REFERRAL OF A PROJECT FOR A DECISION ON THE NEED FOR ASSESSMENT UNDER THE *ENVIRONMENT EFFECTS ACT 1978*

REFERRAL FORM

The *Environment Effects Act 1978* provides that where proposed works may have a significant effect on the environment, either a proponent or a decision-maker may refer these works (or project) to the Minister for Planning for advice as to whether an Environment Effects Statement (EES) is required.

This Referral Form is designed to assist in the provision of relevant information in accordance with the *Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Eighth Edition, 2023). Where a decision-maker is referring a project, they should complete a Referral Form to the best of their ability, recognising that further information may need to be obtained from the proponent.

It will generally be useful for a proponent to discuss the preparation of a Referral with the Impact Assessment Unit (IAU) at the Department of Transport and Planning (DTP) before submitting the Referral.

If a proponent believes that effective measures to address environmental risks are available, sufficient information could be provided in the Referral to substantiate this view. In contrast, if a proponent considers that further detailed environmental studies will be needed as part of project investigations, a more general description of potential effects and possible mitigation measures in the Referral may suffice.

In completing a Referral Form, the following should occur:

- Mark relevant boxes by changing the font colour of the 'cross' to black and provide additional information and explanation where requested.
- As a minimum, a brief response should be provided for each item in the Referral Form, with a more detailed response provided where the item is of particular relevance. Cross-references to sections or pages in supporting documents should also be provided. Information need only be provided once in the Referral Form, although relevant cross-referencing should be included.
- Responses should honestly reflect the potential for adverse environmental effects. A Referral will only be accepted for processing once IAU is satisfied that it has been completed appropriately.
- Potentially significant effects should be described in sufficient detail for a reasonable conclusion to be drawn on whether the project could pose a significant risk to environmental assets. Responses should include:
  - a brief description of potential changes or risks to environmental assets resulting from the project;
  - available information on the likelihood and significance of such changes;
  - the sources and accuracy of this information, and associated uncertainties.
- Any attachments, maps and supporting reports should be provided in a secure folder with the Referral Form.
- A USB copy of all documents will be needed, especially if the size of electronic documents may cause email difficulties. **Individual documents should not exceed 10MB as they will be published on the Department's website.**

- A completed form would normally be between 15 and 30 pages in length. Responses should not be constrained by the size of the text boxes provided. Text boxes should be extended to allow for an appropriate level of detail.
- The form should be completed in MS Word and not handwritten.

The party referring a project should submit a covering letter to the Minister for Planning together with a completed Referral Form, attaching supporting reports and other information that may be relevant. This should be sent to:

Postal address

Minister for Planning
PO Box 500
EAST MELBOURNE VIC 8002

Couriers

Minister for Planning
Level 16, 8 Nicholson Street
EAST MELBOURNE VIC 3002

In addition to the submission of the hardcopy to the Minister, separate submission of an electronic copy of the Referral via email to ees.referrals@delwp.vic.gov.au is required. This will assist the timely processing of a referral.

PART 1 PROPONENT DETAILS, PROJECT DESCRIPTION & LOCATION

1. Information on proponent and person making Referral

Name of Proponent:	**Syncline Community Cable Pty Ltd**
Authorised person for proponent:	Phillip Galloway
Position:	Managing Director
Postal address:	Level 6, 84 William Street, Melbourne, Victoria, 3000
Email address:	phil@synclineenergy.com.au
Phone number:	0413 640 120
Facsimile number:	n/a
Person who prepared Referral:	Adam Terrill
Position:	Co-Founder & Director
Organisation:	Cogency
Postal address:	Level 6, 84 William Street, Melbourne, Victoria, 3000
Email address:	adam@cogencyaustralia.com.au
Phone number:	0409 132 178
Facsimile number:	n/a
Available industry & environmental expertise: (areas of 'in-house' expertise & consultancy firms engaged for project)	Syncline Community Cable Pty Ltd (**SCC**) is owned by Syncline Energy Pty Ltd (**Syncline**), which has originated more than $5 Bn of energy transition assets over 20-years. Syncline was founded by Phil Galloway, who has an extensive track record in project development, engineering and finance. Prior to establishing Syncline in 2005, Mr Galloway's experience includes global executive at BHP for 10-years, engineering roles with Rio Tinto, finance roles at CS First Boston and energy market analyst roles at Esso. Syncline has engaged several consultants to support the delivery of this Project, including: Cogency – Planning, Environmental Assessment and Engagement Ecology and Heritage Partners – Ecology, Cultural Heritage and Bushfire DNV – Engineering design and owner's engineer DLA Piper – Legal: land, regulatory, construction Deloitte – Regulatory advice and economic impact Aurecon – Network modelling Ag-challenge – Agronomy IAG – Project delivery HSF – Legal: equity Lazard – Equity and debt Equity Trustees – Community Trust operations DCE – Hydrology Peter Hack – Visual

	Resonate – Acoustics In addition, Syncline is working closely with global cable suppliers and converter station Original Equipment Manufacturers (**OEM**s). Early Contractor Involvement processes are underway with selected civil contractors.

2. Project – brief outline

Project title: Syncline Community Cable (the Project)

Project location: (describe location with AMG coordinates and attach A4/A3 map(s) showing project site or investigation area, as well as its regional and local context)

Syncline Community Cable (the **Project** or SCC) is a fully underground transmission line in central Victoria.

The cable commences at the Melbourne Renewable Energy Hub (**MREH**) at Plumpton, runs approximately 100 km in the median strip of the Calder Freeway to Ravenswood, then crosses 165 km of private cropping and grazing land to its terminus near Jeffcott. Approximately 14 km of the line diverts from the Calder Freeway median and is proposed to be located under the old-Calder Highway (Harmony Way) through Harcourt.

Two converter stations will be delivered as part of the Project, one at MREH and one at Jeffcott.

The Project will also include a cable-cable intermediate transition station in the median strip of the Calder Freeway near Ravenswood.

Attachment 1 – Preferred Route Plan shows the project area.

Short project description (few sentences)**:**

The Project comprises an underground transmission line and two above ground converter stations. The underground cable will be a 525kV (or 400kV) High Voltage Direct Current (**HVDC**) point-to-point bipole with Dedicated Metallic Return (**DMR**).

This setup involves three cables in conduit, buried in a 1.5 m wide trench at a depth of 1.2 m. Topsoil will be replaced in the upper 0.4 m of the trench, allowing most farming activities to continue above the easement.

Sections of the route with river and road crossings, as well as areas with high ecological and cultural value, will use Horizontal Directional Drilling (**HDD**) at depths of 8 to 16 m. This avoids surface disturbance other than for temporary drill pad locations during construction.

The two converter stations will connect the Project to Victoria's 500kV HV Alternate Current (**HVAC**) Declared Shared Network (**DSN**) at MREH and Jeffcott.

3. Project description

Aim/objectives of the project (what is its purpose / intended to achieve?):

The Project has five key aims / objectives:

1. *Critical infrastructure for Victoria*
2. *Optimised transmission route*
3. *Appropriate technology delivering a stronger network at a lower cost*
4. *Significant economic benefits that are aligned to government policy*
5. *Strong social licence*

A description of each of the aims / objectives is provided as follows:

1. Critical infrastructure for Victoria

The Project is a 1.5GW to 2GW HVDC underground electricity transmission link that has been specifically designed to:

- Reinforce Victoria's electricity network at the lowest possible cost to consumers when compared to the longer overhead 500kV HVAC alternatives
- Increase interconnector flows with New South Wales (**NSW**) by + 2.3 GW
- Increase Victoria's renewable energy hosting capacity by + 3.1 GW
- Mobilise the priority Renewable Energy Zone (**REZ**) areas identified by VicGrid in its September 2024 Victorian Transmission Plan Guidelines

2. Optimised transmission route

The Project's route was developed over 18 months in close consultation with farmers and following ecology and cultural heritage studies. This has ensured that difficult terrain and rocky sections are avoided, and creeks and rivers are crossed at their narrowest point. As a result, SCC has the shortest possible cable route that is acceptable to the community.

Great care has been taken by Syncline to minimise agricultural impacts during construction and to develop the framework for farm access agreements that respect property specific requirements, biosecurity, topsoil, drainage and operational needs. This early consideration of 'constructability' will further reduce Project costs with the necessary allowances included in the capital budget for topsoil management, equipment washdown, access and temporary stock fencing.

As a result, the route has been 'micro sited' within a 30 m wide corridor to minimise its impact on ecology, agriculture and cultural heritage. (Note: Minor changes may be necessary during the detailed design stage, but these will only be accepted if there is no material adverse impact to community, ecology or cultural heritage)

3. Appropriate technology delivering a stronger network at a lower cost

The Project's HVDC technology delivers higher energy transfer and materially better grid stability than overhead HVAC. Underground HVDC is contained within a narrower easement compared to overhead HVAC (12m v 60m) and is much more resilient to extreme weather and bushfires.

With minimal construction disturbance, no visual impact and the significantly narrower easement, HVDC requires less financial compensation to impacted land holders and fewer environmental offsets. This is why HVDC technology is increasingly chosen by utilities globally, resulting in technology improvement and lowered equipment costs in the last 10-years.

With HVDC technology, wind and solar farms cannot connect directly along the route – a positive consideration for rural communities worried about over-development of wind, solar and batteries adjacent to new transmission. Instead, the improved renewable energy hosting capacity for Victoria from SCC is more broadly spread across the State by de-bottlenecking existing lines.

HVDC technology emits little Electro Magnetic Field (**EMF**) radiation. This means SCC avoids common issues with overhead HVAC such as acute electric shocks from nearby metal objects, tingling sensations when people are near HVAC transmission lines, computer monitor interference and interreference with some 'smart farming' technologies.

4. Significant economic benefits that are aligned to government policy

The Project will:

- Deliver a $7.5Bn uplift to Australia's Gross Domestic Product (**GDP**), based on modelling undertaken by Deloitte Access Economics for Syncline
- Provide downside protection against bushfires and extreme weather that regularly impacts overhead transmission. For example, a single weather event in February 2024 cost Victoria $770m when six high voltage transmission towers were destroyed near

Anakie[1]. As an underground cable, SCC will remain operational during extreme weather and bushfires.

The Project is aligned to government energy policy as follows:

- Resolves community concerns raised with VicGrid during its extensive consultation from July to September 2024. SCC addresses strong negative sentiments towards transmission, specifically the community's expectation that: (i) biodiversity and the natural environment should be protected (ii) agriculture and land use will not be impacted; and (iii) vulnerability to natural hazards will be reduced. These three themes represented 60% of the concerns raised with VicGrid across more than 1,300 community responses[2].
- Policy objectives to reduce the cost of energy to consumers and improve reliability.
- Victoria's Renewable Energy Target of reaching 95 per cent renewable energy by 2035
- Initiatives within the *Climate Change Act 2017* to meet the greenhouse gas emissions reduction target of net zero emissions by 2050. Greenhouse gas reduction from the Project is achieved in two ways: (i) by increasing the renewable energy hosting of Victoria compared to the alternative HVAC plan; and (ii) by reducing energy losses in transmission through the more efficient DC technology.
- the Australian Government commitment to achieve it's 2030 climate change target, to reduce greenhouse gas emissions to 43 percent below 2005 levels by 2030.

5. Strong social licence

SCC has a unique engagement and landowner involvement model.

Firstly over one-third of the route sits within the Calder Freeway median and old-Calder Highway (Harmony Way), which enable SCC to exit Melbourne with no impact on peri-urban areas, green-wedge zones and State Parks along the Great Dividing Range. Department of Transport & Planning (Roads) (**DTP**) initial feedback on Syncline's construction methodology, traffic management and trench design has been incorporated into the Project's reference design and was used as the basis for the Project's civil construction tender. Case studies have been provided to DTP on the similar use of highway median strips in the United States of America for underground HVDC transmission.

The Proponent's approach to engagement has been traditional and 'grass roots', with face to face 'kitchen table conversations' by senior representatives. In most instances, landowners were introduced to the Project via a neighbour or community contact. This has resulted in broad acceptance and fewer social license issues, which is a notable result given community sentiment in much of Western Victoria is against transmission projects.

Landowners are offered the opportunity to participate in a unique Community Trust arrangement, where distributions are made based on the length of cable through their properties. This is in addition to the State Government's required compensation for transmission. The Community Trust operates under an Australian Financial Services Licence (**AFSL**) held by Equity Trustees Limited, with Syncline acting as its Authorised Representative. The Community Trust will be independently audited and administered.

In this way, landowners have a stronger financial involvement in the Project and can benefit more significantly from hosting the Project. The structure accommodates the often multi-generation and layered ownership of the large family owned enterprises along the route. This includes redemption rights and unit transfer mechanism that have been developed following consultation with farmers.

The Project will also allocate approximately 10% of the units in the trust for community projects. This part of the Community Trust income will be distributed annually by an appropriately constituted committee of farmers along the route plus independent members. The capacity and capability of this community group will be developed during the construction phase of the Project.

Further details regarding the Project's social license, community engagement and benefits are

[1] Source: Victorian State Government, Network Outage Review: February 2024 Storm and Power Outage Event: Independent Review of Transmission and Distribution Businesses Operational Response – Final Report, June 2024
[2] Source: Draft Victorian Transmission Plan Guidelines Final Engagement Report - What We Heard, VicGrid – December 2024

provided at Part 2 Sections 15 and 20.

