Statement of Environmental Effects

Thredbo Sewer Trunk Main Rehabilitation

Thredbo Alpine Resort,
Kosciuszko National Park

March 2025

Document Control

Revision	Date	Revision Type	Author	Approved by
A	2/12/2024	Draft	J.Best;K.O'Sullivan	C.Chalk
0		Final	J.Best;K.O'Sullivan	E.Diver
1	18/12/2024	Address RFI comments from DPHI	K.O'Sullivan	C.Chalk
2	07/03/2025	Address RFI from Sandria Butler (DPHI) email dated 7/3/2025.	K.O'Sullivan	C.Chalk

Project Number: 24013ES

Kosciuszko Thredbo Pty Ltd

Table of Contents

Figures

Tables

1 Introduction

This Statement of Environmental Effects (SEE) has been prepared to support the Development Application (DA) for the rehabilitation of the sewer main located within Thredbo Alpine Resort (hereinafter referred to as the Development).

1.1 Application details

Table 1: Application Details

Application Details	
Applicant	Kosciuszko Thredbo Pty Ltd (KT)
ABN	95 000 139 015
Applicant Address	1 Friday Drive, Thredbo NSW 2625
Development Address	Thredbo Alpine Resort, Kosciuszko National Park, 2 Friday Drive, Thredbo NSW 2625
Lot/Plan	876/DP1243112
Local Government Area	Snowy Monaro Regional Council
Zoning	Zone C1 – National Parks and Nature Reserves
Planning Instrument	*State Environmental Planning Policy (Precincts – Regional)* 2021 (Precincts – Regional SEPP)
Integrated Development	Applicable – controlled activity under the *Water Management Act 2000*
Consent Authority	Department of Planning, House and Infrastructure
Type of Development	Infrastructure facilities
Summary of works	• Vegetation removal • Trenching and excavation • Pipeline re-lining • Mahole repairs and decommissioning • Site rehabilitation

1.2 Supporting documentation

This application is supported by the documentation listed in **Table 2**.

Table 2: Supporting Documentation

Document	Title/Description	Author/Prepared by	Date	Document Reference
Plan	Site Plan, Thredbo Sewer Trunk Main Rehabilitation	Kosciuszko Thredbo Pty Ltd, KOS	4/11/2024	Rev B
Plan	Trench Cross Section – Sewer line for Replacement	Kosciuszko Thredbo Pty Ltd, K.O'Sullivan	03/12/2024	Rev 1
Plan	Manhole Numbers Thredbo Sewer Trunk Main Rehabilitation	Kosciuszko Thredbo Pty Ltd, KOS	16/12/2024	Rev A

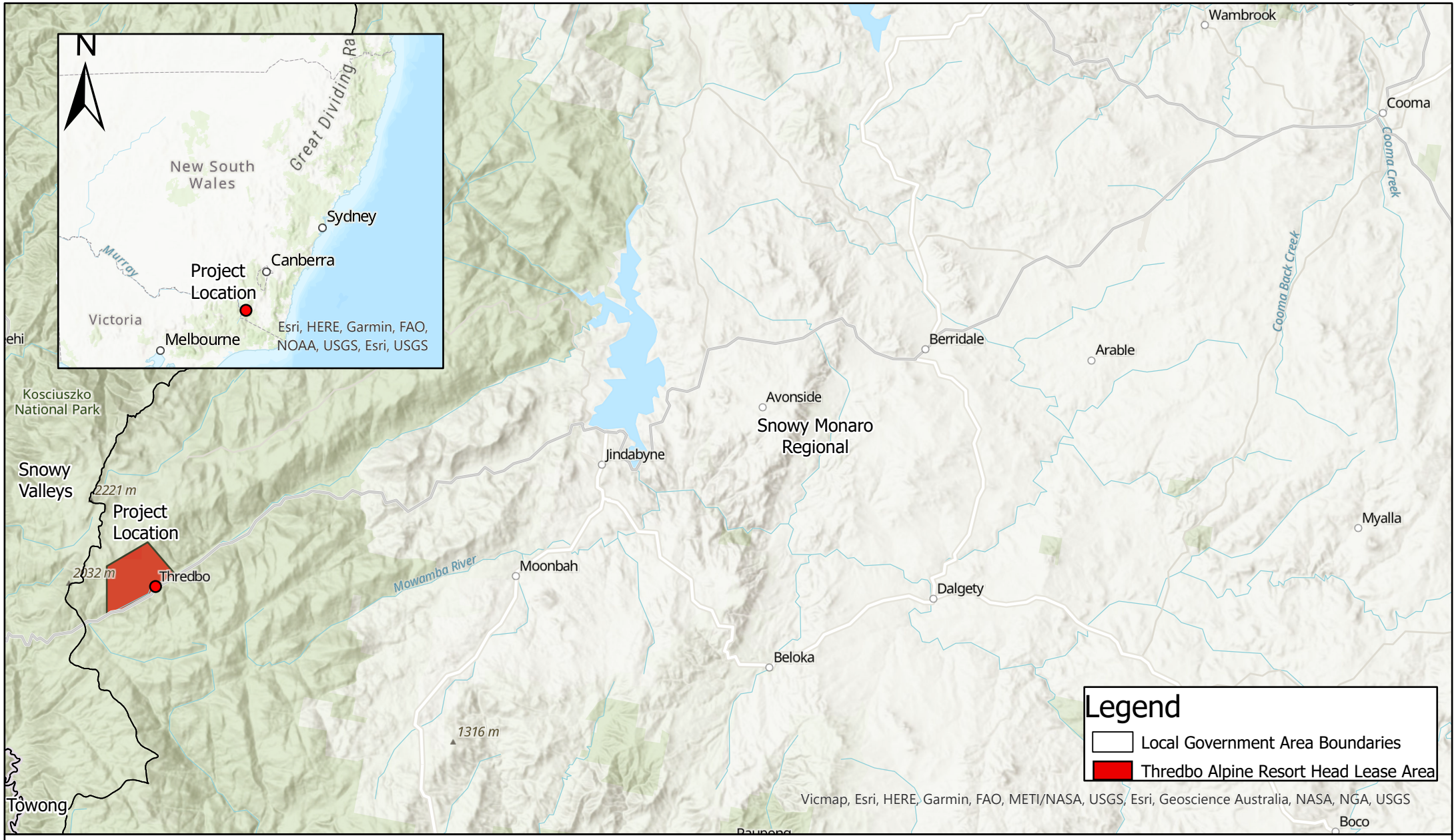
Document	Title/Description	Author/Prepared by	Date	Document Reference
Report	Site Environmental Management Plan, Thredbo Sewer Trunk Main Rehabilitation	Kosciuszko Thredbo Pty Ltd	05/12/2024	Rev 0
Report	Aboriginal Cultural Heritage Due Diligence Assessment Thredbo Sewer Trunk Main Rehabilitation	Past Traces Heritage Consultants	21/11/2024	V2
Report	Ecological Assessment – Sewer Trunk Main Rehabilitation – Thredbo Alpine Resort	Eco Logical Australia Pty Ltd	11 /03/2025	9734
Report	Proposed Sewer Main Rehabilitation, Thredbo Village NSW Geotechnical Assessment	AssetGeoEnviro	04/12/2024	7665-R1 Rev1
Geotechnical Form 4	Form 4 – Minimal Impact Certification	AssetGeoEnviro	04/12/2024	-

