NSW GOVERNMENT

Snowy 2.0 Segment Factory

Critical State Significant Infrastructure Assessment (SSI 10034)

March 2020

Disclaimer

Copyright notice

Glossary

Abbreviation	Definition
AEP	Annual Exceedance Probability
BCD	Biodiversity and Conservation Division of the Department
CIV	Capital Investment Value
Council	Snowy Monaro Regional Council
CSSI	Critical State Significant Infrastructure
Department	Department of Planning, Industry and Environment
DPI	Department of Primary industries
DPIE - Water	Department of Planning, Industry and Environment – Water Division
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
LEP	Local Environmental Plan
Minister	Minister for Planning and Public Spaces
NRAR	Natural Resources Access Regulator
Planning Secretary	Planning Secretary of the Department of Planning, Industry and Environment
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*
SSI	State Significant Infrastructure
TfNSW	Transport for NSW

Executive Summary

Background

Snowy Hydro Limited (Snowy Hydro) is proposing to expand the existing Snowy Mountains Hydro-electric Scheme and build a new underground power station in the Kosciuszko National Park.

The Snowy 2.0 Project involves connecting the Talbingo and Tantangara reservoirs to the new power station via a series of underground tunnels and generating up to 2,000 megawatts (MW) of electricity for the National Electricity Market (NEM).

The project is essential for the NSW economy as it would provide a reliable supply of electricity to the NEM as it transitions away from a long-standing reliance on coal-fired power stations.

Consequently, all components of the project are classified as Critical State Significant Infrastructure under Section 5.13 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and require the approval of the Minister for Planning and Public Spaces (Minister) before they may proceed.

Project

Snowy Hydro is proposing to develop a Segment Factory in the Polo Flat industrial area in Cooma. The factory would operate for 3 – 4 years and produce concrete segments to line the underground tunnels for the Snowy 2.0 Project.

The Segment Factory includes the development of:

- a large pre-cast building and associated concrete batching plant;
- storage areas for raw materials and finished concrete segments; and
- ancillary infrastructure to support the operations on site, including offices, parking and a wastewater treatment plant.

The Segment Factory has a capital investment of $55 million and would provide jobs for up to 125 workers.

Statutory Context

The Segment Factory is classified as Critical State Significant Infrastructure (CSSI) under the EP&A Act because it is ancillary development for the Snowy 2.0 Project, which is specified as CSSI under Clause 9 of Schedule 5 of State Environmental Planning Policy (State & Regional Development) 2011.

Consequently, it requires the Minister's approval.

Engagement

During the assessment of the Segment Factory, the Department has consulted widely with the community and key government agencies, including Snowy Monaro Regional Council.

This has included exhibiting the EIS from 10 October to 6 November, holding a public information session in Cooma, inspecting the site and surrounding area, working closely with government agencies on key assessment issues, publishing all submissions online and requiring Snowy Hydro to provide a formal response to the issues raised in submissions.

During the public exhibition, the Department received 33 submissions, including 7 from government agencies and 26 from the general public. Although none of these submissions objected to the project, some of the public submissions were particularly concerned about the potential traffic impacts of the project on the Cooma town centre.

Assessment and Evaluation

Following detailed assessment, the Department has concluded that the Segment Factory can be carried out without causing any significant impacts and should be approved subject to strict conditions.

The critical merit issue was the potential cumulative traffic impacts of the Segment Factory and Snowy 2.0 Project on the Cooma town centre, as together they could generate up to 384 heavy vehicle movements (192 each way) through the town centre each day; and without suitable mitigation, these vehicles could cause unacceptable traffic noise, safety and congestion impacts in the town centre, particularly during ski season.

The Department has worked closely with Transport for NSW (TfNSW) and Snowy Monaro Regional Council to identify suitable mitigation measures to address these impacts, and determined that they can be reduced to an acceptable level by:

- making minor upgrades to the Bombala Street and Vale Street roundabouts;
- installing temporary traffic signals at the Bombala Street intersection to control traffic flows during the ski season;
- requiring Snowy Hydro to use Performance-Based Standards vehicles to deliver concrete segments to the Snowy 2.0 site, which would reduce the heavy vehicle movements of the Segment Factory through the Cooma town centre from 78 to 26 a day (13 each way) on average and 132 to 44 (22 each way) a day during a 2-3 month peak period;
- scheduling as many heavy vehicle movements outside peak periods; and
- requiring Snowy Hydro to prepare a detailed Traffic Management Plan for the Segment Factory in consultation with both TfNSW and Snowy Monaro Regional Council, setting out the specific traffic mitigation measures for the project.

The Department has prepared recommended conditions of approval for the Segment Factory that require these measures to be implemented, set standards and performance measures for the project, and require regular monitoring and reporting on performance.

Summary

The Segment Factory is an essential component of the Snowy 2.0 Project, which (if approved) would deliver up to 2,000 megawatts (MW) of reliable electricity supply to the NEM as it transitions away from a reliance on coal-fired power stations.

The Department has carried out a detailed assessment of the merits of the project and considered all relevant issues raised by the community and agencies in submissions.

Based on this assessment, the Department has concluded that the Segment Factory can be carried out without causing any significant impacts and would deliver economic benefits to the State and region by facilitating the Snowy 2.0 Project, attracting capital investment of $55 million and creating up to 125 jobs in Cooma.

On balance, the Department has found that the Segment Factory is in the public interest and should be approved subject to strict conditions.

Contents

1. Introduction

Snowy Hydro Limited (Snowy Hydro) is proposing to expand the existing Snowy Mountains Hydro-electric Scheme and build a new underground power station in the Kosciuszko National Park (KNP).

The Snowy 2.0 Project (see **Figure 1**). involves connecting the Talbingo and Tantangara Reservoirs to a new power station via a series of underground tunnels and generating up to 2,000 megawatts (MW) of electricity for the National Electricity Market (NEM).

The project is essential for the NSW economy as it would provide a reliable supply of electricity to the NEM as it transitions away from a long-standing reliance on coal-fired power stations towards renewables (wind and solar).

Consequently, all components of the Snowy 2.0 Project have been classified as Critical State Signficant Infrastructure (CSSI) under the *Environmental Planning and Assessment Act, 1979* (EP&A Act), and require the approval of the Minister for Planning & Public Spaces before they may proceed.

One of the components of the Snowy 2.0 Project is the development of a Segment Factory in the Polo Flat industrial area in Cooma.