Background/rationale of project (describe the context / basis for the proposal, eg. for siting):

To identify the optimal transmission link for Victoria, Syncline built an engineering model of the network in PSS®E, the software used by the Australian Energy Market Operator (**AEMO**) and VicGrid to assess energy flows. This model identified SCC as the optimal solution to alleviate Victoria's existing network constraints by increasing flows between NSW and Victoria and by increasing and better distributing the State's renewable energy hosting capacity.

Syncline then reviewed the cost and technical feasibility of alternative transmission types to complete the required link at the lowest possible cost to Victoria's energy consumers.

525kV HVDC technology was chosen mainly because of the smaller footprint for the cable trench and the grid forming capability of the converters at each end, which will enhance the State's network stability. AEMO was consulted on the performance envelope expected from the cable and the credible contingency events to be considered in detailed design.

The 525kV HVDC technology has benefited from rapid technical development and cost reduction over the last 10-years as underground cable replaces overhead transmission in Europe, the US and China.

The Project has been developed in close consultation with civil contractors and global cable and converter manufacturers. The proposed construction methodology for the Calder Freeway median section was provided to the DTP (Roads) and its feedback incorporated into the Project's reference design. The overall approach was benchmarked and reviewed by DNV, a leading engineering firm.

SCC's preferred OEM's have a track record in delivering similar projects.

As described in the Design Evolution Memo (Attachment 2), the cable route was selected following an extensive strategic process aimed at reducing environmental, social and particularly biodiversity impacts of electricity transmission. Other existing corridors from Melbourne, such as rail easements and the Western Freeway were assessed and rejected for reasons of cost, impact on existing land uses and environmental values.

Once the general route for SCC was resolved, alternative routes were assessed through the hills around Inglewood and the 'newer volcanics' basalt area west of Newbridge, with decisions guided by a strong desire to avoid biodiversity and heritage impacts. This led to a route almost entirely traversing freeway corridors and cropping/grazing land.

The route was then micro sited following extensive discussions with farmers and ecology and cultural heritage studies. Additional micro siting will be carried out as part of detailed design to reduce impacts further.

Key factors contributing to the suitability of the siting of the Project include:

- Using the HV AC 500kV infrastructure being developed for the MREH Battery Energy Storage System (**BESS**) project just outside Melbourne. MREH was originated and developed by Syncline and is now owned by Equis and the State Electricity Commission (**SEC**) Victoria.
- Co-locating approximately 100 km of the 265 km line within the Calder Freeway median, reducing land use conflicts and ecology impacts for approximately one third of the line.
- Siting the cable route following extensive consultation with farmers and to avoid areas with high ecological and cultural heritage values.
- Using HDD or other trenchless construction methods to minimise impacts on native vegetation, cultural heritage, rivers and creeks, transport routes and agriculture.
- Connecting to the finalised VNI West alignment to create a direct energy flow path with NSW and to mobilise VicGrid's priority REZ.

Main components of the project (nature, siting & approx. dimensions; attach A4/A3 plan(s) of site layout if available):

Key components of the Project include:

Underground transmission line: 265 km long, from Melbourne to Jeffcott, 525 kV HVDC, comprised of three cables buried in a trench that is 1.6 m deep and 1.5 m wide. Refer to Figure 1 below for a typical cross section of the cables.

The construction corridor is typically 30 m wide. In areas of ecology or heritage sensitivity, and where the Calder Freeway median is narrower than 30 m, the corridor will be reduced to 20 m width. Where HDD is proposed, there is no aboveground disturbance and therefore no construction corridor other than establishing the temporary drill pads at each end of the bore within the construction corridor.

Along the corridor, at approximately 1.2 km intervals, underground joint bays will be constructed to support construction, these will be backfilled and will not need to be accessible for routine operations. Four to eight communications cabinets will be required along the route which would be accessed along the cable easement approximately once per month for maintenance purposes.

A 12 m wide easement will be applied over the transmission line corridor to protect the line and provide access as required.

Some restrictions on activities within the easement will apply, for example construction of a structure or a stock yard, but generally it is expected that the land will continue to be used for cropping and grazing.

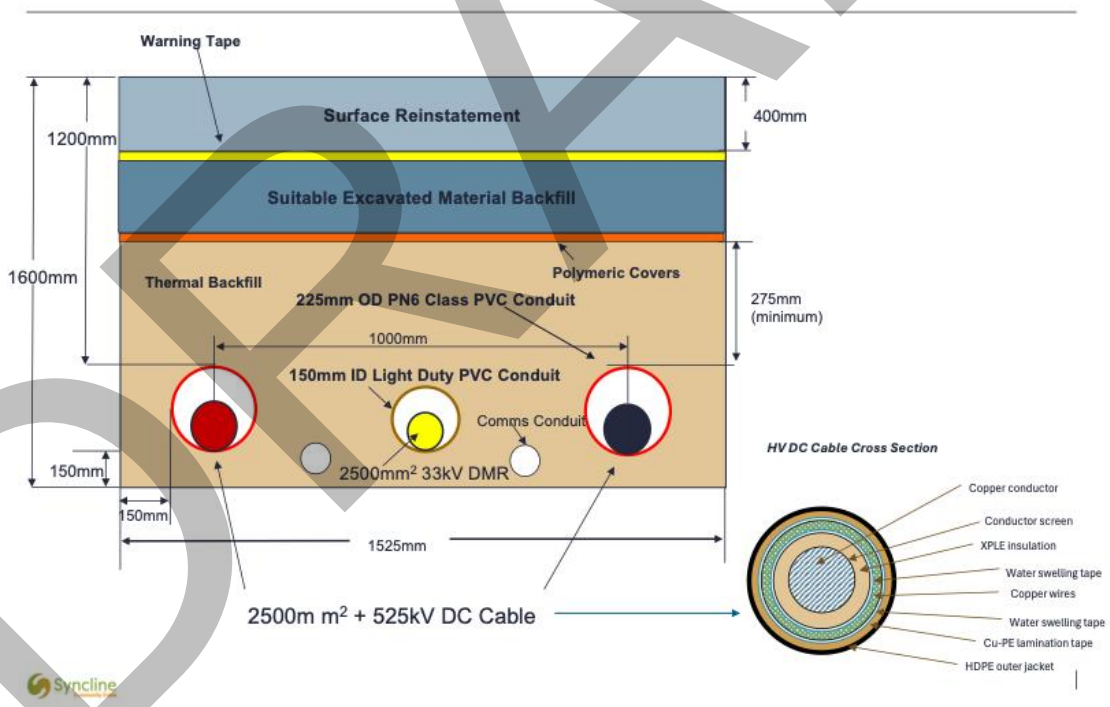

Figure 1 – Typical Cross Section

Converter stations: Two converter stations located at MREH and Jeffcott covering approximately 290 m x 220 m and with a maximum height of 25 m. They will comprise a large shed like structure. These comprise a variety of electrical and power equipment, switchgear, associated sheds and buildings, car parking and fencing.

Figure 2 provides an indication of the layout and scale of a typical converter station.

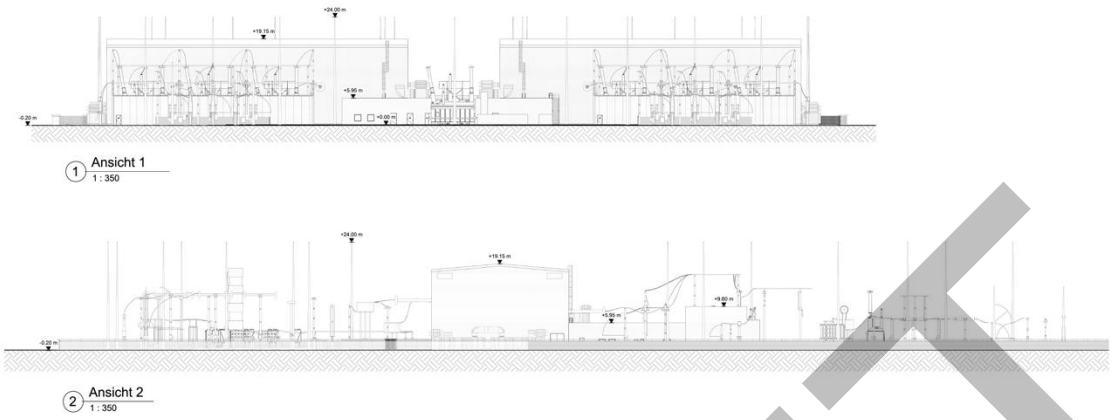

Figure 2 – Typical Converter Station cross-section

Cable-cable intermediate transition station: located in the wide median strip of the Calder Freeway near Ravenswood where the underground cable turns west into private properties. It is expected that this station will be located on a bench 30 m x 50 m in size and will comprise of three shipping container sized units (1 x 20 ft and 2 x 40 ft) (refer to Figure 3).

Figure 3 – Typical cable-cable intermediate transition station

Attachment 1 – Preferred Route Plan shows the project area.

Ancillary components of the project (eg. upgraded access roads, new high-pressure gas pipeline; off-site resource processing):

Access tracks: access tracks will generally be within the construction corridor and along existing roads and farm tracks. New access tracks may be required to be constructed where existing access is not suitable, or where the construction corridor is islanded because of directional drilling. The new access tracks will be generally short (less than 100 m), approximately 5 m wide, and will be located sensitivity to avoid environmental impacts where possible. Minor upgrades to existing roads may also be needed.

Construction compounds: five construction compounds are proposed, these will be approximately 70 m x 130 m (0.9ha), comprising site offices, amenities buildings, hardstand areas and laydown areas for equipment, plant and materials for civil construction and later cable installation. The compounds have been sited in areas without environmental constraints, particularly native vegetation. These facilities are planned for Jeffcott, Glenalbyn and MREH, and along the Calder Freeway and near Harcourt. The location and design of the compounds will be refined during the detailed design involving early contractor work through 2025.

Construction material: quarry material, concrete and other construction materials will be sourced from existing licensed facilities.

Key construction activities:

A Construction Environment Management Plan will be developed to manage the environmental effects of the Project during construction.

SCC will be constructed using four work fronts. Two work fronts will progress along the Calder Freeway with appropriate traffic management and protection. Two work fronts will progress across farmland, with one starting at Ravenswood and the other at Glenalbyn.

A construction rate of approximately 400 m / day is anticipated for the civil works.

The transmission line will be constructed via:

- open trenching, this method will be utilised where constraints are limited
- HDD or other trenchless construction methods, under watercourses, sealed roads and through areas of significant cultural heritage and native vegetation

The transmission line will be constructed with the aim of limiting disruption to the Calder Freeway and farming operations. This will be achieved by completing civil works in "one pass" and then returning later to install the cables via the pre-cast jointing bays once all cable has been manufactured and delivered to laydown yards along the route.

Civil works – Farmland

- Prepare road access, farm access and install access gates as required.
- Establish construction compounds including pug-mills for thermal backfill.
- Transport and store conduit, joint bay precast sections and other construction material to compounds and then distribute to works areas.
- Progressively move along each of the two work fronts:
    - Set-up bio-security vehicle wash down areas and temporary stock fencing for each farm
    - Clear 30 m (or 20 m where constraints exist) wide construction corridor and develop access and haul roads. Set aside topsoil for replacement and re-vegetation.
    - Excavate trenches or pits where HDD or other trenchless construction methods will be used.
    - Construct and install joint bays using pre-cast concrete sections
    - Instal conduit and backfill trench with stabilised sand or thermal backfill to approx. 650 mm above trench bottom.
    - Install Polymeric Covers.
    - Backfill with selected materials for 200 mm above polymeric covers and install warning tape.
    - Replace topsoil and revegetate in accordance with Syncline's farm access agreement (as agreed for each property). Including, removing spoil from farm if requested to do so by farmer. Otherwise stockpile on property for farmer's use.
    - Reinstate and rehabilitate access works to pre-construction uses, or as agreed with the landowner/s.

Cable Installation and jointing to commence once cable is delivered to site laydown yards

- Uncover and open-up joint bay
- Deliver cable drums to joint bay
- Pull cable
- Assemble enclosure over joint bay
- Cable supplier to then joint and test cables
- OEM to supply and install fibre optic and condition monitoring equipment

Each construction compound will establish proxy facilities to ensure the workforce has access to amenities along the length of the worksite. Furthermore, compounds will serve as laydown yards for long lead-time items such as cables and pits. The laydown yards will include Pug Mills to process sand and cement for backfilling conduit trenches.

Impact on vegetation has been minimised through the use of HDD or other trenchless construction methods at targeted crossing sites (e.g. at waterways, sealed roads, areas of significant native or roadside vegetation, etc.). The construction corridor has also been narrowed in some areas to 20 m to avoid impacts on vegetation and provide sufficient clearance to avoid tree protection zones.

The two converter stations at Jeffcott and MREH will be constructed as follows:

- Access, fire breaks and fire water supply to be developed in accordance with the Fire Management Plan and Construction Emergency Management Plan.
- Site preparation, stock fences and vegetation clearing as needed to provide a safe and efficient area for construction activities
- Commence bulk earthworks, horizontal bench and drainage.
- Concrete foundations will be constructed for the converter halls and footings poured for transformers, power quality equipment and switchgear.
- Construction of converter halls and electrical and mechanical systems.
- Testing and commissioning.

Key operational activities:

An Operation Environment Management Plan will be developed to manage the environmental effects of the Project during operation.