2 Site Description

Regionally, the Development is located within Thredbo Alpine Resort, in the southern part of Kosciuszko National Park, NSW (**Figure 1**). Within the context of the resort, the Development is located within the pre-disturbed pipeline easement comprising the underground sewer line, sewer manholes, and dual use walking and mountain bike trail referred to as the "Pipeline Path" (**Figure 2**). The Development is located within the Thredbo Head Lease Area on Lot 876/DP1243112.

The Pipeline Path was originally constructed as a benched pipeline easement for the install of the Thredbo Sewer Trunk Main. The walking path along the pipeline easement was constructed to act as a pipeline service corridor which later became part of Thredbo's walking trail network. The Pipeline Path trail head starts off Friday Drive (below Bobuck Lane) and travels in a north-easterly direction toward the Sewerage Treatment Plant and loops back around towards the Friday Flat day car parking. The upper and low bank of the easement comprises native vegetation. At the end of the snowmaking pond, the pipeline crosses below Friday Drive, traverses across the top overflow car park and terminates at the Pre-treatment screening shed which forms part of the Sewage Treatment Plant (STP).

The site is considered suitable for the Development as the works are for the repairs and maintenance of the existing underground infrastructure within a highly modified site.



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3 1.5 0 3 6 9 12

Kilometers

Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 MGA Zone 55

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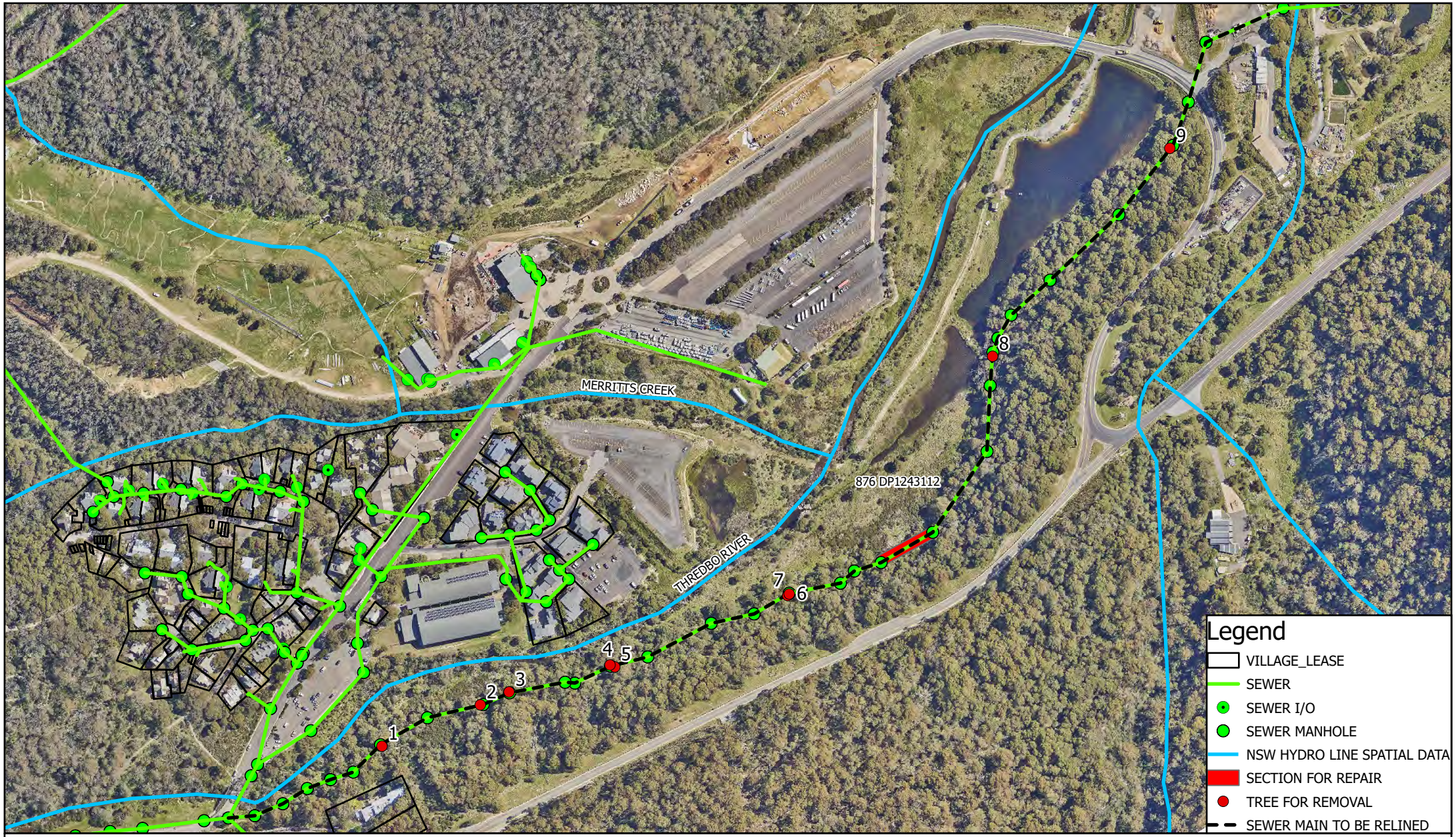
THREDBO