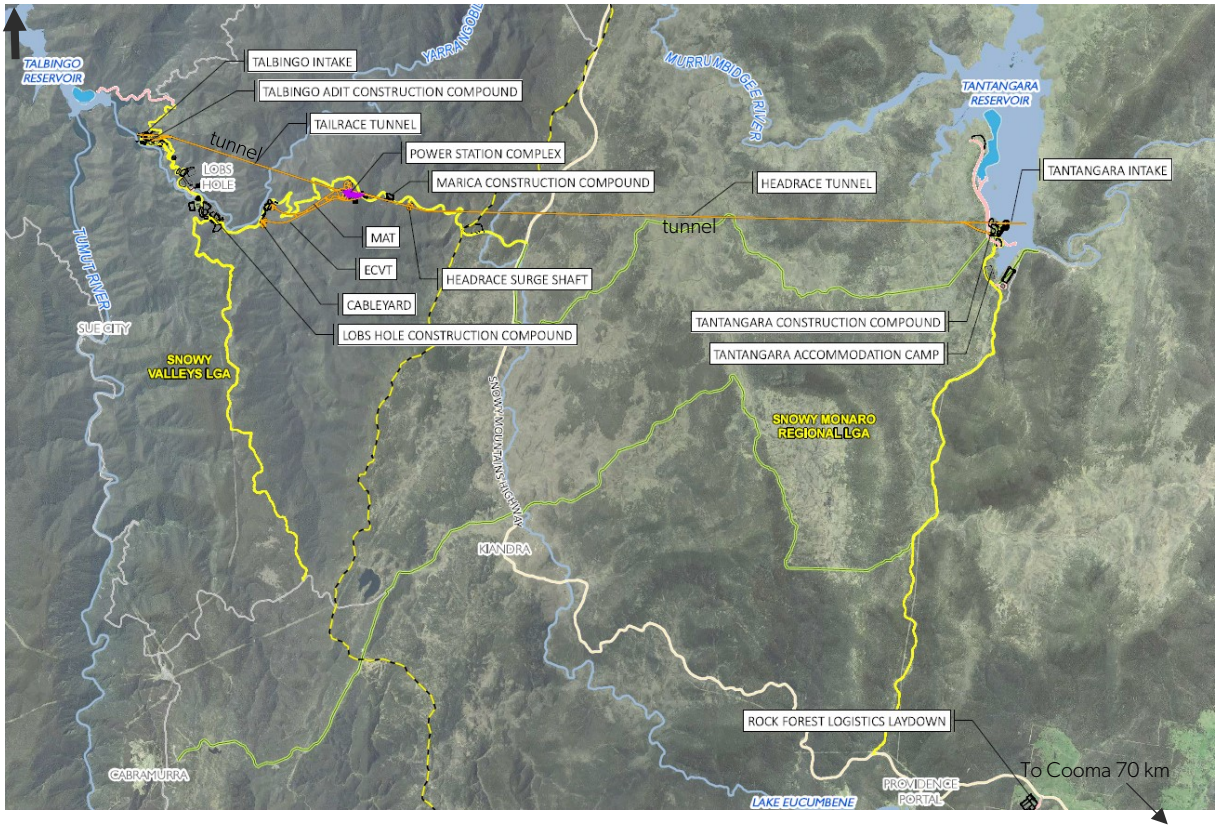

Figure 1 | Snowy 2.0 Project

2. Project

Snowy Hydro is proposing to develop a Segment Factory and associated infrastructure in the Polo Flat industrial area in Cooma (see **Figure 2**). The Segment Factory would operate for 3-4 years and produce the concrete segments required to line the underground tunnels at the Snowy 2.0 Project.

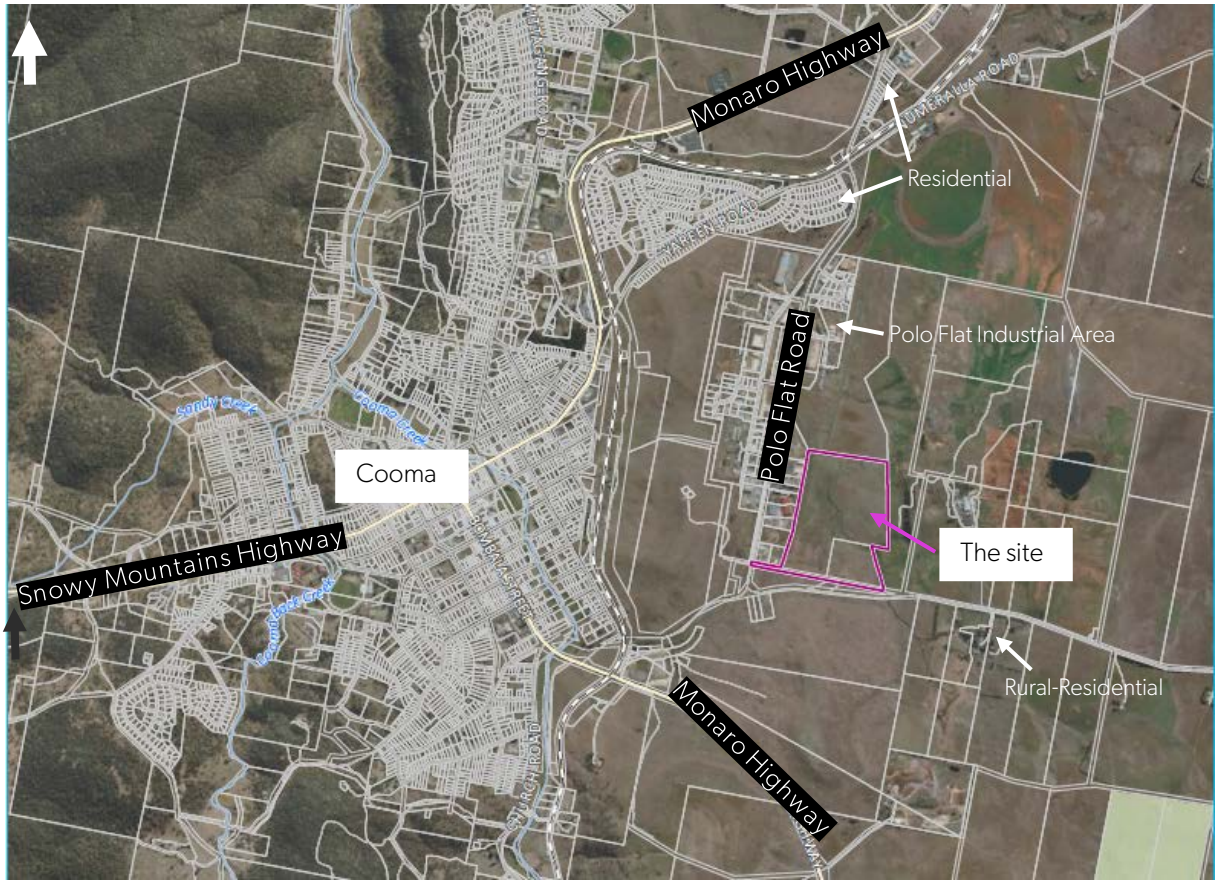

Figure 2 | Local Context

2.1. The Site

The site is located off Polo Flat and is a disused part of the Cooma Airport. It is generally comprised of cleared land although there are a few derelict buildings along the southern boundary of the site.

A third order ephemeral creek runs through the middle of the site, and forms part of the local drainage network. During heavy rains, this creek overflows and floods part of the site.

The site is isolated from the residential areas of Cooma, which lie to the west of the site. However, there are four residences located in the industrial area, three residences located about 450 metres to the south east of the site and a collection of around eight residences along the northern part of Polo Flat Road between an old railway line and the Monaro Highway, see **Figure 2**.