The Project will operate 24 hours / day, 365 days / year over an anticipated minimum 80 year lifespan.

Site based operational activities will be limited to security, equipment monitoring, incident response and maintenance of the project infrastructure. A separate control centre for the Project will be established at an office in Melbourne which will monitor the cable and converter systems and operate the interface with AEMO's network control and grid ancillary services functions.

The cable will be monitored remotely with fault location and partial discharge detection. Routine physical inspection and incident detection will identify and resolve operational and maintenance issues, including:

- Land stability
- Revegetation
- Weed invasion
- Cover at water crossings
- Easement, fencing and access (maintained in accordance with Syncline's farm access agreements).

The 12 m wide operational easement over the transmission line will result in some restrictions on how the land can be used, similar to that of an underground water or gas pipeline. Structures will not be able to be built and trees will not be able to be planted within the 12 m wide easement. It is not expected that this restriction will impact upon the usual use of the agricultural properties, noting most of them are used for broad acre grazing or cropping.

The farm access agreements which will be prepared for each landowner will detail the operational activities expected, along with the restrictions within the easement. Appropriate compensation will also be provided in consultation with each landowner where there is an un-avoidable impact on farm production.

Key decommissioning activities (if applicable):

As a critical part of Victoria's electricity infrastructure, the Project's operating life is anticipated to be a minimum 80 years. At the end of its life, the transmission line will either be decommissioned or upgraded to meet network needs at that time.

If the transmission line is decommissioned, all above-ground infrastructure will be removed, and associated land returned to the previous use or as agreed with the landowner.

All underground infrastructure will be decommissioned in accordance with the requirements of the time. This is likely to include recovery of the cable sections, but some components such as the conduit may remain underground where it is safe to do so.

Is the project an element or stage in a larger project?

☒ No ☐ Yes If yes, please describe: the overall project strategy for delivery of all stages and components; the concept design for the overall project; and the intended scheduling of the design and development of project stages).

No, the Project is not an element or stage in a larger project.

Is the project related to any other past, current or mooted proposals in the region?

☒ No ☐ Yes If yes, please identify related proposals.

No, the Project is not related to any other past, current or mooted proposals in the region.

What is the estimated capital expenditure for development of the project?

The estimated capital expenditure for the Project is between $3.0 Bn and $3.5 Bn dollars (2024 Real).

4. Project alternatives

Brief description of key alternatives considered to date (eg. locational, scale or design alternatives. If relevant, attach A4/A3 plans):

An above ground transmission line, along the same route as SCC was rejected early due primarily to community sentiment, landscape impacts, design inflexibility, bushfire risks and land use conflicts.

The route presented in this referral is the culmination of a comprehensive route and site selection process that considered the views of landholders and the community along with economic, technical, environmental, cultural and social constraints.

Assessments of ecological, cultural heritage, hydrology, bushfire, visual, agricultural and acoustic considerations were completed to inform the route selection process, with detailed consideration of options occurring during 2023 and 2024.

The Design Evolution Memo provided at Attachment 2 provides an overview of the route refinement process and the various routes that have been considered to date. The proposed route primarily seeks to avoid significant impacts to the environment and community.

At a high level, the route refinement process involved:

- Modelling of the electricity network to identify the augmentation that will deliver the highest renewable energy hosting capacity and interconnector flows for Victoria.
- Determining the optimal commencement and terminal points to connect to Victoria's grid at a sufficiently strong grid location to deliver the required +2GW of energy transfer.
- Developing a reference design for the proposed underground line and converter stations (i.e. what is proposed to be built) to deliver the lowest cost transmission solution for Victoria's energy consumers.
- Identifying and categorising the topography, ecology, cultural and historic, geology, hydrological and socioeconomic values that exist within the area of interest
- Considering the constraints and opportunities presented by the various values of the area of interest
- Identifying six feasible corridors from Melbourne to Jeffcott and selecting the Calder Freeway median to near Bendigo
- Identifying four routes from the Calder Freeway median to Jeffcott
- Evaluating the routes against constraint criteria, including DTP (Roads)
- Working with landowners to micro site the preferred route to avoid key constraints

Further engagement with landowners, the community and stakeholders will continue to inform refinement of the proposed route.

Brief description of key alternatives to be further investigated (if known):

No key alternatives will be further investigated. Minor changes to the proposed route will continue to be considered through further consultation with landowners and in response to on-ground conditions and detailed design requirements, however this will be within proximity to the proposed

route presented in this referral.

5. Proposed exclusions

Statement of reasons for the proposed exclusion of any ancillary activities or further project stages from the scope of the project for assessment:

Geotechnical testing, service proving, land surveying, ecological, cultural heritage and other site investigations to support detailed design do not form part of this referral. This is because the scope of these surveys would not result in significant effects on the environment.

6. Project implementation

Implementing organisation (ultimately responsible for project, ie. not contractor)**:**

Syncline Community Cable Pty Ltd is the implementing organisation and the proponent for the Project. This special purpose project vehicle will ultimately be owned by infrastructure funds and be appropriately resourced with technical, compliance and project delivery and operations personnel as required to secure a Transmission Licence from ESV.

Implementation timeframe:

The proposed timeline for delivery of the Project is outlined below. These timeframes are indicative only and subject to the successful completion of the regulatory approvals process in all three jurisdictions, obtaining access to land and contractual arrangements.

Project Activity	Timing
Complete detailed design	2025
Complete approvals process	Early 2026
Final investment decision	Mid 2026
Finalise land and contractual arrangements	Mid 2026
Site establishment	Late 2026
Main works	Late 2026 – 2031
Testing and commissioning	2031
Operation	2031 – onwards

Proposed staging (if applicable):

The Project is not proposed to be staged.

7. Description of proposed site or area of investigation

Has a preferred site for the project been selected?

☐ No ☒ Yes If no, please describe area for investigation.
If yes, please describe the preferred site in the next items (if practicable).

General description of preferred site, (including aspects such as topography/landform, soil types/degradation, drainage/ waterways, native/exotic vegetation cover, physical features, built structures, road frontages; attach ground-level photographs of site, as well as A4/A3 aerial/satellite image(s) and/or map(s) of site & surrounds, showing project footprint):

The proposed route commences at MREH, runs approximately 100 km in the median strip of the Calder Freeway to Ravenswood and then runs approximately 165km on private land to its terminus near Jeffcott.

The Calder Freeway median strip and Harmony Way/Old Calder Freeway is a largely disturbed portion of the proposed route, beyond the Calder Freeway the land is generally used for broad acre grazing and cropping farms.

The topography of the freeway corridor is highly modified because of its intended function as a high standard transport corridor. The elevation steadily increases to the freeway's high point in the Great Dividing Range, before gradually reducing in elevation to the north. The overland section of the underground cable is located within a mostly flat to slightly undulating landscape comprised primarily of open pasture or crop land. Occasional rises and undulating topography are found in areas near significantly elevated forms, such as Mount Korong.

The proposed route traverses the Victorian Volcanic Plains, Central Victorian Uplands, Goldfields, Victoria Riverina and Wimmera Bioregions and several mapped geologies.

Further description of the drainage/ waterways, native/exotic vegetation cover, physical features, built structures and road frontages is provided in the description of the local setting and existing environment, below.

The following preliminary assessments have been completed to characterise the existing environment and values within and surrounding the proposed route, and to inform a preliminary assessment of impacts for this referral:

- Attachment 2: Design Evolution Memo (Cogency, 2025)
- Attachment 3: Flora and Fauna Preliminary Assessment (Ecology and Heritage Partners, 2025)
- Attachment 4: Cultural Heritage Preliminary Assessment (Ecology and Heritage Partners, 2025)
- Attachment 5: Hydrology Preliminary Assessment (DCE, 2025)
- Attachment 6: Landscape and Visual Preliminary Assessment (Peter Haack, 2025)
- Attachment 7: Acoustic Preliminary Assessment (Resonate, 2025)
- Attachment 8: Agricultural Preliminary Assessment (Ag-challenge, 2024)
- Attachment 9: Preliminary Bushfire Assessment (Ecology and Heritage Partners, 2025)

Attachment 1 provides maps of the proposed route and relevant features including topography, waterways, vegetation, known cultural heritage values, major roads and potential sensitive receptors. The Landscape and Visual Preliminary Assessment (Attachment 6) also provides ground-level photographs from various viewpoints to the proposed route.

Site area (if known):

- Project area: approximately 788.3 ha
- Construction corridor: approximately 776.1 ha

Route length (for linear infrastructure)

- Approximately 265 km in length

Route width

- Construction corridor: approximately 20 – 30 m
- Easement: approximately 12 m
- Trench: approximately 1.4 m

Current land use and development:

The transmission line will traverse several different land uses, although has avoided urban or settled areas. Key land uses along the proposed route includes:

- Road – including the approximately 100km length proposed within the Calder Freeway median and a section along the old-Calder Highway (Harmony Way) through Harcourt. This section will be mostly under the existing road pavement and gravel shoulder.
- Agricultural – including predominantly broad acre grazing and cropping farms
- Vegetation and waterways – including several waterways and vegetated areas where HDD will be used to minimise impacts.

The converter stations are proposed on existing agricultural land at MREH and Jeffcott, and the construction compounds are similarly located on agricultural land.

Description of local setting (eg. adjoining land uses, road access, infrastructure, proximity to residences & urban centres):

Outer urban context

The transmission line commences on the edge of metropolitan Melbourne in Plumpton at MREH, traverses north along the Calder Freeway passing a number of suburbs and towns before heading west into agricultural land south of Ravenswood.

Key suburbs and towns along this section include:

- Diggers Rest
- Sunbury
- Gisborne
- Woodend
- Kyneton

Although these towns are nearby, impacts are negligible given the location of the route in the freeway median, well buffered from the urban areas by traffic lanes and freeway verge landscaping.

An approximately 14 km section will be routed along the old-Calder Highway (Harmony Way) through Harcourt. This is necessary because the median strip on the Calder Freeway for this section is too narrow.

Rural context and waterways

From the Calder Freeway to Jeffcott the surrounds are predominantly rural. Along this portion of the route the closest towns including Newbridge (approximately 4 km west of the proposed route), Bridgewater on Loddon (approximately 2.5 km west of the proposed route), Inglewood (approximately 5 km south of the proposed route), Wedderburn (approximately 5 km north of the proposed route) and Charlton (approximately 8.5 km north of the proposed route).

The Loddon and Avoca Rivers are key waterways running through the region, with the proposed route traverses the Loddon River north of Bridgewater on Loddon and the Avoca River south of Charlton. There are a few other waterways throughout the region. Waterway crossings have been chosen to minimise impacts by selecting crossing points where the waterway and surrounding reserve narrows, and HDD will ensure impacts on waterways are minimal.

All minor creeks, drainage pathways and catchments have been identified as part of the Hydrology Preliminary Assessment (Attachment 5) and the Project's route and construction methodology refined to avoid impacts.

National and State Parks

All National and State Parks have been avoided by the proposed route. Specifically, the following sites have been identified and the Project routed to ensure there will be no adverse impacts from construction or operations:

- Organ Pipes National Park
- Lerderderg State Park
- Fryers Range State Forest
- Waanyarra – Dolley State Forest
- Inglewood State Forest
- Sunday Morning Hills State Forest

Many of these Parks and Forests are adjacent to the Calder Freeway section of the route, where its location within the median means the Project will be buffered by the existing traffic lanes, shoulders, and landscaped verges. This includes avoiding any 'downstream' site run-off or dust impacts on the parks from the Project's construction.

Project intersection with existing road and rail infrastructure

Major roads traversed by the proposed route include the Calder Freeway, Calder Highway and Wimmera Highway.

The proposed route will traverse the Echuca & Swan Hill Regional Railway Line at Holden Road, Plumpton. While there are also crossings at Diggers Rest, Woodend and Harcourt these are existing grade separated crossings, and it is expected that the transmission line would not interact with the rail infrastructure in these locations.

There are two freight rail lines traversed by the proposed route, including:

- V/Line Regional Infrastructure Lease broad gauge freight rail line from Inglewood to Korong Vale which the proposed route would traverse in Glenalbyn
- Out of service V/Line Regional Infrastructure Lease broad gauge freight rail line from Inglewood to Bendigo which the proposed route would traverse east of Bridgewater on Loddon

HDD will be used extensively to eliminate impacts on road and rail infrastructure, including minor roads where native vegetation exists in the roadsides.

Implications for energy infrastructure

The proposed route will traverse the existing 220kV Bendigo to Ballarat above ground transmission line south of Ravenswood.

Two overhead transmission projects are currently proposed in other parts of western Victoria, the Western Renewables Link (**WRL**), planned from Sydenham to Bulgana, and the Victoria – New South Wales Interconnector West (**VNI West**), from Bulgana to the Murray River, north of Kerang. VNI West then continues to EnergyConnect in New South Wales and back to the Dinawan substation. The project proposes to connect to VNI West at Jeffcott.

Crossings of existing energy infrastructure will occur underground through trenching, following detailed discussions with the operators, mitigating impacts.

Planning context (eg. strategic planning, zoning & overlays, management plans):

The proposed route is within the Metropolitan Melbourne, Loddon Valley South and Loddon Valley North Regions and subject to the Melton, Brimbank, Hume, Macedon Ranges, Mount Alexander, Greater Bendigo, Loddon and Buloke Planning Schemes.