FIGURE 1: REGIONAL SITE CONTEXT

Revision: A

Date: 7/06/2022

Produced By: KO



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Map Projection: Universal Transverse Mercator
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FIGURE 2: SITE PLAN

Project: Thredbo Sewer Trunk Main Rehabilitation

Revision: B

Date: 4/11/2024

Produced By: KOS

3 Development Details

3.1 Purpose of development

The purpose of the Development is to repair the existing sewer main.

3.2 Project description

KT have engaged a pipe repair specialist to undertake the works. A summary of the Development is provided in the subsequent sections.

3.3 Vegetation removal and trimming

Removal of selected trees is required where root systems are undermining the infrastructure and selective vegetation trimming to maintain an easement generally 3 m wide (1.5m either side of the pipeline). This includes the removal of 9 mature trees which are currently either growing directly on top of the pipeline or immediately adjacent to a sewer manhole, posing a significant risk of root ingress and subsequent sewer overflow caused by a root ball blockage. Vegetation removal and trimming is not proposed within areas included on the Biodiversity Values Map (BVM), refer **Figure 2**.

3.3.1 Pipe replacement

Approximately 50 m of the 1.3 km pipeline requires replacement due to misalignment caused by settling (refer **Figure 2**). Routine cleaning and CCTV inspections of the pipe show the pipe is misaligned at the joins in this section. The pipeline sections and collars covering the pipeline joins remain intact. Routine cleaning activities have not identified any significant defects in the pipeline that would contribute to leakage of raw sewage. While relining this section of pipe is possible it is considered best practice by the contractor to replace and re-bed the original pipe to avoid future issues cause by pipe bellies. This replacement will eliminate the need for relining, ensuring a more durable and efficient solution.

The replacement works will include:

- excavation
- plugging of upstream manhole, setup of temporary sewer bypass network to downstream manhole
- removal of existing damaged pipeline section
- installation of new pipe section
- unplugging of upstream manhole therefore diverting sewer through the new pipeline section
- backfilling and compaction of excavation.

The existing pipe in this section will be removed and disposed offsite.

3.3.1.1 Temporary sewer bypass

The contractor proposes to utilise a 6inch self-priming pump as per (or equivalent to) attached TDS for Yakka 150 self-priming diesel pump to bypass which can pump over 90L/s (refer to specification titled ‘Sykes Yakka 150iC – Installation, Operation & Maintenance Manual’ provided separately with this application). This is more than sufficient for Peak Dry Weather Flow experienced by the pipeline of 19.8 L/s. Works have been proposed to occur in March, as it is the lowest period of visitation at the resort and will result in the lowest flows received at the WWTP further reducing overflow risk.

The contractor will run a DN150 suction line from upstream manhole to pump but reduce downstream line to DN100 polypipe coil from pump to the manhole downstream of the excavation.

As a contingency (in the event of a pump breakdown), the contractor will have 2 x 2 inch flex drive submersible trash pumps on site which pump at a rate of 16.7L/s each.

The line will temporarily run adjacent to the trench on the uphill side in the existing area of cleared vegetation to avoid interaction with machinery completing the pipeline replacement. Rigid poly pipe has been selected rather than lay flat pipe to ensure there are no risks of leaks. The contractor will utilise air inflated bungs (**Figure 3**) to isolate the sewer upstream of the excavation.

Figure 3: Example of inflated pipe bung

3.3.2 Pipe re-lining

The Development will involve re-lining the existing pipeline (approx. 1.3 km long). Given the site constraints, this method will minimise the amount of ground disturbance required. The works will include:

- Cleaning the pipeline with high-pressure water jet and root cutter
- Internal CCTV inspection of pipe to ensure no roots/obstructions remain
- Structural relining of 31 manhole lengths x DN 300 sewer main using Interflow's spiral wound PVC Expanda lining system
- Repair and reinstating of 15 existing manholes including benching and joint repairs as required
- Decommissioning of the remaining 16 existing manholes by lining through the manhole and filling the existing manhole void with stabilised sand
- Final internal CCTV inspection video of finalised works.