Key infrastructure in the area includes:

- the Monaro Highway, which connects Sydney, Canberra and other areas to the north of Cooma to south-eastern NSW;

- the Snowy Mountains Highway, which connects Cooma to the Kosciuszko National Park (KNP) and other regional centres to the north-west, including Adaminaby and Tumut; and
- Polo Flat Road, which serves as a heavy vehicle by-pass route for Cooma and allows trucks using the Monaro Highway to avoid the Cooma town centre.

2.2. The Segment Factory

The layout and proposed operations of the Segment Factory are summarised in **Table 1**, depicted in **Figure 6**, and described in detail in the Environmental Impact Statement for the project (see **Appendix B**).

Essentially, the factory has three key components:

- a large pre-cast building and associated concrete batching plant along the southern boundary of the site, which is where the concrete segments would be produced (see **Figure 3** and **Figure 4)**;
- a storage area, which would be located behind the pre-cast building and used to store the raw materials required to make the segments and the manufactured segments before they are delivered to the Snowy 2.0 site; and
- associated infrastructure to support the operation of the factory, including:
    - a new site access road off Polo Flat Road;
    - offices, a warehouse and parking;
    - a drain to divert the existing watercourse on site around the new factory and storage areas;
    - connections to Cooma's water supply network; and
    - a wastewater treatment plant.

It is likely to take around five months to construct the Segment Factory and another 3 – 4 years to produce the concrete segments required for Snowy 2.0 after which the factory would be decommissioned, and the pre-cast building reused for another industrial purpose (subject to the relevant approvals being obtained).

Operations on site will be relatively simple: raw materials will be imported to the site via the Monaro Highway; they will be used in the factory to make concrete segments; and completed concrete segments will be stored on site until they are trucked to the Snowy 2.0 site.

Trucks delivering concrete segments to the Snowy 2.0 site would first head north on Polo Flat Road and turn left onto the Monaro Highway before heading through the Cooma town centre to the Snowy Mountains Highway and the Snowy 2.0 site.

Initially, these trucks would only be allowed to go to the Lobs Hole construction site near the Talbingo reservoir in the KNP where Snowy Hydro is currently carrying out the approved exploration works for the Snowy 2.0 Project.

However, if the new power station is approved, then they would be delivered to two other locations on the Snowy 2.0 site:

- the Rock Forest property located outside the KNP near the Link Road intersection with the Snowy Mountains Highway, which would be used as an interim storage site and allow Snowy Hydro to reduce delivery distances to the construction sites within the KNP, particularly during winter when there is snow and ice on the roads; and
- the construction site adjacent to the Tantangara reservoir in the KNP.

The Segment Factory has a capital investment of $55 million and would create up to 125 jobs.

Figure 3 | Concrete Batching Plant (example)

Figure 4 | Precast Building (example)

Figure 5 | Finished Concrete Segments

Table 1 | Main components of the Segment Factory

Aspect	Description
Project Summary	**Construction and operation of a concrete factory in the Polo Flat industrial area east of Cooma**
Production	130,500 concrete segments to create 14,500 tunnel rings.
Factory	• raw material storage in silos and bunkers, including cement, aggregate, sand, and ground slag; • concrete batching plant; • precast building containing a casting room and curing chamber including a gas fired boiler; • open storage areas for finished concrete segments; • office, workshop, truck and car parking; and • two 20,000 litre above-ground diesel storage tanks.
Stormwater	• watercourse diversion, perimeter drains and an on-site detention basin; • first flush tank for wastewater treatment in the concrete batching and cement storage areas; • reuse of treated water from the first flush tank and detention basin; and • six 40,000 litre above ground water storage tanks.
Access and road upgrades	• a new site access road in the unmade road corridor from Polo Flat Road to the site entry; • Polo Flat Road – pavement strengthening works; • Polo Flat Road / Monaro Highway / Yallakool Road intersection upgrades; and • Snowy Mountains Highway / Bombala Street temporary traffic controls.
Transport routes and vehicle movements	• heavy vehicles - Polo Flat Road, Monaro Highway, Snowy Mountains Highway, Link Road, Lobs Hole Ravine Road; and • light vehicles - Polo Flat Road, Monaro Highway, Snowy Mountains Highway, Saleyards Road.
Duration and hours of work	• construction – 5 months, Monday to Saturday 7 am – 5 pm; and • operation – 3.5 years, 24 hours a day, seven days a week.
Construction	• demolition of existing buildings and a disused telecommunications tower; • temporary fencing and delineation of areas of retained native grasslands; • earthworks and installation of drainage infrastructure; • laying concrete for the precast building and internal roads; • laying of cement soil for storage areas; and • construction of the batching plant, precast building, office, workshops, access road and parking.
Employment	• construction – 30 workers; and • operation – 125 workers.
Decommissioning	• removal of plant and equipment; and • retention of the precast building, workshops and offices for future alternative industrial use (subject to separate development approval).
Capital Investment Value	$55 million