Planning Policy Framework

The key clauses of the Planning Policy Framework that will be considered for the Project include:

- Clause 11 Settlement – sets out key directions to anticipate and respond to the need of existing and future communities through provision of zones and serviced land for infrastructure, among other factors
- Clause 12 Environmental and Landscape Values – seeks to protect the health of ecological systems and the biodiversity they support and conserve areas with identified environmental and landscape values
- Clause 13 Environmental Risks and Amenity – focuses on the need to strengthen the resilience and safety of communities and identify, prevent and minimise the risk of harm to the environment, human health and amenity
- Clause 14 Natural Resource Management – seeks to conserve natural resources to support both environmental quality and sustainable development
- Clause 15 Built Environment and Heritage – protects places and sites with significant heritage, architectural, aesthetic, natural, scientific and cultural value
- Clause 17 Economic Development – seeks to provide for a strong and innovative economy
- Clause 19 Infrastructure – encourages development of infrastructure in a way that is efficient, equitable, accessible and timely and advocates for the efficient use of existing infrastructure which avoids, minimises and offsets environmental impacts and

incorporates resilience to natural hazards, including future climate change risks

The Municipal Planning Strategies of the various Planning Schemes provide objectives and strategies associated with the Planning Policy Framework, as relevant to each LGA.

Land Use Terms

The *Utility installation* land use term will apply to the Project as *'land used … to transmit … power'*.

Planning Scheme Zones

The Project traverses the following zones:

Zone	Municipality	Area
Farming Zone (FZ)	Macedon Ranges, Mount Alexander, Greater Bendigo, Loddon and Buloke	65%
Transport 2 Zone (TRZ2)	Melton, Brimbank, Hume, Macedon Ranges, Mount Alexander, Greater Bendigo, Loddon and Buloke	33%
Green Wedge Zone (GWZ)	Melton and Brimbank	1%
Transport 1 Zone, (TRZ1)	Melton, Brimbank, Macedon Ranges, Mount Alexander and Loddon	1%
Township Zone (TZ)	Mount Alexander	<1%
Public Conservation and Resource Zone (PCRZ)	Loddon	<1%
Transport 3 Zone (TRZ3)	Mount Alexander	<1%

Within the above listed zones, the use and development of land for a Utility installation requires a planning permit. The Minister for Planning is the Responsible Authority for Utility installations used to transmit or distribute electricity in accordance with Clause 72.01-1 of the Planning Schemes.

The location of the zones along the proposed route are provided at Attachment 1 – Zone Map.

Planning Scheme Overlays

The Project traverses the following overlays:

Overlay	Area
Melton	
Environmental Significance Overlay – Schedule 1 (ESO1) for Remnant Woodlands, Open Forests and Grasslands	<1%
Heritage Overlay (HO) for: - HO41: *Aitken's Gap Pine Avenue*, located along the Calder Freeway in Diggers Rest - HO51: *Arrunga*, located at 77-347 Holden Road, Plumpton	<1%
Public Acquisition Overlay – Schedule 8 (PAO8) for the Calder Park Train Stabling and Maintenance Yards	<1%
Melbourne Airport Environs Overlay – Schedule 2 (MAEO2)	2%
Specific Controls Overlay (SCO) for: - SCO2: Calder Park Train Stabling and Maintenance Yards Incorporated Document, September 2012 - SCO4: Melton Renewable Energy Hub (MREH) – 77–347 Holden Road and 67 & 77 Victoria Road, Plumpton – Incorporated Document – April 2021	1%
Brimbank	
Development Contributions Plan Overlay – Schedule 2 (DCPO2) for the Brimbank Development Contributions Plan	<1%
Melbourne Airport Environs Overlay – Schedule 2 (MAEO2)	<1%
Hume	
Incorporated Plan Overlay – Schedule 4 (IPO4) for the Sunbury South Precinct Structure Plan and Lancefield Road Precinct Structure Plan	<1%
Land Subject to Inundation Overlay (LSIO)	<1%
Melbourne Airport Environs Overlay – Schedule 2 (MAEO2)	<1%
Macedon Ranges	
Environmental Significance Overlay (ESO) for: - ESO4: Eppalock Special Water Supply Catchment - ESO5: Other Water Supply Catchments	15%

- ESO7: Wastewater Treatment Facilities	
Vegetation Protection Overlay (VPO) for: - VPO1: Black Gum Areas - VPO2: Roadside Vegetation - VPO6: Wildlife Corridors	<1%
Design and Development Overlay (DDO) for: - DDO2: Kyneton Airfield - DDO12: Noise Attenuation Measures along the Calder Freeway between Kyneton and Faraday - DDO14: Kyneton Hospital Emergency Medical Services Helicopter Flight Path Protection (Inner Area) - DDO15: Kyneton Hospital Emergency Medical Services Helicopter Flight Path Protection (Outer Area)	3%
Land Subject to Inundation Overlay (LSIO)	<1%
Bushfire Management Overlay (BMO)	3%
Airport Environs Overlay – Schedule 2 (AEO2)	<1%
Development Contributions Plan Overlay – Schedule 2 (DCPO2) for the Gisborne Development Contributions Plan	<1%
Specific Controls Overlay – Schedule 1 (SCO1) for the Hospital Emergency Medical Services - Helicopter Flight Path Protection Areas Incorporated Document, June 2017	<1%
Mount Alexander	
Environmental Significance Overlay (ESO) for: - ESO1: Lake Eppalock Catchment - ESO5: Watercourse Protection	6%
Heritage Overlay (HO) for: - HO688: Railway Bridge, Gaaschs Road in Harcourt - HO784: Remains of early granite bridge Bridge Street in Harcourt - HO790: ANA Hall Calder Highway, 7 High Street in Harcourt - HO997: Porcupine Hill Railway Precinct (Murray Valley Railway, Melbourne to Echuca) Fogarty Gap Road Ravenswood South	<1%
Design and Development Overlay – Schedule 1 (DDO1) for Noise Attenuation Measures along the Calder Freeway between Kyneton and Ravenswood	8%
Erosion Management Overlay (EMO)	<1%
Bushfire Management Overlay (BMO)	<1%
Greater Bendigo	
Environmental Significance Overlay – Schedule 1 (ESO1) for Waterway Protection	<1%
Vegetation Protection Overlay – Schedule 2 (VPO2) for Significant Vegetation	<1%
Salinity Management Overlay (SMO)	<1%
Land Subject to Inundation Overlay – Schedule 3 (LSIO3) for Rural Areas	<1%
Bushfire Management Overlay (BMO)	<1%
Restructure Overlay – Schedule 2 (RO2) in Ravenswood	<1%
Loddon	
Vegetation Protection Overlay (VPO) for: - VPO1: Significant Remnant Vegetation - VPO2: Significant Roadside and Corridor Vegetation	<1%
Salinity Management Overlay (SMO)	<1%
Land Subject to Inundation Overlay (LSIO)	<1%
Bushfire Management Overlay (BMO)	<1%
Buloke	
Environmental Significance Overlay – Schedule 1 (ESO1) for Waterway Protection	<1%
Heritage Overlay – Schedule 270 (HO270) for Yeungroon Public Hall at Corner Cossars & Coonooer Roads, Yeungroon	<1%
Floodway Overlay	<1%
Land Subject to Inundation Overlay (LSIO)	<1%

Within the above listed overlays, the development of land for a Utility installation generally requires a planning permit. The Minister for Planning is the Responsible Authority for Utility installations used to transmit or distribute electricity in accordance with Clause 72.01-1 of the Planning Schemes.

The location of the overlays along the proposed route are provided at Attachment 1 –

Environment and Landscape Overlays; Heritage and Built Form Overlays; Land Management Overlays; Other Overlays.

In addition to the above areas, Macedon Ranges is a declared area under the *Planning and Environment Act 1987* and the Project is proposed within the Macedon Ranges Distinctive Area and Landscape and Kyneton Protected Settlement Boundary. Within these areas, the Project is proposed entirely within the Calder Freeway median, minimising impacts.

Particular Provisions
The following particular provisions may be relevant to the Project:

- Clause 52.05 (Easements, Restrictions and Reserves) – a permit is required to create, vary or remove an easement or restriction or remove a condition on an easement in a Crown grant
- Clause 52.02 (Signs) – specifies categories for sign control depending on the zone and type of sign
- Clause 52.06 (Car Parking) – requires that car parking be provided to the satisfaction of the responsible authority
- Clause 52.17 (Native Vegetation) – a permit is required to remove, destroy or lop native vegetation, including dead native vegetation, some exemptions apply
- Clause 52.29 (Land Adjacent to the Principal Road Network) – a permit is required to create or alter access to a road in TRZ2 or land in a PAO if a transport manager is the acquiring authority and the acquisition is for the purpose of a road

Local government area(s):

The proposed route traverses the following Local Government Areas (LGAs):

- Melton
- Brimbank
- Hume
- Macedon Ranges
- Mount Alexander
- Greater Bendigo
- Loddon
- Buloke

The Minister for Planning is the Responsible Authority for Utility installations used to transmit or distribute electricity in accordance with Clause 72.01-1 of the Planning Schemes.

8. Existing environment

Overview of key environmental assets/sensitivities in project area and vicinity
(cf. general description of project site/study area under section 7)**:**

The key environmental values and sensitivities identified in the assessments undertaken to date are summarised in the following sections. The general approach has been to consider a 100 m wide corridor (**investigation area**) for initial surveys and then micro-site the Project within that corridor to minimise impacts, resulting in one of the following:

- A 30 m disturbance corridor as the standard approach
- A narrower 20 m disturbance corridor where land has significant values (biodiversity, cultural heritage etc)
- No surface disturbance (HDD is used) where land has significant values (biodiversity, cultural heritage etc) and HDD is feasible.

This section presents the findings of the assessment of the 100 m wide investigation area, with the impacts of the disturbance corridors described above presented in Part 2 of this form.

Ecological values
A Flora and Fauna Preliminary Assessment (Ecology and Heritage Partners, 2025) (Attachment

3) has been prepared to provide an understanding of the existing conditions of the investigation area, a summary of which is provided below. It is noted that this summary relates to the investigation area, with the values impacted by the construction corridor are much less (Refer Part 2, Section 11, and Part 2, Section 12).

The proposed route is located within the Goldfields, Central Victorian Uplands, Victorian Riverina, Victorian Volcanic Plain and Wimmera bioregions. It is also located within the Melbourne Water and North Central Catchment Management Authorities (CMAs).

38% of the route is within the already developed Calder Freeway median strip. The balance of the route consists of improved pastures and derived native grasslands, scattered patches of native vegetation and scattered trees within paddocks, regrowth from past clearing and contiguous patches of native vegetation along roadsides and waterbodies. The majority of this is highly modified due to historic and current agricultural practices and historical infrastructure development (e.g. the Calder Highway).

A total of 11 Ecological Vegetation Classes (EVCs) are located within the investigation area including Floodplain Riparian Woodland (EVC 56), Plains Woodland (EVC 803), Healthy Woodland (EVC 48), Box Ironbark Forest (EVC 61), Alluvial Terraces Herb-rich Woodland (EVC 67), Creekline Grassy Woodland (EVC 68), Sandstone Ridge Shrubland (EVC 93), Grassy Woodland (EVC 175), Plains Grassland (EVC 132), Tall Marsh (821) and Wetland Formation (EVC 74).

In some instances, the EVCs may be synonymous with nationally listed threatened ecological communities, with the following potentially occurring within the investigation area:

- Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions – likely to occur in the northern portion of the proposed route with patches of Plains Woodland (EVC 803) and Grassy Woodland (EVC 175) with the potential to meet the condition thresholds
- Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia – likely to occur between Ravenswood South to Wooroonook and generally along roadsides in areas of Plains Woodland (EVC 803) and Grassy Woodland (EVC 175)
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – has the potential to occur along the proposed route, in particular patches of Plains Woodland (EVC 803) and Grassy Woodland (EVC 175) may meet the community description
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains – may occur where plains are broken by areas of higher relief, or grade into hills and in some cases wetland forming gilgai depressions, the community may occur in areas where mapped wetlands that are seasonally inundated with sufficient diversity of native wetland graminoid or forbs occur.

In addition, the following FFG Act-listed communities may occur within the investigation area:

- Creekline Grassy Woodland (Goldfields) Community – commonly occurs in the Goldfields, Victorian Riverina and Wimmera Bioregions in areas where Creekline Grassy Woodland (EVC 68) occur, along creeklines, ephemeral drains and permanent streams
- Grey Box – Buloke Grassy Woodland Community – generally found in flat or very gently undulating plains in northern Victoria and a few areas in central Victoria, may occur in areas of Plains Woodland (EVC 803) and Grassy Woodland (EVC 175)
- Northern Plains Grassland Community – typically found on the naturally treeless plains of northern Victoria with the potential to occur in paddocked areas
- Semi-arid Northwest Plains Buloke Grassy Woodland Community – may occur in the north of the proposed route where Bulokes are generally present in patches of native vegetation (Grassy Woodland (EVC 175))
- Victorian Temperate Woodland Bird Community – may occur in patches of native vegetation where the bird species within the community are identified

A total of 649 scattered trees were identified within the investigation area including a variety of Grey Box, Buloke *Allocasurina luehmannii*, Red Ironbark *Eucalyptus tricarpa*, Yellow Box and Yellow Gum.