Cleaning of the pipeline is a routine maintenance activity. Details and locations of machinery (vacuum truck) is identified in the SEMP. The jetter accesses the pipe through manholes as required with the vacuum truck and easement reel (extends hose length to access hard to reach locations). Water is contained within vacuum truck and obtained from water hydrants as per general

maintenance activities. Once expelled from the jetter head inside the pipeline, jet water travels via gravity through pipeline to the wastewater treatment plant.

3.3.2.1 Relining process

The relining process follows the typical Rib Loc relining methodology that has been installed throughout Australia and New Zealand since the 1980s. It is as follows:

Set up of winding machine in the starting sewer manhole

- Positioning of the Expanda pipe reel or hand carrying of Expanda pipe to site
- Commencement of winding of Expanda Pipe into pipeline until desired upstream manhole is
- reached and secured at the upstream manhole
- Cutting of sacrificial wire lock and rewinding of cutting wire to expand the liner
- Connection of the new liner to the upstream and downstream manholes with sealant
- Pack down and moving of equipment to next section for reline.

Further detailed information on the relining process is outlines in the attached Document Rib Loc "Expanda Operations & Maintenance Manual with Attachments".

The relining process will require (but not limited to) the following vehicles, machinery and equipment:

- 12T tabletop truck for equipment delivery
- Recycler vacuum truck and easement reel
- "Kubota" mini excavator modified as a lining support vehicle
- Expanda pipe winding cage and drive tray
- Spool of profiled Expanda Pipe PVC Strip
- Wire puller
- Silicone drum + pump
- CCTV equipment

Should any issues arise during the relining process, work will cease, and the existing pipe will continue to function as normal, entirely preventing overflow risks. As the pipe remains live throughout the entire relining process, it ensures continuous flow providing its own contingency. The Ribloc Expanda Pipe Relining method is ideal for high environmental risk areas, as it rehabilitates pipes without excavation or bypass pumping, greatly minimising potential environmental impact.

Access to the pipe will be via the northern entry access to the existing pipeline easement on Friday Drive immediately adjacent to SMH-TM-02. Access for relining vehicles and equipment along the easement is possible for the section from SMH-TM-02 to SMH-TM-18. All relining works between SMH-TM-18 and SMH-TM-31 will be achieved by use of the Kubota mini excavator or by carrying equipment in on foot.

3.3.2.2 Decommissioning manholes

The contractor plan to reline through manholes using Ribloc Expanda and then fill lined through manholes with stabilised sand. Rehabilitation of the manholes to be decommissioned is not required.

Manholes to be decommissioned are SMH – TM 02, 06, 07, 09, 13, 14, 16, 18, 20, 21, 23, 25, 27, 28 and 29. A plan showing these manholes is provided separately with this application.

3.4 Construction timing and staging

Construction timing and staging is proposed as follows:

1. Replacement of pipe section between manholes 11 and 12 as per Section 3.3.1.
2. Cleaning and CCTV of the entire pipeline except newly replaced section. Relining of 1150m of the pipeline beginning at SMH-TM-01 working south towards SMH-TM-31. This step will include the lining through manholes outlined in Section 3.3.2 and will not include relining of the newly replaced section of pipe.
3. Rehabilitation of manholes to be kept.
4. Filling of decommissioned manholes with stabilised sand.

It is anticipated that these works will take 2 weeks over normal construction hours.

3.5 Operational details

The rehabilitated pipeline will operate as per the existing following completion of construction.

4 Legislation & Statutory Framework

4.1 Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act provides a legal framework to protect and manage nationally and internationally important aspects of the Australian environment. The EPBC Act is administered by the Department of Climate Change, Energy, the Environment and Water (DCCEEW). Under Part 3 of the EPBC Act, a person must not undertake an action (e.g. a development) that will have, or is likely to have, a significant impact on a protected matter (MNES), without approval from the Australian Government Minister for the Environment.

MNES that may occur or relate to the search area (within a 5 km buffer) are provided in the EPBC Act Protected Matters Report (**Appendix B**). A summary of the PMR and potential impacts is provided in **Table 3**.

Table 3: Matters of National Environmental Significance

Matters of National Environmental Significance	Comment
World Heritage Properties	Not applicable.
National Heritage Places	No impacts proposed.
Wetlands of International Importance	No impacts proposed.
Great Barrier Reef Marine Park	Not applicable.
Commonwealth Marine Area	Not applicable.
Listed Threatened Ecological Communities	No impacts proposed.
Listed Threatened Species	No impacts proposed.
Listed Migratory Species	No impacts proposed.

An EPBC Act referral to the Commonwealth Environment Minister is not recommended as the Development is unlikely to have a significant impact on any MNES or Commonwealth land.

4.2 State Legislation

4.2.1 Environmental Planning and Assessment Act 1979

Section 4.15 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) outlines matters that the consent authority is to take into consideration when determining a DA, refer **Table 4**.

Table 4: EP&A Act Matters for consideration

Environmental Planning and Assessment Act 1979	
Section 4.15 – matters for consideration	
(i) any environmental planning instrument	The Precincts – Regional SEPP is the only environmental planning instrument which applies to the site for this proposal.
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved)	Not applicable. There are no draft Environmental Planning Instruments that are applicable to the Development.
(iii) any development control plan	Not applicable. There are no development control plans applicable to the site.
(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4	Not applicable. There are no planning agreements applicable to Thredbo under the Precincts – Regional SEPP.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph)	The DA and supporting information has been prepared in accordance with the relevant requirements of the EP&A Regulation.
(a) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	The impact assessment is provided in **Section 5**.
(b) the suitability of the site for the development	The site is considered suitable for the Development as it for the repairs and maintenance of existing infrastructure.
(c) any submissions made in accordance with this Act or the regulations	Consideration will be given to submissions made.
(d) the public interest.	The Development is considered within the public interest as it is for the preservation and maintenance of critical service infrastructure within Thredbo Village.