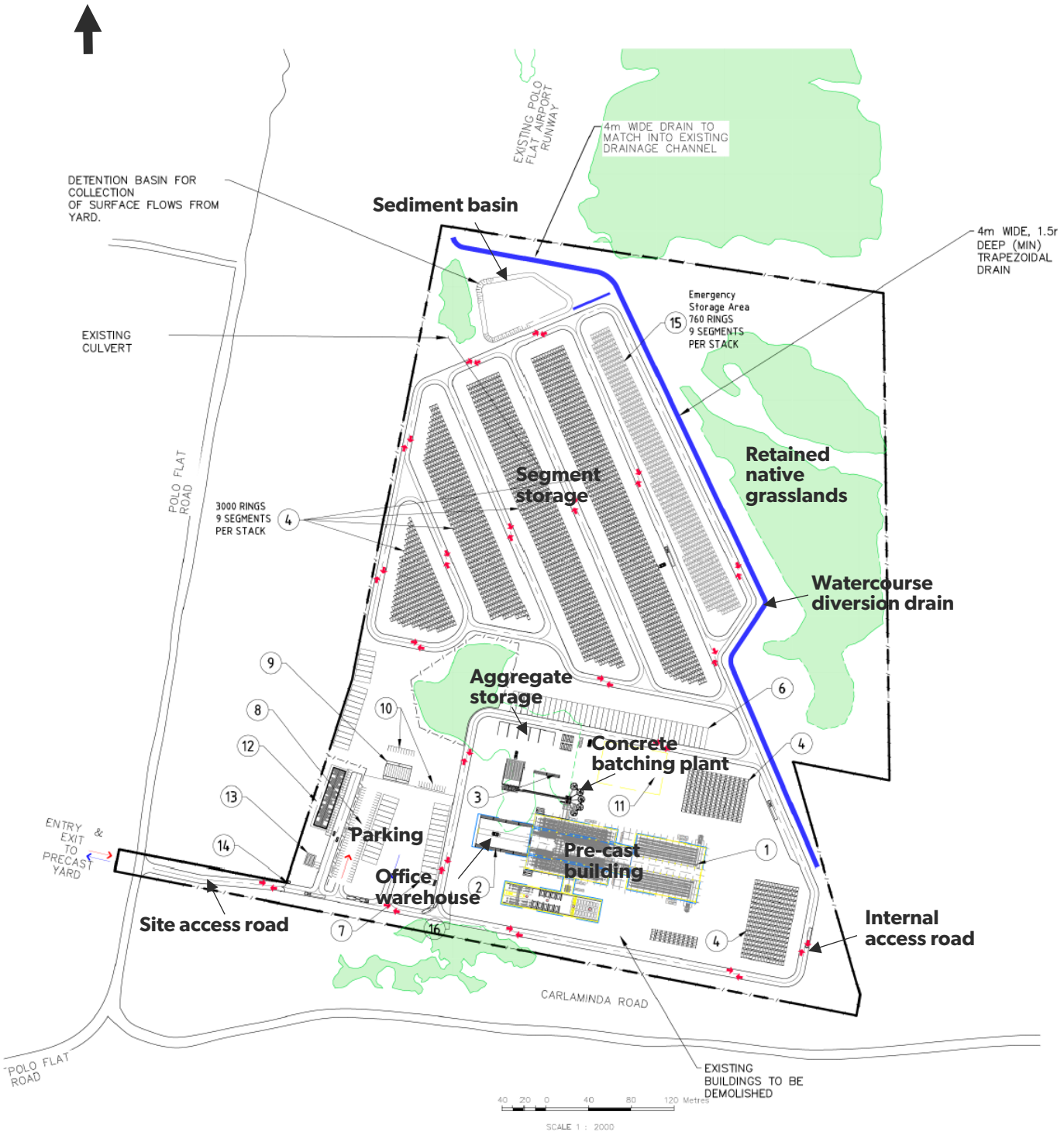

Figure 6 | Project Layout

3. Statutory Context

3.1. Critical State Significant Infrastructure

The project is classified as CSSI under Section 5.13 of the EP&A Act because it is ancillary development for the Snowy 2.0 and Transmission Project, which is specified as CSSI under Clause 9 of Schedule 5 of State Environmental Planning Policy (State and Regional Development) 2011 (State and Regional Development SEPP).

Consequently, it requires the approval of the Minister for Planning and Public Spaces before it may proceed.

3.2. Permissibility

The project is permissible without consent on the site under Clause 16 of the State and Regional Development SEPP.

3.3. Administrative and Procedural Requirements

Under the EP&A Act and EP&A Regulation, there are several administrative and procedural requirements that must be satisfied before the Minister can determine the application.

These requirements include:

- making the CSSI application and giving notice of the making of the application;
- the preparation of the Secretary's environmental assessment requirements for the Environmental Impact Statement (EIS) for the project;
- the exhibition of the EIS for at least 28 days; and
- making key documents available on the Department's website, including the public submissions and Snowy Hydro's response to these submissions.

The Department has conducted a detailed review of the steps taken so far in the assessment of the Segment Factory, and can confirm that all relevant administrative and procedural requirements have been met, and that the Minister may now determine the application.

3.4. Application of the Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* applies to the project. In particular,

- under Section 7.9 of the Act, the EIS for the project must be accompanied by a biodiversity development assessment report (BDAR); and
- under Section 7.14, the Minister must consider the likely impact of the project on biodiversity values as assessed under the BDAR.

The EIS for the Segment Factory included a BDAR, which concluded that the site had low conservation value and that the project would not have a significant impact on any threatened species or ecological communities.

The recommended conditions for the project require Snowy Hydro to retire 25 ecosystem credits and 9 species credits to offset the residual impacts of the project.

3.5. Environment Protection Licence

The project requires an environment protection licence (EPL) from the Environment Protection Authority (EPA) under the *Protection of the Environment Operations Act 1997*.

Under Section 5.23 of the EP&A Act, the EPA cannot refuse to grant the EPL if the Segment Factory is approved under the EP&A Act, and the terms of any EPL issued for the project must be consistent with the terms of the CSSI approval.

The Department has worked closely with the EPA during the assessment of the Segment Factory application and received advice from the EPA that it is willing to grant an EPL for the project subject to conditions requiring Snowy Hydro to minimise the noise, dust, waste and water quality impacts of the project.

The Department has incorporated these conditions into the recommended conditions of approval for the Segment Factory.

3.6. Environmental Planning Instruments

Although environmental planning instruments do not apply to the assessment of CSSI projects under Section 5.22 of the EP&A Act, the Department has assessed the project against the provisions of several instruments and concluded that:

- the project is consistent with the aims and objectives of the IN1 General Industrial zone under the *Cooma-Monaro Local Environmental Plan 2013*;
- the project is not potentially hazardous or offensive under *SEPP33 – Hazardous and Offensive Development*;
- the land is not core koala habitat under *SEPP (Koala Habitat Protection) 2019*; and
- the land is suitable for the project under *SEPP 55 – Remediation of Land*, provided Snowy Hydro is required to remove the asbestos fragments found on the surface of parts of the site prior to carrying out the project.

3.7. Matters for Consideration

When deciding whether or not to approve the carrying out of the project under Section 5.19 of the EP&A Act, the Minister is required to consider the reports, advice and recommendations contained in this report, which includes the:

- EIS for the project;
- public submissions and Snowy Hydro's response to the issues contained in these submissions;
- advice provided by public authorities on the project;
- Department's whole-of-government assessment of the merits of the project; and
- recommended conditions of approval for the project.

4. Engagement

4.1. Department's Engagement

During the assessment of the Segment Factory, the Department has consulted widely with the community and government agencies, including Snowy Monaro Regional Council. This engagement has included:

- making all the information associated with the project publicly available on the Department's website;
- exhibiting the EIS from 10 October to 6 November 2019;
- publishing copies of all the submissions received online;
- requiring Snowy Hydro to provide a formal response to the issues raised in submissions;
- holding public information sessions in Cooma in August 2018 and October 2019;
- inspecting the site and surrounding area; and

- working closely with government agencies on the assessment of key issues.

4.2. Summary of Submissions

During the exhibition of the EIS, the Department received 33 submissions on the Segment Factory, including seven from government agencies and 26 from the general public.

However, only 11 of these submissions were relevant to the Segment Factory as the exhibition period for the Segment Factory EIS co-incided with the exhibition of the Snowy 2.0 Main Works EIS; and many of these submissions related solely to the Main Works, not the Segment Factory.

Of the 11 submissions, only four were from the general public with three of these coming from Cooma and the other from Sydney. None of the submissions objected to the project; however they raised several issues requiring further assessment, including the potential cumulative traffic impacts of the Segment Factory on the Cooma town centre.

4.3. Response to Submissions

In December 2019, Snowy Hydro provided a detailed response to the issues raised in submissions that was published on the Department's website (see **Appendix C**). This response (RtS):

- clarified that the EIS had significantly overstated the traffic volumes of the Segment Factory by double counting each of the traffic movements, and included a revised traffic and traffic noise assessment with the correct traffic volumes;
- included further information on the required intersection upgrades;
- included refinements to the site layout; and
- updated the proposed mitigation and management measures.

4.4. Key Issues – Government Agencies

Snowy Monaro Regional Council strongly supports the development of the Segment Factory and Snowy 2.0 Project because of the benefits they are likely to provide to the local community.