Fauna habitat within the investigation area includes:

- Native and introduced grasslands – with potential presence of common native fauna and potential for the nationally significant species such as Golden Sun Moth *Synemon plana*. Some of these areas have cracking soils which can be habitat for reptiles and small mammals, for example Striped Legless Lizard *Delma impar*, Fat-tailed Dunnart *Sminthopsis crassicaudata*, and Victorian Grassland Earless Dragon *Tympanocryptis pinguicolla*.
- Woodlands, forests and scattered trees – occurs along the proposed route, providing habitat for arboreal fauna.
- Planted vegetation – occurs along the proposed route, predominantly along the Calder Highway, providing foraging habitat for mobile generalist fauna.
- Rivers, creeks and artificial waterbodies – occur along the proposed route and may provide habitat for waterbirds and frog species.

Within the investigation area 54 significant flora species and 36 significant fauna species with potential to occur.

The Flora and Fauna Preliminary Assessment identified approximately 581.67 ha of native vegetation within the investigation area. In instances where the investigation area was inaccessible (i.e. private property) an assessment of likelihood of native vegetation occurrence was undertaken, finding that approximately 39.31 ha has a high likelihood of native vegetation occurrence (greater than 50 per cent chance), 203.41 ha has a moderate likelihood of native vegetation occurrence (between 25 and 50 per cent chance) and 344.87 ha has a low likelihood of native vegetation occurrence (less than 25 per cent chance).

Aboriginal Cultural Heritage values
The proposed route traverses land within the Registered Aboriginal Party (RAP) boundaries of the Wurundjeri Woi-wurrung Aboriginal Cultural Heritage Corporation (WWCHAC), Taungurung Land & Waters Aboriginal Corporation (TLaWAC) and Dja Dja Wurrung Clans Aboriginal Corporation (DJAARA).

A search of the Victorian Aboriginal Heritage Register (VAHR) found that the investigation area traverses 32 registered Aboriginal places, primarily consisting of flaked stone artefacts. The proposed route also crosses a number of areas of cultural heritage sensitivity associated with 80 Aboriginal places and 30 waterways and an area identified as “Qm1” in the Surface Geology of Victoria 1:250 000 map book.

A Cultural Heritage Preliminary Assessment (Ecology and Heritage Partners, 2025) (Attachment 4) has been prepared to identify potential impacts to Aboriginal cultural heritage values as a result of the Project.

Historic Heritage values
The proposed route is in proximity to a number of Victorian Heritage Register (VHR), Victorian Heritage Inventory (VHI) and local heritage places listed on the Heritage Overlay of planning schemes. None of these will be directly impacted by the Project.

A Cultural Heritage Preliminary Assessment has been prepared to identify potential impacts to historic heritage values as a result of the Project.

Hydrology values
The proposed route crosses six national major watercourses, including the Avoca, Campaspe, Coliban and Loddon rivers, with the Campaspe River crossed three times. The crossing locations of the Avoca and Campaspe rivers are classified as non-perennial, meaning that there is not permanent water in these rivers at the crossing point. All other national and regional watercourse crossings (262 crossings) are classified as minor watercourses.

A Hydrology Assessment (DCE, 2025) (Attachment 5) has been prepared to further classify the watercourse crossings and provide mitigation strategies for the development across each watercourse, which is based primarily on the use of HDD to avoid impacts.

Landscape values
The proposed route traverses four landscape units across Victoria. Within the Western Plains and Foothills landscape units, the proposed route is located entirely within the Calder Freeway

median. The balance of the proposed route which traverses agricultural land is located within the following landscape units:

- Western Central Hills – sits between the Seymour- Murchison area and the eastern edge of The Grampians, this area contains a portion of the Great Dividing Range and features a range of elevations with occasional peaks and gentle to moderate slopes
- Murray Basin Plains (type a) – Northern District Plains Subtype – extends from Wodonga to the Avoca River, the land surface is virtually flat with the flood plains of a complex stream network that experience seasonal volume variations flowing into the Murray River

There are a number of sensitive receptors which have been identified by the preliminary Landscape and Nosie Assessments prepared for the Project, including:

- Towns and settlements of Calder Park, Sunbury, Diggers Rest, Gisborne, South Gisborne, Macedon, Woodend, Carlsruhe, Kyneton, Malmsbury, Elphinstone, Ravenswood South, Newbridge, Bridgewater on Loddon, Wedderburn, Inglewood, Charlton
- 54 rural residences within 500 m of the proposed route, generally within RLZ or FZ settings and often surrounded by dense vegetation and outbuildings
- Road crossings including Bendigo-Maldon Road (C283), Bendigo-Maryborough Road (C277), Wimmera Highway (B240), Bridgwater Serpentine Road (C274), Calder Highway (A79), Logan Wedderburn Road (C273), Charlton - St Arnaud Road (C272)
- Reserves including
    - Newbridge Cemetery – 575 m west of the proposed route
    - Derby I124 Bushland Reserve – 690 m west of the proposed route
    - Derby Recreation Reserve – 630 m west of proposed route
    - Inglewood State Forest Nature Conservation Reserve – 870 m west of the proposed route
    - Powlett Plains Recreation Reserve – 1.4 km north of the proposed route
    - Mt Korong Nature Conservation Reserve – 700 m north of the proposed route
    - Sunday Morning Hills State Forest – 1.1 km south east of the proposed route
    - Kurraca I110 Bushland Reserve – 20 m north of the proposed route
    - Wychitella Nature Conservation Reserve – 75 m north of the proposed route
    - Nine Mile H.a – 80 m south of the proposed route
    - Coonooer East I159 Bushland Reserve – 610 m north of the proposed route
    - Western Wooroonook Lake Reserve/Wooroonook Lakes (Middle and East) Wildlife Reserve – 1.5 km west of the proposed route

A Landscape and Visual Preliminary Assessment (Peter Haack, 2025) (Attachment 6) has been prepared to identify the landscape values and anticipated impacts as a result of the proposed route. The assessment highlights the undergrounding of the transmission line as a key feature in determining the projects landscape impacts.

9. Land availability and control

Is the proposal on, or partly on, Crown land?

☐ No ☒ Yes If yes, please provide details.

Attachment 1 – Land Ownership and Receptors Map illustrates the Crown land traversed by the proposed route, this includes Crown Land identified as Government Road, Unused Road and Water Frontage / Riparian Management Licence.

The Project does not traverse any reserves or State forests. In most instances roads and waterway crossings are proposed to be constructed via HDD.

Current land tenure (provide plan, if practicable):

The land traversed by the proposed route is predominantly freehold land, with some Crown Land (refer to Attachment 1 – Land Ownership and Receptors Map). Approximately 100 km of the proposed route within freehold land is in the median strip of the Calder Freeway or the old-Calder Highway (Harmony Way) which is managed by DTP (roads). The balance of the freehold land is owned by approximately 60 private landowners, almost all of which have been approached and,

generally, the route agreed on their properties.

Intended land tenure (tenure over or access to project land):

Syncline Community Cable Pty Ltd will establish an approximately 12 m easement over the transmission line route following a lease for the development, construction and operation stage, with the land retaining its current ownership. Syncline Community Cable Pty Ltd is currently negotiating access and easement agreements with impacted landowners to facilitate the further investigation of and future development of the Project.

Syncline Community Cable Pty Ltd will also lease the converter station land at MREH and Jeffcott and is currently in negotiation with the landowners.

Other interests in affected land (eg. easements, native title claims):

Small parts of the land are subject to a number of easements that are typical of rural land.

The Dja Dja Wurrung Clans Aboriginal Corporation (known as DJAARA) entered into a Recognition and Settlement Agreement (RSA) which formally recognises the Dja Dja Wurrung people as the traditional owners for part of Central Victoria. The RSA was entered into under the *Traditional Owner Settlement Act 2010* and includes a Land Use Activity Agreement which applies to Crown land.

At the time of writing this referral, there is no determined Native title or Native title claims within the proposed route.

10. Required approvals

State and Commonwealth approvals required for project components (if known):

Commonwealth
The Project is being referred under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for a decision as to whether it is a 'controlled action' requiring approval under the EPBC Act.

State
The Project will require the following primary approvals:

- Planning approval in the form of a Planning Scheme Amendment for use and development of land pursuant to the *Planning and Environment Act 1987* (P&E Act)
- Approval of a Cultural Heritage Management Plan (CHMP) pursuant to the *Aboriginal Heritage Act 2006* (AH Act)

The Project may also require the following secondary approvals:

- Consents for works within a road reserve pursuant to the *Road Management Act 2004*
- Works within waterways permits for works affecting designated waterways pursuant to the *Water Act 1989*
- Permit or consent for management of impacts to historic heritage places pursuant to the *Historic Heritage Act 2017*
- Permit to take protected flora pursuant to the *Flora and Fauna Guarantee Act 1988* (FFG Act)
- Authorisation to control wildlife under the *Wildlife Act 1975*

Section 20, below, sets out the further investigations that are proposed to be undertaken to support detailed design and siting, construction and operation methodologies and management plans and the above approvals and consents, including the proposed Planning Scheme Amendment.

Have any applications for approval been lodged?

☒ No ☐ Yes If yes, please provide details.

Approval agency consultation (agencies with whom the proposal has been discussed):

- Department of Transport and Planning (Renewables) – a number of meetings have been held with the DTP Renewables team.
- Department of Transport and Planning (Impact Assessment Unit).

Consultation with the three Registered Aboriginal Parties (RAPs) will be undertaken during the course CHMP preparation: Wurundjeri Woi-wurrung Aboriginal Cultural Heritage Corporation (WWCHAC), Taungurung Land & Waters Aboriginal Corporation (TLaWAC) and Dja Dja Wurrung Clans Aboriginal Corporation (DJAARA)

Other agencies consulted:

- Department of Transport and Planning (Roads)
- Department of Environment, Energy and Climate Action – (Flora and Fauna and Crown Land)
- AEMO
- VicGrid
- SEC

In addition, the following regulators and agencies will be consulted during the detailed design and assessment phase of the Project:

- Heritage Victoria
- Melbourne Water
- North Central Catchment Management Authority
- Country Fire Authority
- Melton, Brimbank, Hume, Macedon Ranges, Mount Alexander, Greater Bendigo, Loddon, Buloke Councils

PART 2 POTENTIAL ENVIRONMENTAL EFFECTS

11. Potentially significant environmental effects

Overview of potentially significant environmental effects (identify key potential effects and comment on their significance and likelihood, as well as key uncertainties):

The Project has undertaken a significant amount of work in the early planning stages to avoid and minimise environmental effects. As described in the Design Evolution Memo (provided at Attachment 2), the Project has involved:

1. Initial route investigations and high-level constraints assessment
2. Multi Criterion constraints assessment and preferred route alignment
3. Micro siting from landowner and consultant input (ongoing)

As a result of this ongoing process, the Proponent has a strong social license within the community the Project is proposed within, demonstrated through the positive landowner negotiations.

Avoidance, minimisation and offset measures include:

- 'thread the needle' between significant trees and patches of native vegetation
- HDD or other non-trenching methods where threading between significant vegetation is not possible
- Reducing the construction corridor from 30 m in width to 20 m in width where avoidance and HDD or other non-trenching methods are not possible
- Replanting vegetation where removal is required, and seeking the required offsets

Where HDD is proposed in proximity to significant vegetation, it is understood that boring efforts will need to occur under the Structural Root Zone (SRZ) to avoid impacts to native trees. In order to ensure this occurs, the SRZ will be confirmed via further Ecological Assessments and Arboricultural Assessments to ensure no significant impact to SRZ or protection zones.

The assessment of potentially significant environmental effects is based on the impacts of the **construction corridor** which is generally a 30 m wide corridor, with 20 m wide sections or sections of HDD where ecological or heritage sensitivity is high.

To inform the preparation of this referral, a self-assessment against the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* was undertaken, and a number of preliminary assessments were prepared to inform the design and assessment.

The self-assessment found that the Project **does not** have the potential for:

- Clearing of an area determined as 'critical habitat' under the FFG Act
- Long-term change to the ecological character of a wetland listed under the Ramsar Convention or in A Directory of Important Wetlands in Australia
- Extensive or major effects on the use and environmental values of water resources due to changes in water quality, water availability, stream flows, water system function, or regional groundwater levels, or the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term
- Extensive or major effects to human health or the environment, or displacement of residents, from pollution or waste emitted to air, land, water or groundwater
- Greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per annum (direct and indirect) attributable to the operation of the facility
- Extensive or major effects on landscape values of regional importance, especially:
    - where recognised by a planning scheme overlay;
    - declared as a distinctive area and landscape under the P&E 1987; or
    - within or adjoining land reserved under the *National Parks Act 1975*.
- Extensive or major effects to the environment due to changes in land stability, disturbance of acid sulphate soils or project induced soil erosion over the short or long term.
- Extensive or major effects on social or economic well-being due to direct or indirect displacement of non-residential land use activities

- Extensive displacement of residents or severance of residents' access to their community resources
- Significant effects on the amenity of a substantial number of residents, due to extensive or major, long-term changes in visual, noise and traffic conditions
- Extensive or major effects on Aboriginal cultural heritage values protected under the *Aboriginal Heritage Act 2006*
- Extensive or major effects on cultural heritage places and sites listed on the Victorian Heritage Register or the Victorian Heritage Inventory under the *Heritage Act 2017*.