4.2.2 Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Conservation Act 2016* (BC Act) is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ESD.

The *Biodiversity Conservation Regulation 2017* sets out threshold levels for when the Biodiversity Offset Scheme (BOS) will be triggered. Part of the alignment is located within the Biodiversity Values Map (BVM) published by the Minister for Environment. No vegetation removal is proposed in this location, refer Ecological Assessment prepared by Eco Logical Australia Pty Ltd (2024) in **Appendix D** for details.

4.2.3 State Environmental Planning Policy (Precincts – Regional) 2021

Development in the NSW alpine resort areas are subject to the provisions in Chapter 4 of the *Statement Environmental Planning Policy (Precincts -Regional) 2021* (Precincts – Regional SEPP). Consideration of the relevant provisions to the Development is provided in **Table 5**.

Table 5: Precincts – Regional SEPP, Chapter 4 Considerations

Precincts – Regional SEPP Considerations	Comment
Section 4.2 Land to which Chapter applies	Thredbo Alpine Resort is listed as one of the Alpine Subregions on the *State Environmental Planning Policy (Precincts – Regional 2021 Thredbo Alpine Resort Map* referenced in Section 4.2.
Section 4.7 Land Use Table	Infrastructure facilities is permissible development with consent within the Thredbo Alpine Resort.
Section 4.9 Demolition	Not applicable.
Section 4.10 Temporary use of land	Not applicable.
Section 4.21 Heritage Conservation	The Development will not impact upon any heritage items or Aboriginal heritage items or places.
Section 4.24 Flood Planning	Under the SEPP (Precincts – Regional) there is no defined flood planning area, flood planning level or reference to adopted mapping. No further consideration is required.

Precincts – Regional SEPP Considerations	Comment
Section 4.25 Earthworks (3) In deciding whether to grant development consent for earthworks, or for development involving ancillary earthworks, the consent authority must consider the following matters— (a) the likely disruption of, or adverse impact on, drainage patterns and soil stability in the locality of the development, (b) the effect of the development on the likely future use or redevelopment of the land, (c) the quality of the fill or the soil to be excavated, or both, (d) the effect of the development on the existing and likely amenity of adjoining properties, (e) the source of any fill material and the destination of any excavated material, (f) the likelihood of disturbing relics, (g) the proximity to, and potential for adverse impacts on, a waterway, drinking water catchment or environmentally sensitive area, (h) appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.	(3) (a) The Development will not impact on drainage patterns or soil stability. (b) The Development will not impact on the redevelopment of the land. (c) All excavated soil will be reused onsite where possible. If fill is required, it will be sourced from approved locations, as outlined in the Site Environmental Management Plan – Thredbo Sewer Trunk Main Rehabilitation (KT 2024) (SEMP). (d) The Development will have negligible impacts on the amenity of adjoining properties. Appropriate dust and noise controls will be implemented during construction. (e) Fill material will be sourced from approved sites in accordance with the SEMP. Any excess excavated material will be transported to the designated stockpile sites at the Thredbo Waste Transfer Facility. (f) Unlikely, refer to **Section 5.7.** (g) Impacts unlikely, refer **Section 5.2**. (h) The works will be carried out by technical specialists. Site environmental controls will be implemented during construction in accordance with the SEMP.
Section 4.25 Earthworks (3) In deciding whether to grant development consent for earthworks, or for development involving ancillary earthworks, the consent authority must consider the following matters— (a) the likely disruption of, or adverse impact on, drainage patterns and soil stability in the locality of the development, (b) the effect of the development on the likely future use or redevelopment of the land, (c) the quality of the fill or the soil to be excavated, or both, (d) the effect of the development on the existing and likely amenity of adjoining properties, (e) the source of any fill material and the destination of any excavated material, (f) the likelihood of disturbing relics, (g) the proximity to, and potential for adverse impacts on, a waterway, drinking water catchment or environmentally sensitive area, (h) appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.	(3) (a) The Development will not impact on drainage patterns or soil stability. (b) The Development will not impact on the redevelopment of the land. (c) All excavated soil will be reused onsite where possible. If fill is required, it will be sourced from approved locations, as outlined in the Site Environmental Management Plan – Thredbo Sewer Trunk Main Rehabilitation (KT 2024) (SEMP). (d) The Development will have negligible impacts on the amenity of adjoining properties. Appropriate dust and noise controls will be implemented during construction. (e) Fill material will be sourced from approved sites in accordance with the SEMP. Any excess excavated material will be transported to the designated stockpile sites at the Thredbo Waste Transfer Facility. (f) Unlikely, refer to **Section 5.7.** (g) Impacts unlikely, refer **Section 5.2**. (h) The works will be carried out by technical specialists. Site environmental controls will be implemented during construction in accordance with the SEMP.