It also supports the proposed road upgrades and traffic mitigation measures for both projects, which are considered to be essential for minimising any cumulative traffic impacts on the Cooma town centre, and indicated that it would prefer the Segment Factory to be put to an alternative industrial use at the end of the project rather than being demolished.

Council recommended several conditions which have been incorporated into the recommended conditions of approval (see **Appendix E**), including for the provision of a drainage easement for adjacent industrial properties, encouraging recycling and reuse within the concrete manufacturing process, the eradication of noxious weeds on-site, and the disposal facilities for the asbestos found on the surface of parts of the site.

Transport for NSW (incorporating the former Roads and Maritime Services) noted the development would generate a significant amount of additional traffic on the State road network and asked Snowy Hydro carry out a comprehensive assessment of the potential cumulative traffic impacts of all components of the Snowy 2.0 Project. TfNSW also requested further analysis of:

- the types of vehicles that would be used to transport concrete segments, with a focus on reducing the total number of heavy vehicle movements from the development;
- impacts on journey times and measures to minimise delays and ensure road users are informed of changes to conditions;

- concept designs for all road and intersection upgrades and an assessment of the environmental impacts of the upgrade works;
- heavy vehicle salvage plans or protocols; and
- further details on the implementation of the Road Safety Audit recommendations, including commitments to completing the implementation of these recommendations as soon as possible.

After reviewing the RtS, TfNSW recommended several conditions which have been incorporated into the recommended conditions of approval (see **Appendix E**) for the projet including confirming the road upgrades required and requiring Snowy Hydro to use longer vehicles to deliver concrete segments to the Snowy 2.0 site.

The ***Environment Protection Authority*** (EPA) requested several clarifications on the noise and air impact assessments, including:

- the likely noise impacts of the project on the residences in the industrial area;
- additional mitigation measures that could be implemented to reduce the construction and traffic noise impacts of the project;
- clarifying some of the assumptions used in the air quality model; and
- revised air quality modelling to evaluate worst-case emissions.

After reviewing the RtS, the EPA confirmed Snowy Hydro's approach to noise management is appropriate and recommended conditions for minimising particulate emissions from the factory.

The Department's ***Biodiversity and Conservation Division*** (BCD) requested some amendments to the species credits calculations in the BDAR and recommended conditions requiring Snowy Hydro to eradicate the African Lovegrass on site to prevent its spread to the KNP and implement an unexpected finds protocol for any heritage items on site (see **Appendix E**).

The Department's ***Water Group*** and ***NSW Natural Resources Access Regulator*** (NRAR) recommended conditions for design of the watercourse diversion, including a vegetated buffer, erosion and sediment control, and the use of water on-site (see **Appendix E**).

The ***Department of Primary Industries*** did not raised any concerns about the project.

4.5. Key Issues – Community

The submissions from the general public were particularly concered about the likely traffic impacts of the project, including the potential cumulative traffic impacts of the Segment Factory and Snowy 2.0 Project on the Cooma town centre, saying the project would significantly reduce the amenity of the town centre and cause unacceptable traffic congestion and safety impacts.

They indicated that Snowy Hydro should be required to use an alternative heavy vehicle route that bypasses the Cooma town centre, such as Shannons Flat Road and Bobeyan Road.

These submissions were also concerned about the traffic noise impacts, noting that heavy vehicles can already be clearly heard across Cooma at night, particularly when they are braking.

Finally, they were concerned about the 24/7 operation of the factory given the low night-time background noise levels in Cooma.

5. Assessment

The Department has assessed the merits of the project in accordance with the requirements of the EP&A Act and applicable NSW Government policies and guidelines.

Based on this detailed assessment, the Department has concluded that the Segment Factory can be carried out without causing any significant impacts and should be approved subject to strict conditions.

The Department has outlined the findings of its assessment of the potential traffic impacts of the Segment Factory in detail in **section 5.1**, and summarised its findings on all the other potential impacts in **section 5.2**.

5.1. Traffic

The Segment Factory would operate in conjunction with the construction of the Snowy 2.0 Main Works Project (if it is approved), and together they would significantly increase the number of heavy vehicle movements going through the Cooma town centre.

Without suitable mitigation, these increases could cause significant congestion during peak periods, increase traffic safety risks and reduce the amenity of the town centre, particularly during the ski season.

Following detailed assessment, the Department has found that these potential impacts can be reduced to an acceptable level with suitable road upgrades and the implementation of a range of traffic management measures by Snowy Hydro, working closely with TfNSW and Snowy Monaro Regional Council.

5.1.1. Traffic Generation

The Segment Factory would generate three types of traffic:

- heavy vehicles to import raw materials to the site;
- heavy vehicles to deliver the concrete segments from the factory to the Snowy 2.0 site; and
- light vehicles for workers to get to and from the factory.

Trucks delivering the raw materials would come from the north along the Monaro Highway and turn straight into the industrial area, well before the Cooma town centre, and travel to the site along Polo Flat Road. On average, there are likely to be 52 heavy vehicle movements a day (26 each way) but this could rise to 84 movements a day (42 each way) during peak periods (see **Figure 7**).

Trucks delivering concrete segments to the Snowy 2.0 site would travel along Polo Flat Road and the Monaro Highway before heading through the Cooma town centre to the Snowy Mountains Highway and then to the Snowy 2.0 site. On average, there are likely to be 78 heavy vehicle movements a day (34 each way) but this could rise to 132 movements a day (66 each way) during a 2 – 3 month peak period in operations (see **Figure 7**).

Figure 7 | Peak Daily Traffic Movements

If the Snowy 2.0 Main Works are approved, there are likely to be up to 252 additional heavy vehicle movements (126 each way) going through the Cooma town centre delivering raw materials and plant to the Snowy 2.0 site, taking the total to a maximum of 384 heavy vehicle movements a day (192 each way).

Workers travelling to the site would come mainly from the Cooma residential areas and enter the site via Sale Yards Road from the south or Polo Flat Road from the north. During peak operations, there are likely to be up to 266 light vehicle movements (133 each way) from the south and 194 movements (97 each way) from the north.

5.1.2. Cooma Town Centre

The critical issue is the potential cumulative traffic impacts of the Segment Factory and Snowy 2.0 Main works on the Cooma town centre, given they could generate up to 384 heavy vehicle movements (192 each way) a day through the town centre for a period of 3 – 4 years.

(a) Options to Avoid Town Centre

The Department has investigated the options available for requiring all these trucks to by-pass the Cooma town centre but found that none of these options is feasible and reasonable.

The first of these options involved using an alternative route through Cooma, but there were no suitable roads available that could accommodate the predicted number of heavy vehicles safely and avoid passing through residential areas.

The other option involved requiring all trucks to use Shannons Flat Road and Bobeyan Road to get to the Snowy Mountains Highway (see **Figure 8**).

Figure 8 | Route from Cooma to KNP

However, these roads are in poor condition and would require significant upgrades to make them suitable for heavy vehicles, and the costs (financial and environmental) of doing this would outweigh any benefits, particularly when considering the impacts would only occur for 3 – 4 years.