While the Project has undertaken a significant amount of ecological assessment, including desktop and field based assessments, and micro-sited a number of ecological sensitivities, the Project **does** have the potential for:

- Removal, destruction or lopping of 10 hectares or more of native vegetation, that consists of, or comprises a combination of:
    - an ecological vegetation class (EVC) classified as endangered; or
    - an EVC that is classified as vulnerable (with a condition score of 0.5 or more) or rare (with a condition score of 0.6 or more); and
    - that is not authorised for removal under an approved forest management plan or fire protection plan
- Loss of a significant proportion (e.g. 1 percent or greater) of known remaining habitat or population of a threatened species within Victoria
- Removal, destruction or lopping of 10 hectares or more of native vegetation, unless it is authorised for removal under an approved forest management plan or fire protection plan
- Matters listed under the FFG Act:
    - potential loss of a significant area of a listed ecological community; or
    - potential loss of a genetically important population of an endangered or threatened species (listed or nominated for listing), including from loss or fragmentation of habitats; or
    - potentially significant effects on habitat values of a wetland supporting migratory bird species.

The following provides a summary of the currently considered impacts of the Project based on the known information related to existing ecological conditions and the construction corridor.

The construction corridor has been prepared to identify the maximum area of ground disturbance anticipated for the project. It is expected that the construction corridor will continue to be refined and that actual ecological impacts will be less than what is presented in this form. The construction corridor currently includes the entirety of the construction footprint (20 m and 30 m wide areas), including laydown areas and access requirements, and excludes areas which will be bored.

Based on the Flora and Fauna Preliminary Assessment (Ecology and Heritage Partners, 2025) (Attachment 3), the construction corridor results in the potential and maximum loss of:

- 35.574 ha of native vegetation (inclusive of eight Large Trees, 30.602 ha of native vegetation and 4.404 ha of modelled wetlands), including:
    - 10.890 ha of native vegetation within the Calder Freeway median and old-Calder Highway (Harmony Way road reserve) – this vegetation has regenerated after the construction of the road and is considered highly modified, it was observed to have low habitat score under the *Guidelines*
    - 19.719 ha of native vegetation within broadacre agricultural properties and adjacent roadside vegetation – this vegetation was observed to be low-moderate condition due to regular farming practices, while roadside vegetation was observed to be in moderate condition.

In addition, the construction corridor has the potential to impact:

- 4.31 ha of land with a high likelihood of being native vegetation
- 23.91 ha of land with a moderate likelihood of being native vegetation
- 12.06 ha of land with a low likelihood of being native vegetation

Of the approximately 35.574 ha of native vegetation proposed to be impacted, approximately 27.881 ha is within the Goldfield Bioregion, 1.468 ha is within the Victorian Riverina Bioregion and 1.253 ha is within the Victorian Volcanic Plain Bioregion. Further, approximately 4.827 ha is

classified with a Bioregional Conservation Status of Endangered, 21.19 ha is Vulnerable and 4.586 ha of Least Concern.

The Project has the potential to impact threatened flora, fauna and ecological communities, with 54 significant flora species, 36 significant fauna species and four nationally significant and four state significant communities with potential to occur along the proposed route. Given the results of the preliminary assessment, and the committed future actions, there is a very low likelihood that the Project will result in a significant impact on any National or State significant flora and fauna, and/or ecological communities.

A detailed ecological assessment will be prepared, including field surveys of all remaining patches of 'likely' native vegetation, threatened flora, fauna and ecological communities, to confirm presence and impact. The detailed ecological assessment may result in further micro siting to reduce impacts. It is therefore expected that the actual native vegetation removal and impacts to threatened flora, fauna and ecological communities for the Project will be less than what is described above.

The detailed ecological assessment will be prepared using the *Guidelines for the removal, destruction or lopping of native vegetation* (Guidelines) with consideration given to the three-step approach of avoidance, minimisation and offsetting. The detailed ecological assessment will also be used to inform the future Planning Scheme Amendment, which is expected to implement a Specific Controls Overlay and associated Incorporated Document to facilitate the Project. For the avoidance of doubt, the Incorporated Document will include conditions to control the assessment, removal and offsetting of native vegetation.

The Project is expected to be subject to many conditions in an Incorporated Document, including the following indicative conditions (or similar) in relation to the removal of native vegetation:

- Prior to removal of native vegetation (excluding native vegetation removed as part of preparatory buildings and works), information about that native vegetation in accordance with the relevant requirements of the Guidelines including an avoid and minimise statement, must be prepared to the satisfaction of the Secretary to the DEECA. For the avoidance of doubt, the information provided to the Secretary to the DEECA must include information about any native vegetation that has been, or is to be, removed as part of preparatory buildings and works.
- Prior to removal of native vegetation (excluding native vegetation removed as part of preparatory buildings and works), the biodiversity impacts from the removal of that native vegetation must be offset in accordance with the Guidelines, and evidence that the required offset(s) has been secured must be provided to the satisfaction of the Secretary to DEECA.
- In exceptional circumstances, the Secretary to DEECA may vary the timing for the provision of offsets.
- The secured offset(s) for the Project may be reconciled at the completion of the Project in accordance with the *Assessor's handbook – Applications to remove, destroy or lop native vegetation* (DELWP, October 2018).
- Before the removal, destruction or lopping of native vegetation to enable a preparatory use or development, information about that native vegetation in accordance with requirements 1, 3, 5 and 9 of the Guidelines must be prepared to the satisfaction of the Secretary to the DEECA. The biodiversity impacts from the removal of native vegetation as part of preparatory buildings and works must be included in the total biodiversity impacts when determining the offset(s).

An EPBC Act referral will be lodged to consider the need for further assessment should a significant impact to Matters of National Environmental Significance be expected.

The Flora and Fauna Preliminary Assessment acknowledges the considerable effort that the Project has demonstrated to avoiding and minimising impacts to ecological values. A detailed ecological assessment will be prepared as all private properties along the alignment are able to be accessed and targeted surveys will be undertaken, as required, to assess impacts and implications.

Given the residual EES referral triggers relate only to ecological impacts, and there are established processes throughout the planning system to comprehensibly consider impacts,

together with the extensive mitigation measures proposed, it is considered that an EES would not be required. This referral has been prepared to provide as much detail and certainty regarding the anticipated impacts of the Project to justify how it will not have major or extensive impacts on the environment.

The Project has also undertaken a comparison of its key attributes against other similar projects, which is presented in the following table. In particular it is noted how comparable the Project is to projects which did not require an EES (East Grampians Rural Pipeline and South-East Vic Carbon Storage). Where the Project is similar to projects that do require an EES, it is noted there are key differences, including that Marinus Link has a coastal and Commonwealth land interface, and WRL and VNI West have clear visual and social impacts compared to the Project.

Project	Predominant land use	Disturbance corridor	Native vegetation removal*	Underground	Requirement for EES
Syncline Community Cable (SCC)	Fwy Median/ Cropping/Grazing	20 – 30m with boring	35 ha	Yes	Subject to referral decision
No EES required:					
WA375 Yarra Valley quarry extension	Quarry	~42 ha	26 ha	No	No (Enviro Report)
East Grampians Rural Pipeline	Cropping/Grazing	8-15m	36 ha	Yes	No
South-East Vic Carbon Storage	Grazing	12 – 75m	13.63 ha	Yes	No
North-South Pipeline	Grazing/ State Forest	20 – 30m	121 ha	Yes	No (Enviro Report)
EES required:					
Marinus Link	Coastal/ Grazing	20 - 36m with boring	20 ha	Yes	Yes
Western Outer Ring Main Gas Pipeline Project (WORM)	Peri-urban/Grazing	20m	60 ha	Yes	Yes
Western Renewables Link (WRL)	Grazing/ Peri-urban	70 – 100m	Significant	No	Yes
Victoria to NSW Interconnector West (VNI West)	Cropping/Grazing	70m	Significant	No	Yes

*Note: Figures are estimates based on publicly available information.

12. Native vegetation, flora and fauna

Native vegetation

Is any native vegetation likely to be cleared or otherwise affected by the project?

☐ NYD ☐ No ☒ Yes If yes, answer the following questions and attach details.

What investigation of native vegetation in the project area has been done? (briefly describe)

A Flora and Fauna Preliminary Assessment has been undertaken (Ecology and Heritage Partners, 2025) (Attachment 3), which involved a desktop assessment and field surveys where land was available, of native vegetation within the investigation area, including along or in proximity to the proposed route.

What is the maximum area of native vegetation that may need to be cleared?

☐ NYD Estimated area:

- 35.574 ha of native vegetation (inclusive of eight Large Trees, 30.602 ha of native vegetation and 4.404 ha of modelled wetlands), including:
    - 10.890 ha of native vegetation within the Calder Freeway median and old-Calder Highway (Harmony Way road reserve) – this vegetation has regenerated after the construction of the road and is considered generally highly modified, it was observed to have low habitat score under the *Guidelines.*
    - 19.719 ha of native vegetation within broadacre agricultural properties and adjacent roadside vegetation – this vegetation was observed to be generally low-moderate condition due to regular farming practices, while roadside vegetation was observed to be in generally moderate condition.

In addition, the construction corridor has the potential to impact:

- 4.31 ha of land with a high likelihood of being native vegetation
- 23.91 ha of land with a moderate likelihood of being native vegetation
- 12.06 ha of land with a low likelihood of being native vegetation

It should be noted that the above areas are based on the Flora and Fauna Preliminary Assessment and the construction corridor which represents the maximum disturbance footprint. Detailed ecological assessment will be undertaken to further refine the known ecological values and the preferred route will continue to be micro sited to avoid impacts as far as practicable.

How much of this clearing would be authorised under a Forest Management Plan or Fire Protection Plan?

☒ N/A …… approx. percent (if applicable)

Which Ecological Vegetation Classes may be affected? (if not authorised as above)

☐ NYD ☒ Preliminary/detailed assessment completed. If assessed, please list.

- Plains Woodland (EVC 803) – 3.34 ha in private land
- Alluvial Terraces Herb-rich Woodland (EVC 67) – 0.23 ha along the old-Calder Highway (Harmony Way road reserve)
- Sandstone Ridge Shrubland (EVC 93) – 4.59 ha in private land
- Grassy Woodland (EVC 175) – 10.53 ha in private land and 10.66 ha along the Calder Freeway and old-Calder Highway (Harmony Way road reserve)
- Plains Grassland (EVC 132) – 1.25 ha in private land and roadside vegetation

Have potential vegetation offsets been identified as yet?

☐ NYD ☒ Yes If yes, please briefly describe.

Preliminary discussions with registered offset brokers have been carried out which has identified land that may be suitable. Further discussions will occur are the Project progresses. There is also the potential for on-site offsets within the properties impacted.

Other information/comments? (eg. accuracy of information)

The above details are based on the Flora and Fauna Preliminary Assessment. This assessment was based on desktop assessments and field surveys where land access was available. The

detailed ecological assessment will be prepared as all private properties along the alignment are able to be accessed, to assess impacts and implications. The assessment will use the Guidelines with consideration given to the three-step approach of avoidance, minimisation and offsetting. An EPBC Act referral will be lodged to consider the need for further assessment should a significant impact to Matters of National Environmental Significance be expected.

NYD = not yet determined

Flora and fauna

What investigations of flora and fauna in the project area have been done?
(provide overview here and attach details of method and results of any surveys for the project & describe their accuracy)

A Flora and Fauna Preliminary Assessment has been undertaken (Ecology and Heritage Partners, 2025) (Attachment 3), which involved a desktop assessment and field surveys where land was available, of threatened flora and fauna likely to occur within the investigation area, including along or in proximity to the proposed route.

Have any threatened or migratory species or listed communities been recorded from the local area?

☒ NYD ☒ No ☒ Yes If yes, please:

- List species/communities recorded in recent surveys and/or past observations.
- Indicate which of these have been recorded from the project site or nearby.

The Flora and Fauna Preliminary Assessment identified numerous State and/or Commonwealth listed flora and fauna species and threatened ecological communities considered likely to occur along the proposed route. A full list of these species potentially occurring within the investigation area is provided within the Flora and Fauna Preliminary Assessment, and includes 54 significant flora species, 36 significant fauna species, four nationally significant and four state significant ecological communities.

Given the results of the preliminary assessment, and the committed future actions, there is a very low likelihood that the Project will result in a significant impact on any National or State significant flora and fauna, and/or ecological communities. The Project will be micro-siting the alignment to avoid impacts to significant ecological values.

If known, what threatening processes affecting these species or communities may be exacerbated by the project? (eg. loss or fragmentation of habitats). Please describe briefly.

Potential threats to conservation significant flora, fauna and ecological communities may include:

- Direct impact through removal of potential habitat
- Indirect disturbance or degradation to flora, vegetation and fauna habitat
- Potential injury or death of fauna from vegetation clearing, earthworks, vehicle movements or entrapment in trenches
- Disturbance of fauna due to dust, noise, vibration and light during construction

Are any threatened or migratory species, other species of conservation significance or listed communities potentially affected by the project?

☒ NYD ☒ No ☒ Yes If yes, please:

- List these species/communities:
- Indicate which species or communities could be subject to a major or extensive impact (including the loss of a genetically important population of a species listed or nominated for listing) Comment on likelihood of effects and associated uncertainties, if practicable.

The Flora and Fauna Preliminary Assessment includes a desktop assessment of threatened flora, fauna or ecological communities, and their likelihood, and further field studies will be carried out to provide more clarity.

Given the results of the preliminary assessment, and the committed future actions, there is a very low likelihood that the project will result in a significant impact on any National or State significant flora and fauna, and/or ecological communities. The Project will be micro-siting the alignment to

avoid impacts to significant ecological values.