Precincts – Regional SEPP Considerations	Comment
Section 4.28 Consideration of master plans and other documents (a) the aim and objectives of this Chapter set out in section 4.1, (d) the Geotechnical Policy —Kosciuszko Alpine Resorts published by the Department in November 2003, (2) In deciding whether to grant development consent to development in the Alpine Region, the consent authority must consider— (a) a master plan approved by the Minister under section 4.26 that applies to the land, or	(a) The Development is consistent with the aim and objectives of Chapter 4. (d)A Geotechnical Assessment and Form 4 is provided in **Appendix C**. (2)(a) Refer **Section 4.3.1**.
Section 4.29 Consideration of environmental, geotechnical and other matters (1) (a) measures proposed to address geotechnical issues relating to the development, (b) the extent to which the development will achieve an appropriate balance between— (i) the conservation of the natural environment, and (ii) taking measures to mitigate environmental hazards, including geotechnical hazards, bush fires and flooding, (c) the visual impact of the proposed development, particularly when viewed from the land identified as the Main Range Management Unit in the Kosciuszko National Park Plan of Management, (d) the cumulative impacts of development and resource use on the environment of the Alpine Subregion in which the development is carried out, (e) the capacity of existing infrastructure and services for transport to and within the Alpine Region to deal with additional usage generated by the development, including in peak periods, (f) the capacity of existing waste or resource management facilities to deal with additional waste generated by the development, including in peak periods. (2) For development involving earthworks or stormwater draining works, the consent authority must also consider measures to mitigate adverse impacts associated with the works. (3) For development the consent authority considers will significantly alter the character of an Alpine Subregion, the consent authority must also consider— (a) the existing character of the site and immediate surroundings, and (b) how the development will relate to the Alpine Subregion.	(1) (a) A Geotechnical Assessment and Form 4 is provided in **Appendix C**. (b) The measures proposed are not expected to impact on the conservation of the natural environment. (c) The Development is for the repair and maintenance of underground infrastructure. (d) The impacts are considered in **Section 5**. (e) The Development will not impact on the capacity of existing infrastructure and services for transport to and within the Alpine Region. (f) The Development is for the preservation and maintenance of the existing sewer trunk main to ensure its ongoing operation. (2) The Development will involve earthworks. Appropriate controls have been incorporated into the design and construction methods. (3) The Development will not alter the character of Thredbo.
Section 4.30 Kosciuszko National Park Plan of Management	The Development is not inconsistent with the relevant provisions of the Kosciuszko National Park Plan of Management.

4.2.4 Integrated Development

Integrated development requires development consent and one or more of the approvals outlined in Section 4.46 of the EP&A Act. A review of the *Development referrals guideline* (DPIE 2021) has been undertaken to inform this Application. The Development is integrated development requiring approval under the *Water Management Act 2000.*

Table 6: Integrated Development Considerations

Act	Trigger	Approval/Permit	Applicable (yes/no)
Water Management Act 2000	Works within waterfront land	Controlled Activity Approval	Yes
Rural Fires Act 1997	Bush Fire Prone Land; subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes	Section 100B, Bush Fire Safety Authority	No
National Parks and Wildlife Act 1974	Harming an Aboriginal object or declared Aboriginal place	Aboriginal Heritage Impact Permit	No
Fisheries Management Act 1994	activities involving dredging and reclamation work; activities temporarily or permanently obstructing fish passage; using explosives and other dangerous substances; harming marine vegetation.	Part 7 Fisheries Management Act Permit	No

4.3 Plans

4.3.1 Snowy Mountains Special Activation Precinct Master Plan 2022

The Snowy Mountains Special Activation Precinct Master Plan 2022 (Master Plan) applies to the NSW Alpine Resort Areas, including Thredbo. The Development is for the repair and maintenance of critical infrastructure to support Thredbo Village.

DPHI issued an RFI before the DA would be accepted for lodgement, including further details on the following:

- Snowy SAP and technical studies
  - Further consideration of the SAP master plan and technical studies
    - Ecology
    - Heritage
    - Flooding
    - Infrastructure capacity

Consideration of the Master Plan and supporting technical studies is provided in **Appendix F**.

4.3.2 South East and Tablelands Regional Plan 2036

The *South East and Tablelands Regional Plan 2036* (Regional Plan) provides directions for land use planning for the South-east and tablelands region. The Regional Plan promotes well planned, efficient and sustainable development that complements the area's natural and cultural values. The Development is consistent with the Regional Plan as it will ensure the ongoing operation of critical service infrastructure.

5 Impact Assessment

The assessment for the development consisted of a desktop review of publicly available data sources. A preliminary site assessment was undertaken by KT Project personnel and various technical consultants to validate the desktop assessment results, inform the design process and ensure appropriate environmental controls are implemented to avoid, mitigate and/or manage potential impacts on environmental and cultural values.

Representatives from DPHI (Alpine Resorts team) and NPWS inspected the Development site on 24 July 2024.

5.1 Geotechnical Considerations

A review of the Geotechnical Policy Kosciuszko Alpine Resorts (DIPNR 2003) was undertaken to inform the planning of this Development. The site is predominately located within the designated "G" on the accompanying geotechnical maps for the Kosciuszko Alpine Resort areas. A Geotechnical Assessment and Form 4 – Minimal Impact Certification is provided in **Appendix C**.

Figure 4: Geotechnical Policy Map Overlay (NSW Government 2024a)

5.2 Waterfront Land Review

The Development is located within 40 m of two watercourses (waterfront land). Under the *Water Management Act 2000*, a controlled activity means –

(a) the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act 1979), or
(b) the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or
(c) the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or
(d) the carrying out of any other activity that affects the quantity or flow of water in a water source.