Consequently, the Department has determined that it would be better to use the State Road Network (Monaro and Snowy Mountains Highways) instead of any other route, and try to mitigate any potential impacts on the Cooma town centre.

(b) Road Capacity

On average, the road network through the town centre has considerable spare capacity, with both the Bombala Street and Vale Street roundabouts providing a level of service B during peak periods, but it becomes very congested during ski season and levels of service can drop to F (see **Figure 9**).

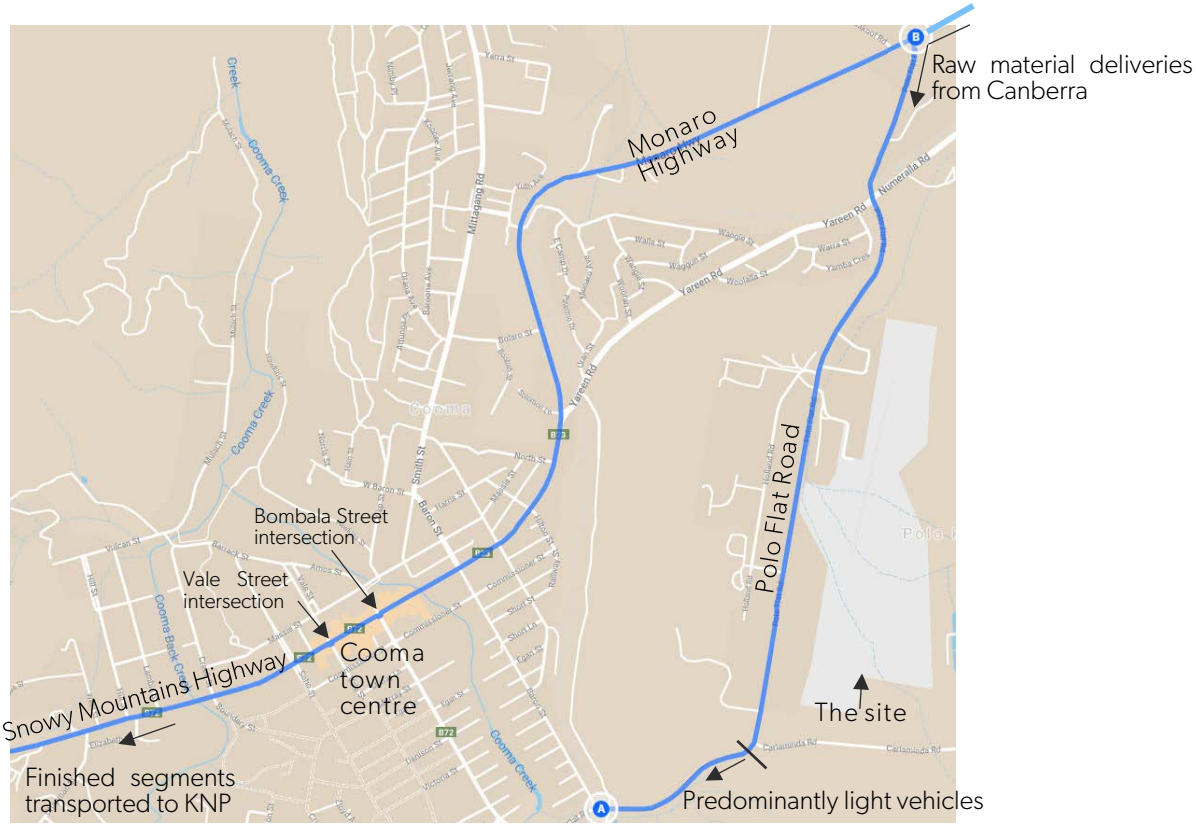

Figure 9 | Route through Cooma

TfNSW has conducted a detailed analysis of the potential impacts of the Segment Factory and Snowy 2.0 Main Works on the town centre and concluded that these impacts can be mitigated to an acceptable level with:

- some minor upgrades to the Bombala Street and Vale Street roundabouts (kerbs, pavement and signage) to accommodate over-dimensional vehicles, which Snowy Hydro are undertaking for the exploratory works;
- the installation of temporary traffic signals at the Bombala Street intersection to control traffic movements through the town centre during the ski season; and
- extensive traffic management by Snowy Hydro to reduce heavy vehicle movements during peak periods and minimise traffic safety risks in the town centre.

(c) Traffic Management

There are three key traffic management measures that could materially reduce the traffic impacts of the Segment Factory and Snowy 2.0 Main Works on the Cooma town centre.

The first involves using Performance Based Standards (PBS) vehicles to transport concrete segments to the Snowy 2.0 site (see **Figure 10**). These vehicles can hold three times the number of concrete segments compared to a regular semi-trailer, and would reduce the number of heavy vehicle movements from the Segment Factory through the town centre by around 66%, taking the heavy vehicle movements from 78 to 26 (13 each way) on average and 132 to 44 (22 each way) during peak operations.

This would substantially reduce the traffic impacts of the Segment Factory on the Cooma town centre, and is required in the recommended conditions of approval (subject to Snowy Hydro being able to secure the necessary approval from the National Heavy Vehicle Regulator).

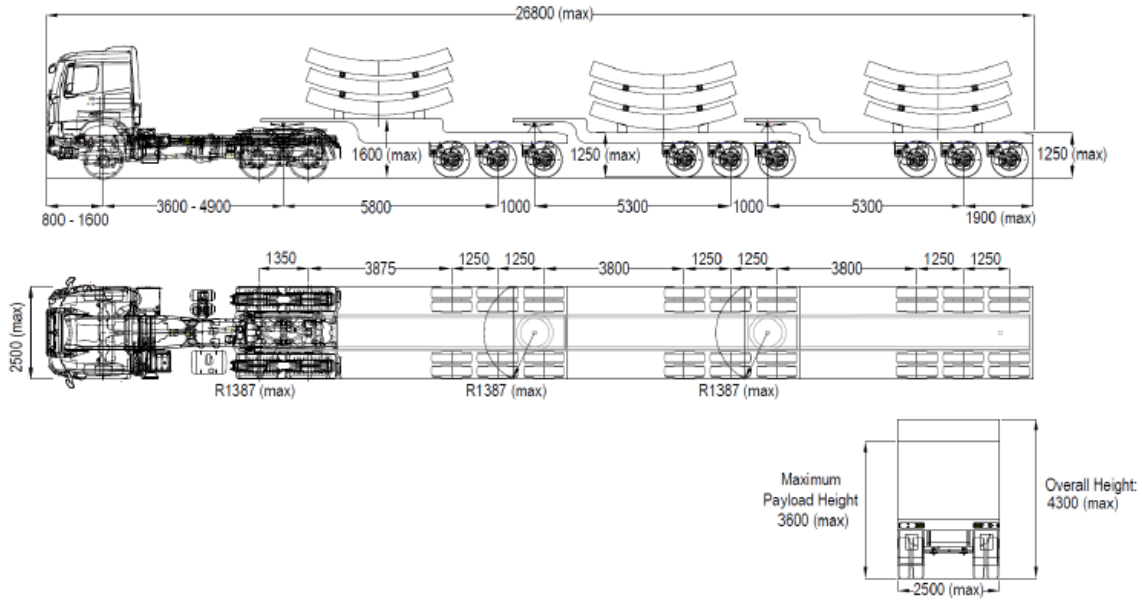

Figure 10 | Performance Based Standards Vehicles

The second traffic management measure involves scheduling as many heavy vehicle movements from the Segment Factory and the Snowy 2.0 Main Works outside peak periods (ski season, morning and evening peak traffic periods, Sundays and public holidays) to reduce the traffic impacts on the town centre.