Is mitigation of potential effects on indigenous flora and fauna proposed?

☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

As described above, a detailed ecological assessment will be prepared, including field surveys of threatened flora, fauna and ecological communities, to confirm presence and impact. The detailed ecological assessment may result in further micro-siting to reduce impacts. It is therefore expected that the actual impacts to threatened flora, fauna and ecological communities for the Project will be less than what is described above.

The nature of the proposed development (i.e. linear infrastructure) allows for construction techniques which avoid impacts, any areas of suitable habitat for significant flora and fauna species, and ecological communities identified during the detailed ecological assessment can be avoided.

In addition, the Project is committed to avoidance, minimisation and offset measures including:

- 'thread the needle' between significant trees and patches of native vegetation
- HDD or other non-trenching methods where threading between significant vegetation is not possible
- Reducing the construction corridor, and associated construction corridor from 30 m in width to 20 m in width where avoidance and HDD or other non-trenching methods are not possible
- Replanting vegetation where removal is required, and seeking the required offsets

An environmental management framework will be developed, including construction and operation environmental management plans that will set out how mitigation measures will be implemented during construction and operation to reduce environmental impacts.

Other information/comments? (eg. accuracy of information)

The above details are based on a Flora and Fauna Preliminary Assessment. This assessment was based on desktop assessments and field surveys where land access was available. The detailed ecological assessment will be prepared as all private properties along the alignment are able to be accessed, to assess impacts and implications. The assessment will include targeted surveys, if required. An EPBC Act referral will be lodged to consider the need for further assessment should a significant impact to Matters of National Environmental Significance be expected.

13. Water environments

Will the project require significant volumes of fresh water (eg. > 1 Gl/yr)?

☐ NYD ☒ No ☐ Yes If yes, indicate approximate volume and likely source.

The Project will not require significant volumes of freshwater.

Will the project discharge waste water or runoff to water environments?

☐ NYD ☒ No ☐ Yes If yes, specify types of discharges and which environments.

The Project will be managed so as to not discharge waste water or runoff to water environments during construction or operation. Construction and Operation Environmental Management Plans will be prepared with measures to manage waste water and runoff (refer to Section 18). In most instances, construction methods will be utilised which avoid direct interaction with waterways (refer to mitigation section below), which in itself will reduce the potential for discharge of waste water or runoff to water environments.

Are any waterways, wetlands, estuaries or marine environments likely to be affected?

☐ NYD ☐ No ☒ Yes If yes, specify which water environments, answer the following questions and attach any relevant details.

There are a number of watercourses which will be crossed as part of construction of the Project. This includes six national major watercourses, including the Avoca, Campaspe, Coliban and Loddon rivers, with the Campaspe River crossed three times. All other national and regional watercourse crossings (262 crossings) are classified as minor watercourses.

The Hydrology Assessment (DCE, 2025) (Attachment 5) sets out a range of construction methodologies to be explored for the waterway crossings, including HDD (refer to mitigation section below). Each waterway crossing will be determined via further hydrology assessment and detailed design.

In some instances, the waterways crossed are also areas subject to flooding (FO, LSIO or not identified by a planning scheme overlay). Further hydrology assessment will include consideration of flooding to ensure no downstream impacts (quantity or quality) are caused by the Project. In most instances, waterways will be crossed via HDD, it is likely that the HDD will be proposed outside of floodways entirely, where this is not possible, appropriate mitigation measures will be put in place to avoid and minimise impacts. Once in operation, the Project will generally constitute belowground infrastructure and is not expected to impact or be impacted by flooding. The aboveground elements of the Project have been sited outside of floodways.

Construction impacts are to be managed via a Construction Environment Management Plan, while impacts during operation are expected to be negligible, as most waterway crossings will be via HDD, an Operation Environment Management Plan will enable management of potential impacts (refer to Section 18).

Are any of these water environments likely to support threatened or migratory species?

☐ NYD ☐ No ☒ Yes If yes, specify which water environments.

It is possible that the watercourses crossed by the Project support threatened or migratory species. Known habitat has and will continue to be avoided where possible, and HDD or other non-trenching methods will be used where known waterways cannot be avoided entirely. As identified above, watercourse crossing methodologies will be selected with regard to the watercourse classification and sensitivity relating to ecological and cultural heritage values. Construction and Operation Environmental Management Plans will be prepared with measures to manage impacts.

Are any potentially affected wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'?

☐ NYD ☒ No ☐ Yes If yes, please specify.

There are no Ramsar Convention or Important Wetlands along the proposed route. A number of avoidance measures are being implemented in the siting of the proposed route including avoiding

known waterways and proposing HDD or other non-trenching methods where known waterways cannot be avoided entirely.

Could the project affect streamflows?

☒ NYD ☒ No ☒ Yes If yes, briefly describe implications for streamflows.

The Project will utilise watercourse crossing methodologies outlined in the Hydrology Assessment to reduce or remove impacts to streamflows during construction. During operation, the underground cable will not affect streamflows. There is some chance of erosion of waterway corridors during operation, this can be managed via the Operation Environment Management Plan and may even be assisted by the ongoing maintenance which the Project will result in across the corridor.

Construction and Operation Environmental Management Plans will be prepared with measures to manage impacts (refer to Section 18).

Could regional groundwater resources be affected by the project?

☒ NYD ☒ No ☒ Yes If yes, describe in what way.

The Project will not result in excavation of a trench greater than 1.6 m in depth. It is likely that the HDD sections of the route will be deeper but this construction methodology is highly controlled and the table itself is relatively small, therefore impacts are not expected to be significant. Geotechnical and groundwater assessments will be undertaken to inform detailed design. Therefore, regional groundwater resources are not expected to be affected.

Could environmental values (beneficial uses) of water environments be affected?

☒ NYD ☒ No ☒ Yes If yes, identify waterways/water bodies and beneficial uses (as recognised by State Environment Protection Policies)

The Project will utilise watercourse crossing methodologies to result in negligible impacts to environmental values of water environments. During operation, the underground cable will not impact the environmental values of water environments. Construction and Operation Environmental Management Plans will be prepared with measures to manage impacts.

Could aquatic, estuarine or marine ecosystems be affected by the project?

☒ NYD ☒ No ☒ Yes If yes, describe in what way.

The Project will utilise watercourse crossing methodologies to result in negligible impacts to aquatic, estuarine or marine ecosystems. During operation, the underground cable will not aquatic, estuarine or marine ecosystems. Construction and Operation Environmental Management Plans will be prepared with measures to manage impacts.

Is there a potential for extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems over the long-term?

☒ No ☒ Yes If yes, please describe. Comment on likelihood of effects and associated uncertainties, if practicable.

The Project proposes to avoid direct impacts to water resources via HDD or other non-trenching methods within proximity to water resources. A Hydrology Assessment has been prepared which provides recommendations on the construction methodologies for waterway crossings. This assessment has and will continue to inform the detailed design of the Project to reduce impacts on water resources.

Is mitigation of potential effects on water environments proposed?

☒ NYD ☒ No ☒ Yes If yes, please briefly describe.

A Hydrology Assessment has been prepared which recommends a number of crossing construction methodologies which are proposed depending on the classification of the watercourse, to avoid impacts as far as practicable. Methods include:

- Open cut trenching across watercourses
- Open Cut with Bypass conduits to preserve low level flow regimes
- Open cut with an upstream Dam. The bypass flows are pumped during construction.

- HDD
- Bridge Attachment

Watercourse crossing methodologies will be selected with regard to the watercourse classification and sensitivity relating to ecological and cultural heritage values, with a focus on HDD. Construction Environmental Management Plans will be prepared once the crossing methodologies are determined following more detailed Hydrology Assessment, including measures to manage impacts to waterways (refer to Section 18). During operation, impacts to water environments would be minimal and would be managed via the Operation Environment Management Plan (refer to Section 18).

Other information/comments? (eg. accuracy of information)

The Hydrology Assessment provides an initial desktop assessment based on the publicly available Geoscience Australia databases of nationally and regionally significant waterways (Geoscience Australia, January 2015), aerial imagery, including Nearmap and Google Hybrid Satellite and Vicmap Elevation DEM 10-m data published by the State government of Victoria. These datasets were used to establish waterway locations and catchment characteristics.

A more detailed catchment analysis, including ground truthing as required, will be undertaken to inform detailed design.

14. Landscape and soils

Landscape

Has a preliminary landscape assessment been prepared?

☐ No ☒ Yes If yes, please attach.

The Preliminary Landscape and Visual Impact Assessment (Peter Haack, 2025) (Attachment 6) has been prepared to inform this referral.

The assessment generally finds that visual impacts associated with the underground cable will be low to very low during operation. During construction the impact will be low to moderate but it is noted that the construction process will only be a short term impact. The aboveground infrastructure proposed at MREH and Jeffcott will be more prominent in the landscape but the assessment noted that at MREH the infrastructure will be viewed in the presence of existing infrastructure, reducing its impact, and at Jeffcott views of the Project from sensitive receptors are limited, therefore having a low impact.

The assessment highlights that the underground nature of the transmission line reduces landscape impacts relative to more commonly constructed overhead option.

Is the project to be located either within or near an area that is:

- **Subject to a Landscape Significance Overlay or Environmental Significance Overlay?**

  ☐ NYD ☐ No ☒ Yes If yes, provide plan showing footprint relative to overlay.

The proposed route traverses ESO's within the Macedon Ranges Shire Council (ESO5), Mount Alexander Shire Council (ESO5), City of Greater Bendigo (ESO) and Buloke Shire Council (ESO1). Attachment 1 – Environment and Landscape Overlays shows the proposed route relative to the ESOs.

The above ground components of the Project are not located on land subject to any overlay of relevance to landscape or visual matters. The underground cable component of the Project will be HDD under vegetated areas subject to relevant overlays, thereby avoiding any vegetation removal.

- **Identified as of regional or State significance in a reputable study of landscape values?**

  ☐ NYD ☒ No ☐ Yes If yes, please specify.

The proposed route is not within an area identified as of regional or State significance in a reputable study of landscape values.

A section of the underground cable along the Calder Freeway median is located within the Macedon Ranges Distinctive Area and Landscape. However, it is located within land zoned TRZ2, which allows for, and has previously been subject to, significant modification for infrastructure purposes.

- **Within or adjoining land reserved under the *National Parks Act 1975* ?**

  ☐ NYD ☒ No ☐ Yes If yes, please specify.

The proposed route is not within or adjoining land reserved under the *National Parks Act 1975*.

- **Within or adjoining other public land used for conservation or recreational purposes ?**

  ☐ NYD ☐ No ☒ Yes If yes, please specify.

The proposed route is not within any public land used for conservation or recreation purposes. The proposed route skirts the following reserves:

- Newbridge Cemetery – 575 m west of the proposed route
- Derby I124 Bushland Reserve – 690 m west of the proposed route
- Derby Recreation Reserve – 630 m west of proposed route
- Inglewood State Forest Nature Conservation Reserve – 870 m west of the proposed route
- Powlett Plains Recreation Reserve – 1.4 km north of the proposed route

- Mt Korong Nature Conservation Reserve – 700 m north of the proposed route
- Sunday Morning Hills State Forest – 1.1 km south east of the proposed route
- Kurraca I110 Bushland Reserve – 20 m north of the proposed route
- Wychitella Nature Conservation Reserve – 75 m north of the proposed route
- Nine Mile H.a – 80 m south of the proposed route
- Coonooer East I159 Bushland Reserve – 610 m north of the proposed route
- Western Wooroonook Lake Reserve/Wooroonook Lakes (Middle and East) Wildlife Reserve – 1.5 km west of the proposed route

Where the proposed route crosses a waterway, some of which are public land, HDD will be used so as to not impact upon the conservation or recreation values of the land.

Is any clearing vegetation or alteration of landforms likely to affect landscape values?

☐ NYD ☒ No ☐ Yes If yes, please briefly describe.

The Project is not expected to impact landscape values as the transmission line, because the Project is predominantly an underground cable. While there will be temporary changes to the landscape during construction, it is very minor as the trench is only 1.4 m wide and 1.6 m deep, and this will be a short term impact as the land is returned to its original state. All other construction activity, such as stock piles, are minor and temporary.

The MREH and JREH which represent the only major aboveground pieces of infrastructure associated with the Project are either in an existing disturbed setting (MREH) or well set back from sensitive receptors (JREH and the cable-cable intermediate transition station), and from a landscape perspective, appear not dissimilar to large agricultural sheds that are common in the area.

Is there a potential for effects on landscape values of regional or State importance?

☐ NYD ☒ No ☐ Yes Please briefly explain response.

The Project will not result in effects on landscape values of regional or State importance, because the Project is predominantly an underground cable, and following construction the land will be fully reinstated.

Is mitigation of potential landscape effects proposed?

☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

The Preliminary Landscape and Visual Impact Assessment recommends screen planting at the MREH and JREH to ensure that the Project is well integrated with the landscape of the setting. In addition, the assessment recommends that halls or sheds use non-reflective cladding materials, finished in natural or neutral colours. A gradation from darker shades at ground level to lighter shades on upper facades is recommended.

Mitigation is not proposed for the cable-cable intermediate transition station, given it's location within the Calder Freeway median.

The assessment also finds that given the extensive size of the proposed route, it is apparent that all required amelioration can be achieved on-site, and that no off-site actions will be required.

