development must provide and integrate new technologies, such as electric vehicle charging and electronic checkpoints, where possible.	
13.2 Utilities, Services and Infrastructure Performance Criteria	Comment
A. Development within the site must have access to water, wastewater, digital connectivity and telecommunications, energy and drainage infrastructure.	The proposal is for the maintenance and rehabilitation of existing sewer infrastructure within a pre-disturbed easement.
B. Utilities and services must be integrated with existing infrastructure and services, where possible.	
C. Utilities and services should be integrated into road reserves, active transport corridors or the public domain, where possible.	
D. Infrastructure and services must be designed to provide for the ultimate growth and development in Alpine Resorts.	
E. Development should provide and integrate water cycle management and renewable energy solutions into the design of buildings and structures, where possible.	

Review of technical studies

Snowy Strategic Activation Precinct Biodiversity Assessment of Alpine Sub-Precincts, June 2022 prepared by WSP.

The Biodiversity Assessment (WSP 2022) identifies part of the development site as being located in an area of High Biodiversity Constraints, refer **Figure 2**.

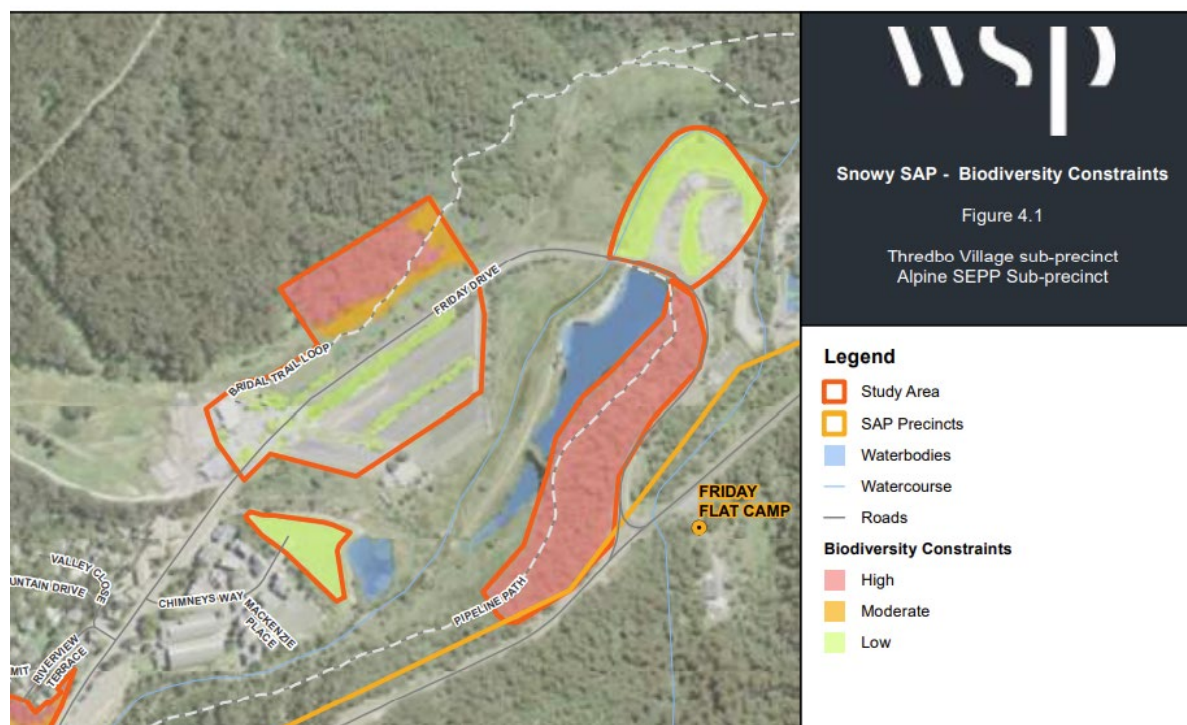


Figure 1: Extract from Biodiversity Assessment (WSP 2022)

Response: As part of the ongoing consultation regarding the draft Alpine Development Control Plan, KT engaged an independent ecologist to review the biodiversity assessment prepared by WSP for the Snowy SAP Master Plan. The subject site (Lakeside area) of the independent advice encompasses the area mapped as High Biodiversity Constraints uphill of snowmaking ponds and encompassing part of the pipeline path. The review identified inaccuracies and limitations to the SAP biodiversity constraint mapping at the Thredbo Village precinct and more specifically the Lakeside area and concluded development should not be precluded on the basis of the constraints mapping within the SAP Master Plan. The Department's SAP team have a copy of this advice.

A site-specific Ecological Assessment (ELA 2024) has been provided with this application. The assessment concluded:

- 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 Act 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.

Revised Aboriginal Cultural Heritage Assessment Report, Snowy Mountains Special Activation Precinct, June 2022 prepared by OzArk.