Snowy Hydro has demonstrated that this is feasible and likely to be extremely effective, particularly if concrete segments and other materials and plant are delivered to the Rock Forest property outside the KNP, outside peak periods, for stockpiling until they are needed on the Snowy 2.0 site. This is also required in the recommended conditions of approval.

Finally, there are several measures that could be implemented within the town centre to reduce any safety risks and improve traffic flows during peaks, including using temporary traffic lights at the Bombala Street intersection.

With the implementation of all three of these measures, the cumulative traffic impacts (flow, safety and noise) of the Segment Factory and Snowy 2.0 Main Works could be reduced significantly and comply with relevant standards in the Cooma town centre, including the recommended road traffic nose criteria in the NSW Road Noise Policy, even though the heavy vehicle movements of both projects would remain noticeable in the town centre for a period of 3 – 4 years.

The Department has recommended conditions requiring Snowy Hydro to prepare a detailed Traffic Management Plan for the Segment Factory in close consultation with TfNSW and Council identifying the specific measures that would be implemented to minimise any traffic impacts on the Cooma town centre.

5.1.3. Polo Flat Industrial Area

With suitable road upgrades and traffic management, the road network in the Polo Flat industrial area would be able to accommodate the traffic generated by the Segment Factory comfortably, and the noise impacts associated with this traffic could be reduced to comply with the relevant road noise criteria in the NSW Road Noise Policy at the residences located along the northern part of Polo Flat Road.

(a) Road Upgrades

Both TfNSW and Snowy Hydro are proposing to upgrade the Polo Flat Road network, and these upgrades will ensure the network can accommodate all of the traffic generated by the Segment Factory.

The TfNSW upgrades form part of a broader upgrade of the State Road Network including upgrading the:

- current Monaro Highway / Polo Flat Road intersection to a three-way, single lane roundabout, which will significantly improve the efficiency and safety of this intersection for all traffic on the network; and
- current Monaro Highway / Sale Yards Road intersection to include a basic right turn treatment and a vehicle-activated sign.

Both of these upgrades are expected to be completed within the new few months, and will be in place for the Segment Factory (if it proceeds).

Snowy Hydro is proposing to:

- strengthen the pavement of Polo Flat Road in consultation with Council prior to delivering any concrete segments, and to make good any damage caused to the road during the 3 – 4 years the Segment Factory operates; and
- provide a new access road and entry to the site off Polo Flat Road.

Council supports these upgrades, and the Department has included obligations in the recommended conditions of approval requiring these works to be carried out.

(b) Traffic Noise

There are 8 residences along the northern section of Polo Flat Road between the existing railway line and the Monaro Highway that will experience increased traffic noise impacts a s a result of the Segment Factory.

Night-time road traffic noise levels are currently around 59 dBA at these residences, which is 4 dBA higher than the recommended criteria in the NSW Road Noise Policy. This is reflective of the road being used as the primary access route to the Polo Flat industrial area as well as a heavy vehicle by-pass for the Cooma town centre.

In these circumstances, the NSW Road Noise Policy says new development (such as the Segment Factory) should not increase existing traffic levels by more than 2 dBA.

During peak operations (which would occur for 2 – 3 months), Snowy Hydro estimated that the project would increase traffic levels at these residences by up to 2.2 dBA.

However, by requiring Snowy Hydro to use Performance Based Standards vehicles to deliver concrete segments to the Snowy 2.0 site and prohibiting the delivery of raw materials to the Segment Factory between 10 pm and 5 am, this increase could be reduced to around 1.1 dBA, which is well within what is recommended in the NSW Road Noise Policy.

Consequently, the Department has incorporated these requirements into the recommended conditions.

5.1.4. Snowy Mountains Highway

The Snowy Mountains Highway can accommodate all of the traffic from the Segment Factory and Snowy 2.0 Main Works. However, the highway only has a single lane each way for much of the route and the increase in heavy vehicles along the highway could slow the rest of the traffic on the highway and create safety risks. In addition, the highway could be put-out of commission for periods if there is an accident on the route, particularly in adverse weather conditions, resulting in heavy vehicles blocking the highway.

The potential impacts will be mitigated to a significant extent by the passing bays that TfNSW is proposing to install along the highway in the next few months, and they would be reduced even further if Snowy Hydro is required to:

- schedule heavy vehicle movements outside peak periods;
- reduce the use of the Snowy Mountains Highway during adverse weather conditions; and
- develop and implement clear procedures for responding to any accidents / incidents on the highway to restore traffic flows as soon as possible.

With these measures in place, both TfNSW and the Department consider there are unlikely to be any unacceptable impacts on the Snowy Mountains Highway as a result of the Snowy 2.0 project.

The delivery of concrete segments from the Snowy Mountains Highway to the exploratory works near Lobs Hole is already approved under the Snowy 2.0 Exploratory Works approval. However, the potential impacts associated with delivering these segments to other parts of the Snowy 2.0 site (Rock Forest and Tantangara) are currently still being assessed, and these deliveries would only be able to occur if the Snowy 2.0 Main Works application is approved.

5.1.5. Conclusion

Although the Segment Factory would significantly increase the volume of heavy vehicle traffic on the road network, including through the Cooma town centre, over a period of 3 – 4 years, the Department has concluded that the potential impacts associated with these increases can be reduced to an acceptable level with suitable road upgrades and effective traffic management.

To ensure this occurs, the Department has recommended conditions requiring Snowy Hydro to:

- upgrade the local road network;
- ensure all heavy vehicles associated with the Segment Factory only use the designated heavy vehicle routes;
- use only PBS vehicles to deliver concrete segments to the Snowy 2.0 site;
- restrict the delivery of raw materials to the Segment Factory to between 5 am and 10 pm;
- schedule as many heavy vehicle movements outside peak periods to reduce impacts on the road network and surrounding area, including the Cooma town centre; and
- prepare a detailed Traffic Management Plan for the Segment Factory, in consultation with TfNSW and Council, identifying the specific measures that would be implemented to reduce the traffic impacts of the project.

5.2. Other Issues

Table 2 | Summary of other issues raised

Issue	Findings	Recommended Conditions
Noise	• Noise from the construction of the project may result in minor exceedances of the recommended noise criteria in the Interim Construction Noise Guideline from time to time at three residences to the south-east of the site, however these levels would remain well below the maximum levels in the guideline and could be avoided with best practice noise management. • During operations, the factory would comply with the relevant criteria in the EPA's Noise Policy for Industry at all residential receivers, except the residence close to the south-eastern boundary of the site where these criteria could be exceeded by 2dBA during the evening and night. This exceedance is likely to be imperceptible at the residence, and is considered to be acceptable given	• Restict construction hours to between 7am and 6pm Monday-Saturday. • Minimise construction noise in accordance with the best practice requirements in the Interim Construction Noise Guideline.