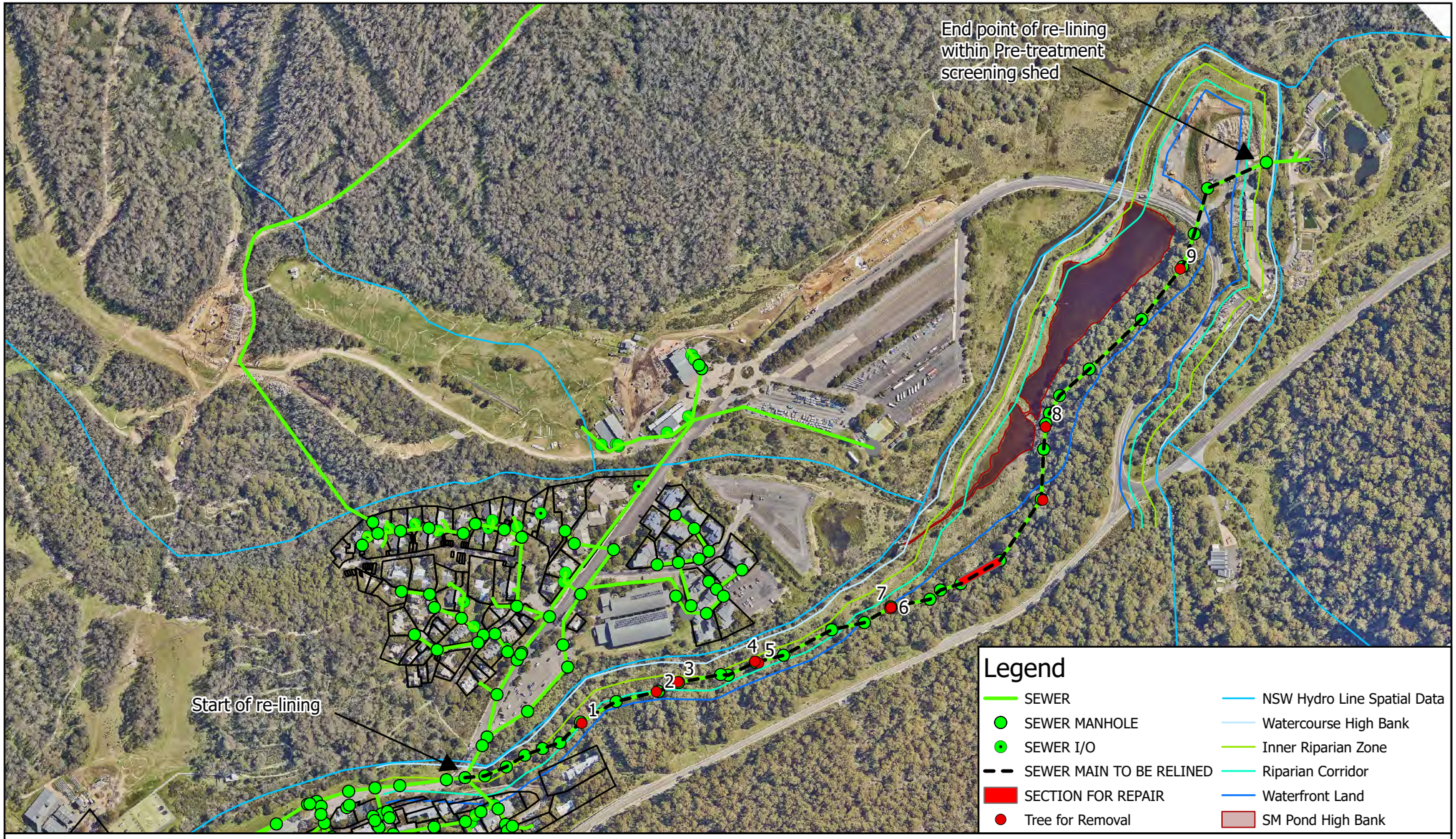
The Development site is located within waterfront land, refer **Figure 5** and **Figure 6**.

Figure 5: Water Management (General) Regulation 2018 hydroline spatial data 1.0 (NSW Government 2025)

Works within waterfront land will include:

- Removal of 5 trees (labelled 1-5 on Site Plan)
    - The trees will be removed to ground-level, thus reducing ground disturbance within waterfront land. Vegetation clearing will be carried out in accordance with the methods outlined in the SEMP.
- Re-lining pipeline
    - To re-line the pipe a continuous strip of PVC is wound through the pipe using a winding machine placed at the base of the manhole. The ends of the liner at each end are then sealed and rendered to the host pipe. Expanda is a fast and low risk solution as the need to bypass, block flows or excavate is eliminated (Interflow Pty Ltd 2021). The re-lining method does not require any ground disturbance within waterfront land.
- Repairing and decommissioning manholes
    - Within waterfront land, it is proposed 7 manholes will be repaired and 8 decommissioned and filled with stabilised sand. All works will be contained entirely within the manholes. The manholes are located within the existing disturbed pipeline easement.

An assessment of the two watercourses and snowmaking pond is provided in the subsequent sections.



Scale: 1:5,525

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Meters

Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 2020
Grid: GDA 2020 MGA Zone 55

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THREDBO

FIGURE 6: Waterfront Land Assessment

Project: GIS2419 Thredbo Sewer Trunk Main Rehabilitation

Revision: E

Date: 07/03/2025

Produced By: JB/CC

5.2.1 Thredbo River

Thredbo River is located north of the pipeline easement. Short sections of the easement encroach into the inner and outer riparian corridor of Thredbo River, refer **Figure 6**.

Thredbo River (for the length of the Development site) is classified as a third order watercourse under the Strahler System. The Vegetation Riparian Zone (VRZ) is 30 m. The channel width varies for the length of the Development site, however for the purposes of the assessment the channel width is approximately 9 m. Therefore, the total riparian corridor width is 69 m (60 m + channel width).

Figure 7: Thredbo River located norther of the pipeline easement (photo taken looking east, downstream)

Figure 8: Thredbo River located on right side of easement (photo taken looking west, facing upstream)

5.2.2 Friday Flat Creek

A third order watercourse known as Friday Flat Creek traverses below the Alpine Way, immediately north of the Thredbo Waste Transfer Station and feeds into Thredbo River below the STP (**Figure 6**).