The OzArk survey area is identified in **Figure 2**. Part of the pipeline easement is captured by the survey area which has been flagged as ‘ACH low potential’.

Figure 8-1: Thredbo Alpine Resort. ACH potential.

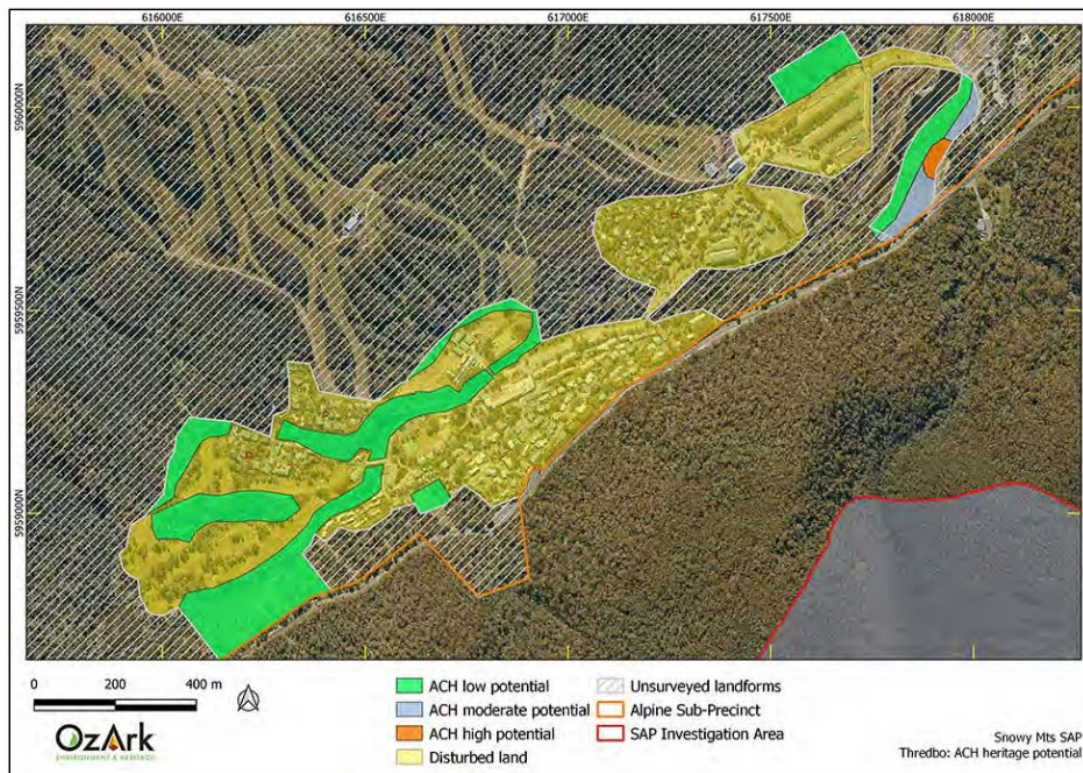


Figure 2: Extract of OzArk assessment, p. 147

A summary of the findings is provided below:

- p. 78 – Despite a large amount of assessment related to the installation of snow industry infrastructure, recorded sites are generally associated with the flatter landforms in the south of the Thredbo area (which is also associated with the Thredbo River). Twelve sites have been recorded in this area, all artefact sites. Seven of these sites are associated with the flatter, valley floor within this area.
- P.100 – Although located on either side of the Thredbo River, the survey area is highly modified from earthmoving, building construction, and other infrastructure such as roads. The development areas shown in the Master Plan are confined either to modified landforms (car parks) or a steep cleared block to the south of the village. None of these areas has potential for significant Aboriginal objects or archaeological deposits. The survey area only included the village area and not the ski slopes to the north of the village.

- P.134 – 61-6-0104 (Friday Flat 2). This site is located on a bench in a steep slope overlooking the Thredbo River (now a small dam used for snow making storage). The slope is thickly vegetated making movement through the landform difficult. The exact location of the site was not accessible as it was covered with debris from a recent tree fall. However, nearby, some quartz artefacts were noted, and this supports the view that this bench, at some time in the past, must have attracted low density occupation (Figure 7-33).
- P. 146 – The KNP survey areas generally have low archaeological potential as they are located within landforms with moderate to steep slopes. Those areas that are flatter have generally been previously disturbed by development. Some small areas, particularly adjacent to the Thredbo River have moderate archaeological potential, and small areas at the Thredbo Alpine Resort... have high potential due to the previous recording of a site.

Response: The pipeline easement is a highly modified site that has undergone extensive earthworks to create the easement and shared use trail. The Due Diligence prepared by Past Traces (2024) concluded there are no known heritage sites or areas of PAD within the project area. There are no heritage constraints on the project.