Issue	Findings	Recommended Conditions
	night time noise levels would remain well below the relevant night-time noise amenity criteria for such residences.	• Set strict noise limits for the operation of the factory. • Require regular noise monitoring and reporting against the noise limits.
Air quality	• The project would comply with the relevant EPA criteria for particulates at all residential receivers outside the industrial area. • Due to elevated background levels at certain times (during winter when domestic wood heaters are operating), the project may contribute to exceedances of the relevant ambient air quality criteria in the surrounding area, and Snowy Hydro will need to adjust its work practices onsite during these conditions to minimise any adverse cumulative impacts.	• Implement all reasonable and feasible measures to minimise dust from the development.
Land	• Surveys have found fragments of asbestos containing material (ACM) on the surface of parts of the site and there are hazardous materials in the dilapidated buildings that are scheduled for demolition.	• Remove the ACM and other hazardous materials prior to demolition and construction.
Water	• The factory would be connected to the local water supply system, and Snowy Hydro would reuse treated wastewater and the stromwater collected on-site to supplement its water supplies. • Snowy Hydro would avoid any adverse flooding/storwater impacts by: - diverting the existing watercourse around the new factory; - providing an inter-allotment easement for industrial properties to the west to drain across the site to Council's existing stormwater system; and - constructing the main building and hazardous material storage areas above the 1% Annual Exceedance Probability (AEP) flood event; • The project is unlikely to cause any water pollution as Snowy Hydro would use standard erosion and sedment control measures on site, and all stormwater would be collected and stored in an on-site detention basin before being discharged in accordance with the requirements set in an Environment Protection Licence.	• Ensure the project has sufficient water for all stages of the project, and adjust the intensity of operations on-site to match the available water supply. • Install erosion and sediment controls, prior to construction, and maintain these controls during the development. • Construct buildings above the 1% AEP flood level. • Prepare and implement a Flood Emergency Response Plan. • Provide an inter-allotment easement to the satisfaction of Council.
Visual	• Although the project would substantially change the open nature of the existing site, the development on-site would blend in with the adjoining industrial development and be consistent with the strategic intent for the land, which is zoned for industrial development. • Residents across Carlaminda Road would have intermittent views of the factory and its associated light spill during night-time operations.	• Minimise the glare and lighting impacts. • Maintain the storage areas in a neat and tidy condition. • Ensure the blends in with the surrounding development.

Issue	Findings	Recommended Conditions
		• Restrict the use of signage on-site.
Biodiversity	• The site is highly disturbed and has low conservation value. • Snowy Hydro has designed the project to avoid the Natural Temperate Grasslands onsite, and committed to offset any residual biodiversity impacts. • Parts of the site are covered in African Lovegrass, a noxious weed, and Snowy Hydro has agreed to control this weed to prevent its spread to the KNP and other parts of NSW.	• Offset the loss of Natural Temperate Grasslands and threatened species habitat. • Control the African Lovegrass and prevent its spread to the KNP.
Social	• The project would deliver significant benefits to the local community, providing 30 construction jobs and 125 operational jobs. • The project could exacerbate the shortage of accommodation in Cooma during the ski season. To avoid this, Snowy Hydro is currently seeking approval from Snowy Monaro Regional Council to establish a workers accommodation facility at the former Pacific Hills Lodge, which is located close to the Polo Flat industrial area.	• Maximise local employment during the project. • Implement an Accommodation and Employment Strategy for the project, which includes the contingency measures that would be implemented if the application for workers accommodation is refused.
Heritage	• There are no known Aboriginal or historic heritage items on-site, and the risks of encountering any during construction is low.	• Implement standard measures if unexpected finds occur.
Hazards	• The project is not potentially hazardous or offensive industry because only a few dangerous goods would be stored on site, and these dangerous goods are well below the risk screening threesholds in *SEPP 33 – Hazardous & Offensive Development*.	• Ensure all dangerous goods, chemicals, fuels and oils are stored in accordance with the relevant Australian Standards and EPA guidelines.

6. Evaluation

The Snowy 2.0 Project is essential for the NSW economy as it would provide up to 2,000 megawatts of electricity to the NEM as it transitions away from a long-standing reliance on coal-fired power stations. Consequently, all components of the project have been classified as CSSI under the EP&A Act and require the approval of the Minister for Planning and Public Spaces before they may proceed.

The Segment Factory is important component of the Snowy 2.0 Project as it would produce the concrete segments required to line the underground tunnels of the project.

The Department has carried out a detailed assessment of the merits of the Segment Factory in accordance with all relevant NSW legislation, policies and guidelines. It has also consulted widely with the community and key government agencies, and closely considered the issues they have raised during this consultation in its assessment.

The critical issue to consider during this assessment was the potential cumulative traffic impacts of the Segment Factory and Snowy 2.0 Project, as they could generate up to 384 heavy vehicle movements (192 each way) through the Cooma town centre a day during peak periods and cause significant congestion, traffic safety and amenity impacts on the town centre for a period of up to four years.

The Department has worked closely with Transport for NSW (TfNSW) and Snowy Monaro Regional Council to identify several mitigation measures that could used to reduce these impacts an acceptable level, including requiring road upgrades, using Performance-Based Standards vehicles to deliver concrete segments to the Snowy 2.0 site, and scheduling scheduling as many heavy vehicle movements outside peak periods.

The Department has prepared recommended conditions of approval for the Segment Factory requiring all of these measures to be implemented along with a range of other controls to minimise the other impacts of the project.

With the implementation of these conditions, the Department has concluded that the project can be carried out without causing any significant impacts.

The Department's assessment has also found that the Segment Factory would deliver significant economic and social benefits for the State and region, including:

- facilitating the development of the Snowy 2.0 Project;
- attracting $55 million of capital investment; and
- creating 125 jobs.

On balance, the Segment Factory is in the public interest and should be approved subject to strict conditions.

7. Recommendation

It is recommended that the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant approval to the application;
- **considers** any advice provided by the Minister having portfolio responsibility for the project;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants approval** for the application in respect of SSI 10034 as amended, subject to the conditions in the attached development project approval; and
- **signs** the attached project approval and recommended conditions of approval (see attachment).

Recommended by:

24/3/20

Nicole Brewer
Director
Energy Assessments

Recommended by:

24/3/20

David Kitto
Executive Director
Special Projects

Recommended by:

Marcus Ray
Group Deputy Secretary
Planning and Assessment

Appendices

Appendix A – Environmental Impact Statement

See the Department's website at https://www.planningportal.nsw.gov.au/major-projects/project/14716

Appendix B – Submissions

See the Department's website at https://www.planningportal.nsw.gov.au/major-projects/project/14716

Appendix C – Response to Submissions

See the Department's website at https://www.planningportal.nsw.gov.au/major-projects/project/14716

Appendix D – Agency Advice

See the Department's website at https://www.planningportal.nsw.gov.au/major-projects/project/14716

Appendix E – Recommended Instrument of Approval