The watercourse is classified as a third order watercourse under the Strahler System. The WRZ is 30 m. The channel width varies for the length of the Development site, however for the purposes of the assessment the channel width is approximately 6 m. Therefore, the total riparian corridor width is 66 m (60 m + channel width).

The endpoint of the re-sleeving is located in the Pre-treatment screening shed surrounded by a hardstand area (refer photo points in **Appendix A**). The shed is located within the riparian corridor of the watercourse. No ground disturbance is proposed in this location.

Figure 9: Pre-treatment screening shed (left HS) within waterfront land (image taken facing downstream)

Figure 10: Unnamed watercourse (image taken facing upstream toward resort entrance off Alpine Way)

5.2.3 Snowmaking pond

The snowmaking pond is a man-made waterbody located to the north of the proposed works. The closest section of the pipe re-lining to the pond is 10.5 m. These works do not comprise any ground disturbance as all re-lining is underground within the existing pipe. The high bank of the pond is at least 65 m from the short section of pipe to be excavated and replaced between SMH 11 - 12. Given the distance between the pond and the section earmarked for excavation and replacement, no impacts are proposed.

Figure 11: Snowmaking pond (photo taken facing west)

5.2.4 Impacts

In accordance with the Riparian corridor matrix (Table 2) of the Controlled Activity Guideline, essential services can occur on waterfront land and in riparian corridors.

Potential impacts to Thredbo River, Friday Flat Creek and the snowmaking pond can be mitigated through the following controls:

- No excavation or tree removal is required within the inner riparian corridor of Thredbo River.
- Trees 1,2,3,4 and 5 marked for removal are located within the outer riparian corridor of Thredbo River within the existing disturbed pipeline easement. Appropriate vegetation management protocols will be implemented during tree removal to minimise disturbance within waterfront land e.g. trees removed to ground level.
- No ground disturbance will occur within the riparian corridor of the unnamed watercourse.
- Site environmental controls will be implemented in accordance with the SEMP and Erosion and Sediment Control Plan during construction to mitigate potential soil and water quality impacts on the receiving environment.
- No new infrastructure will be installed within the riparian corridor of Thredbo River or the unnamed watercourse.
- All construction machinery and equipment will be restricted to previously disturbed areas.
- All disturbance will be kept to the minimum and disturbed land will be progressively rehabilitated.

5.3 Biodiversity

Eco Logical Australia Pty Ltd were engaged to prepare an Ecological Assessment of the Development, refer **Appendix D**.

5.4 Waste Management

The Development is expected to generate a minimal amount of construction waste. Storage and disposal of construction waste will be managed in accordance with the SEMP.

5.5 Socio-economic

The Development is considered within the public interest as it is for the preservation and maintenance of critical service infrastructure within Thredbo Village. The Development will result in direct investment in the resort's infrastructure network.

5.6 Heritage

The Development will not impact any heritage items or places listed in the Precincts – Regional SEPP.

5.7 Aboriginal Cultural Heritage

To establish due diligence for the Development, an assessment against the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010) has been prepared by Past Traces (2024), refer **Appendix E**.

5.8 Visual Amenity

The Development is for the repair and maintenance of existing underground infrastructure. Whilst the proposal will require the removal of 9 mature trees within the pipeline easement, the corridor is reasonably vegetated on either side and therefore the loss of selective trees is considered acceptable.

5.9 Dust and Noise Emissions

The western end of the pipeline easement is located approximately 15-50 m from tourist accommodation along Bobuck Lane. During pipe relining at the western end, machinery will be parked at the entrance of the easement off Friday Drive below tourist accommodation along Bobuck Lane.

Figure 12: Nearby Sensitive Receptors

Construction methods have the potential to generate dust emissions from ground disturbance and exhaust emissions from vehicle/machinery operation. Given the proposed construction methods include relining the pipeline at the western end and no excavation, impacts to nearby sensitive receptors from construction activities are expected to be negligible.

A small excavator will be used to excavate the section of pipe in the middle of the easement which is located more than 220 m from the closest tourist accommodation. The works are proposed to be carried out during the general summer construction period during standard construction hours. As such, noise impacts from the works are expected to be short-term and negligible. Appropriate controls will be implemented during construction in accordance with the SEMP to mitigate potential impacts.

5.10 Traffic Management

Pedestrians and bike riders

The Pipeline Path shared use trail will be closed to the public during the construction period. Traffic controls will be installed at either end of the trail to exclude public access. Construction is anticipated to take approximately 2 weeks during the low visitation period in March 2025.

Vehicle traffic on Friday Drive

Temporary traffic control to close the southern lane adjacent to the Waste Transfer Station will be required at times to ensure truck, lining spool and crew have sufficient room to safely enter the northern access track into Pipeline Path for lining of Manholes 2-19.

6 Conclusion

This application is seeking development approval for the repair and maintenance of an existing sewer main in Thredbo Alpine Resort.

In accordance with the requirements of the EP&A Act, EP&A Regulation and Regional Precincts SEPP, this SEE has assessed the potential impacts of the Development on the human, built and natural environment of the Development site and surrounds. The Development will result in minimal impacts to the existing environment given the highly disturbed nature of the site and relatively minor disturbance footprint. Appropriate environmental controls have been incorporated into the design, construction and operational phase to mitigate potential environmental impacts.

The Development is considered within the public interest as it is for the preservation and maintenance of critical service infrastructure within Thredbo Village.

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8 Appendices

Appendix A Site Photos

Appendix B Desktop Search Results

Appendix C Geotechnical Assessment and Form 4

Appendix D Flora and Fauna Assessment

Appendix E Aboriginal Cultural Heritage Due Diligence Assessment

Appendix F Snowy Mountains SAP Master Plan Review