Technical Study Report, Engineering – Flooding and Water Quality, June 2021 prepared by WSP.

- p.45 – The Flooding and Water Quality assessment reviewed the Flood Level Study of Thredbo River prepared by SMEC (1999), refer **Figure 3**. The study concluded that some access roads were susceptible to inundation in regular events and additional culverts would be required to minimise the effects of flooding.

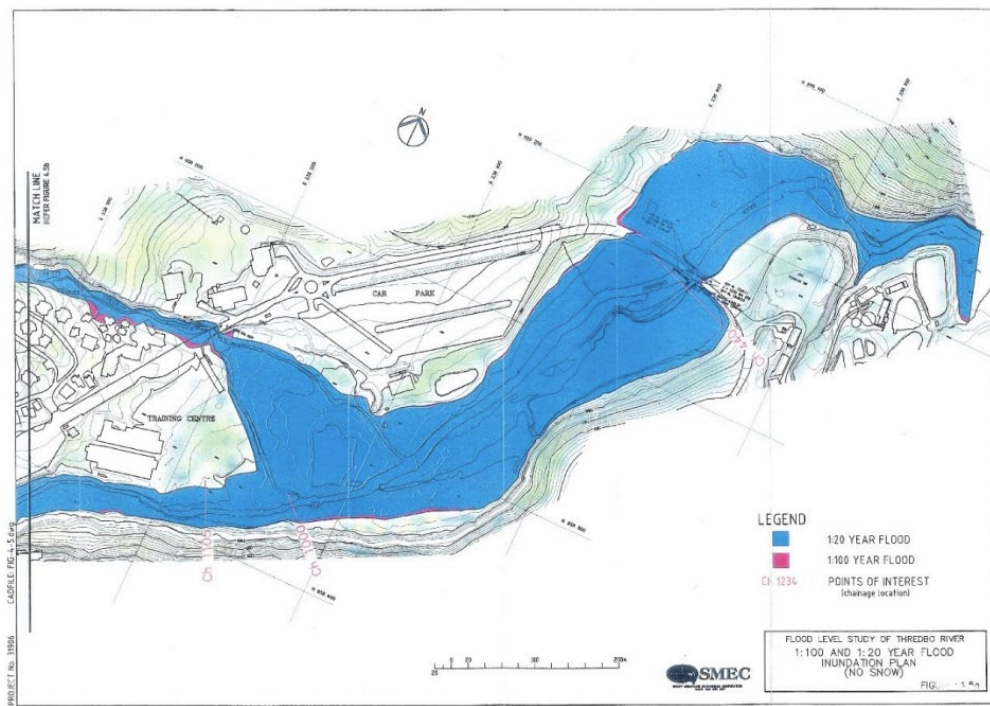


Figure 5.1 Thredbo River flood extents at car park, 5 and 1% AEP events

Figure 3: Extract from Flooding and Water Quality (WSP 2021)

- P.45 - WSP recommended additional site specific flow and water level data should be collected to provide an improved understanding of flood behaviour in the Thredbo River catchment.
- P.73 - The hydraulic modelling identified a few key access routes that had a low immunity, namely Friday Drive within Thredbo Village which may not have adequate immunity in a 1% AEP storm event and the junction between Barry Way and Kosciuszko Road west of Jindabyne. In addition, a number of minor roads particularly in Thredbo Village have been identified with low flood immunity.
- p.73 – It is recommended that the low immunity access locations be reviewed in more detail and that additional infrastructure be constructed to ensure that the right level of immunity is reached. It is expected that a bypass surrounding Jindabyne will provide an alternate route to mitigate the low flood immunity between Barry Way and Kosciuszko Road, however the Friday Drive bridge should be assessed further to determine whether it requires upgrading to provide a higher level of immunity.

Response: The study identified parts of Friday Drive may not have adequate immunity in a 1% AEP storm event and recommended further review of these locations. It is understood no further review of Friday Drive has been undertaken as part of the Snowy SAP master planning process.

The Development is for the maintenance and rehabilitation of existing underground infrastructure. The site is not located within the 1:20 year or 1:100 year flooding area shown in **Figure 3**. The part of the pipeline that traverses Friday Drive is located outside of the 1:20 year flood area.

Snowy Mountains Special Activation Precinct, Kosciuszko National Park Plan of Management Carrying Capacity – Framework Development, June 2022 prepared by WSP.

This document relates to the development of a framework for the carrying capacity of Alpine Resort areas.

Response: As part of the implementation process for the Snowy SAP Master Plan, the SAP planning team are working with NPWS representatives and resort operators to create the framework to be implemented. As this remains undeveloped in draft, no further assessment of this application against the document is warranted.

The Development is for the maintenance and rehabilitation of existing sewer infrastructure.