Other information/comments? (eg. accuracy of information)

The Preliminary Landscape and Visual Impact Assessment sets out limitations (refer to section 2.4 of Attachment 6).

Landscape and Visual Impact Assessments will continue to be undertaken to inform the detailed design of the Project.

Note: A preliminary landscape assessment is a specific requirement for a referral of a wind energy facility. This should provide a description of:

- The landscape character of the site and surrounding areas including landform, vegetation types and coverage, water features, any other notable features and current land use;
- The location of nearby dwellings, townships, recreation areas, major roads, above-ground utilities, tourist routes and walking tracks;
- Views to the site and to the proposed location of wind turbines from key vantage points (including views showing existing nearby dwellings and views from major roads, walking tracks and tourist routes) sufficient to give a sense of the overall site in its setting.

Soils

Is there a potential for effects on land stability, acid sulphate soils or highly erodible soils?

☐ NYD ☒ No ☐ Yes If yes, please briefly describe.

The Project will not affect land stability, acid sulphate soils or highly erodible soils. The proposed route is predominantly within land designated as extremely low or low probability of occurrence of Acid Sulphate Soils.

Where land stability and erodible soils may be encountered (in proximity to waterways) the Project will utilise HDD or other trenchless construction methods which will limit interaction with such soils. Following construction, land will be reinstated to its original state and be subject to ongoing monitoring for erosion and land stability issues, to a much greater degree than what currently occurs.

The Project Environmental Management Plans (refer to Section 18) will include measures to manage land stability and erodible soils.

Are there geotechnical hazards that may either affect the project or be affected by it?

☐ NYD ☒ No ☐ Yes If yes, please briefly describe.

There are no geotechnical hazards that may affect the Project or be affected by it.

Other information/comments? (eg. accuracy of information)

The assessment is based on desktop level information only with some ground truthing. A geotechnical assessment will be undertaken to inform detailed design and the construction methodology.

15. Social environments

Is the project likely to generate significant volumes of road traffic, during construction or operation?

☐ NYD ☒ No ☐ Yes If yes, provide estimate of traffic volume(s) if practicable.

While the Project will result in some traffic generation during construction it is not expected to be significant in the context of the surrounding road network, given the small amounts and the dispersion of the route. The Project will be constructed in intervals which will reduce traffic volumes on a broader scale and reduce the amount of time any one locality is impacted by the construction process.

Traffic Management Plans will be prepared to ensure impacts to road users are avoided and minimised.

During operation, traffic will be minimal and limited to routine maintenance vehicles.

Is there a potential for significant effects on the amenity of residents, due to emissions of dust or odours or changes in visual, noise or traffic conditions?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the nature of the changes in amenity conditions and the possible areas affected.

As predominantly underground infrastructure, the Project will not result in significant effects on the amenity of residents, as the transmission line will create no noise or visual impacts. The route selection has sought to avoid urban areas and other settlements. The closest residents to the proposed route outside of the Calder Freeway are approximately 150 m from the underground transmission line. The closest residents to the converter station at MREH are approximately 300 m away. Changes to visual, noise or traffic conditions are not anticipated at sensitive receptors.

Refer to the Preliminary Landscape and Visual Impact Assessment (Peter Haack, 2025) (Attachment 6) and the Acoustic Preliminary Assessment (Resonate, 2025) (Attachment 7) for further details regarding potential off-site impacts and mitigations.

In addition, a significant portion of the route runs within a freeway corridor, which is well buffered from surrounding residences. There may be minor traffic impacts associated with the construction of Project, including along the Calder Freeway and old-Calder Highway (Harmony Way), but will be managed through Traffic Management Plans agreed with the Department of Transport (roads) to reduce impacts.

Is there a potential for exposure of a human community to health or safety hazards, due to emissions to air or water or noise or chemical hazards or associated transport?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the hazards and possible implications.

The Project will not expose a human community to health or safety hazards as a result of emissions to air or water or chemical hazards or associated transport. In particular, and as noted in the Preliminary Bushfire Assessment (Ecology and Heritage Partners, 2025) (Attachment 9), underground transmission lines are estimated to reduce the ignition likelihood associated with powerlines by >90%, comparative to their overhead counterparts.

Is there a potential for displacement of residences or severance of residential access to community resources due to the proposed development?

☐ NYD ☒ No ☐ Yes If yes, briefly describe potential effects.

As an underground project, the Project will not displace residences or sever residential access to community resources.

Are non-residential land use activities likely to be displaced as a result of the project?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the likely effects.

Non-residential land use activities will not be displaced as a result of the Project. While there will be temporary changes to the use of agricultural land during construction across a narrow corridor, once operational the land will revert to being able to be used largely as before. Most agricultural activities, including broad acre grazing and cropping, will not be impacted.

An Agricultural Preliminary Assessment (Ag-Challenge, 2024) (Attachment 8) has been prepared which provides an overview of the agricultural uses along the proposed route, provides an understanding of how the Project interacts with the agricultural sectors at a regional level, and provides zone specific excavation and reinstatement plans and template property reinstatement plans which will be used to inform the development of Syncline's farm access agreement.

The Agricultural Preliminary Assessment will be used to ensure impacts to non-residential land use activities are mitigated.

Do any expected changes in non-residential land use activities have a potential to cause adverse effects on local residents/communities, social groups or industries?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the potential effects.

While the Project is proposed to occupy non-residential land, the majority of the Project infrastructure post-construction will be located underground. Two small converter stations will be located along the corridor which have been sited on vacant, unproductive agricultural land. The Project will place an easement over the underground transmission line which will restrict development of the land but noting that existing uses are predominantly agricultural, the continued use of land for grazing and cropping purposes is not expected to be impacted. In

addition, it is expected that individual farm based agreements will be prepared with each landowner to set out the access and use obligations within the easement, and allow for appropriate compensation.

An Agricultural Preliminary Assessment has been prepared which finds that the Project will not result in adverse effects as a result in changes in non-residential land use activities.

Is mitigation of potential social effects proposed?

☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

The undergrounding of the transmission line is the major activity to reduce social effects, and build social license for transmission. This concept has been an integral part of the Project since its inception, primarily to reduce social effects. The undergrounding of transmission lines has been a longstanding request of impacted landowners and communities along the route for other transmission projects, and been the subject of much debate and deliberation. The choice to underground for this Project aims to address the lack of social license which impacts other transmission project, and represents a strong signal of the Proponent's desire to reduce negative social effects.

In addition, over a third of the proposed route is within the Calder Freeway median or old-Calder Highway (Harmony Way) alignment, largely reducing sensitive receptors and potential social effects.

The Project has taken a traditional, 'grass roots' approach to engagement and land discussions, preferring face to face 'kitchen table conversations' by senior representatives. In most instances, landowners were introduced to the Project via a neighbour or community contact. This has resulted in broad acceptance and few social license issues. This is proposed to continue as the Project moves into detailed design to ensure that landowners are comfortable with the proposed route, and the construction process proposed.

Farm access agreements will be prepared for each private property in consultation with the landowners and in response to the Agricultural Preliminary Assessment. This will ensure that social effects on landowners are not adverse, and that current agricultural activities can continue as before.

A detailed Community and Stakeholder Engagement Strategy will be prepared to support this process through to operation.

The Community and Stakeholder Engagement Strategy will also include the development of the Community Trust arrangement and associated community projects (refer below). It will be important for the Proponent to work with the landowners and key communities to develop the Community Trust arrangement in a way that works for the community.

Landowners are offered the opportunity to participate in a unique Community Trust arrangement, where distributions are made based on the length of cable through their properties. This is in addition to the State Government's required compensation for transmission. The Community Trust operates under an AFSL held by Equity Trustees Limited, with Syncline acting as its Authorised Representative. The Community Trust will be independently audited and administered.

In this way, landowners have a stronger financial involvement in the Project and can benefit more significantly from hosting the Project. The structure accommodates the often multi-generation and layered ownership of the large family owned enterprises along the route. This includes redemption rights and unit transfer mechanism that have been developed following consultation with farmers.

The Project will also allocate approximately 10% of the units in the trust for community projects. This part of the Community Trust income will be distributed annually by an appropriately constituted committee of farmers along the route plus independent members. The capacity and capability of this community group will be developed during the construction phase of the Project.

Other information/comments? (eg. accuracy of information)

Landowner, community and stakeholder engagement is ongoing and an integral part of the success of this Project. As a response to landowners or community views, the Project has the flexibility to continue to micro-site throughout the detailed design phase.

Cultural heritage

Have relevant Indigenous organisations been consulted on the occurrence of Aboriginal cultural heritage within the project area?

☒ No If no, list any organisations that it is proposed to consult.
☒ Yes If yes, list the organisations so far consulted.

Consultation with the three RAPs will be undertaken during the course CHMP preparation: Wurundjeri Woi-wurrung Aboriginal Cultural Heritage Corporation (WWCHAC), Taungurung Land & Waters Aboriginal Corporation (TLaWAC) and Dja Dja Wurrung Clans Aboriginal Corporation (DJAARA).

Consultation as part of the Project has already been initiated. However, further consultation with each of the above Registered Aboriginal Parties will continue throughout all stages of the pre-approvals process. Consultation will consist of discussions regarding the scope of the proposed Project, the Aboriginal cultural heritage sensitivities and values of the project area, inclusion in further cultural heritage assessments such as CHMPs, and methods to reduce the Project's impact on Aboriginal cultural heritage.

The Proponent is committed to fair and equitable engagement and consultation with Traditional Owners at all stages of the project design and implementation.

What investigations of cultural heritage in the project area have been done?
(attach details of method and results of any surveys for the project & describe their accuracy)

The Cultural Heritage Preliminary Assessment (Ecology and Heritage Partners, 2024) (Attachment 4) was prepared to understand the existing cultural heritage conditions of the investigation area and support micro siting of the proposed route to reduce impacts.

The Cultural Heritage Preliminary Assessment found that:

- The proposed route, particularly the segment of alignment within the Calder Freeway median, has been subjected to extensive desktop-based investigations, archaeological surveys, subsurface archaeological testing, test excavations and archaeological salvage excavations, as well as archaeological monitoring of specific areas of the Calder Freeway construction.

- In 2022, the Sponsor undertook a voluntary Cultural Heritage Management Plan (FP-SR #19037) at the Melbourne end of the proposed route for the development of MREH, to which the Project will connect.

- Additional CHMPs are currently being prepared for the entire length of the proposed route to further identify areas of cultural heritage potential and develop conditions and contingency plans with respect to Aboriginal cultural heritage that may be present.

Is any Aboriginal cultural heritage known from the project area?

☒ NYD ☒ No ☒ Yes If yes, briefly describe:

- Any sites listed on the AAV Site Register
- Sites or areas of sensitivity recorded in recent surveys from the project site or nearby
- Sites or areas of sensitivity identified by representatives of Indigenous organisations

The Cultural Heritage Preliminary Assessment found that:

- Aboriginal cultural heritage is known to exist along the proposed route. Previously registered Aboriginal Places within the proposed route are either within disturbed land in the Calder Freeway median, or within historically disturbed agricultural land. Many of these Places have likely been fully or partially destroyed in the process of the Calder Freeway construction.

- A total of 32 registered Aboriginal Places exist within the original proposed route,

primarily consisting of flaked stone artefacts. The proposed route has been amended to avoid all except two registered Aboriginal Places outside of the disturbed Calder Freeway median strip. The amended proposed route also avoids all undisturbed areas of Cultural Heritage Sensitivity associated with a registered Aboriginal Place outside of the Calder Freeway median.

- The actual ground disturbing works of the Project will not impact any previously undisturbed registered Aboriginal Place. Due to micro-siting of the construction corridor based on the Cultural Heritage Assessment, only two (2) Registered Aboriginal Places outside of the Calder Freeway median are within the amended proposed route and directional drilling in these locations will avoid impacts.

Are there any cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the *Heritage Act 1995* within the project area?

☒ NYD ☒ No ☒ Yes If yes, please list.

The Cultural Heritage Preliminary Assessment found that:

- There are no Heritage Places listed on the Heritage Register within the proposed route.
- There are nine Heritage Places (all archaeological sites) listed on the VHI intersected by the proposed construction corridor, all of which have been previously disturbed:
  - H7723-0462 (Boundary Road Selection Site)
  - H7823-0039 (Greig 1)
  - H7823-0038 (Ranellone 1)
  - H7723-0519 (Henry Carnell House Site)
  - H7723-1147 (Midland Highway House & Dairy Site)
  - H7724-0292 (Bickford's House Site)
  - H7724-0293 (Bickford's Ruined Pub Site)
  - H7724-0296 (Porcupine Inn)
  - H7723-0521 (Sandy Creek/Coliban River Gold Workings).
- In relation to the *Planning and Environment Act 1987* there are five Heritage Overlay places intersected by the proposed construction corridor:
  - HO41 (Aitken's Gap Pine Avenue)
  - HO51 (Arrunga)
  - HO68 (Railway Bridge, Gaaschs Road)
  - HO997 (Porcupine Hill Railway Precinct [Murray Valley Railway, Melbourne to Echuca] Fogarty Gap Road Ravenswood South)
  - HO270 (Yeungroon Public Hall).
- The Project has actively sought to avoid the substantive elements of these places and areas, will not impact any of these places in undisturbed areas. However, to ensure the minimisation of harm, Heritage Victoria will be consulted regarding appropriate permits for all of the VHI registrations and the relevant councils will be consulted regarding minimisation of impacts to the Heritage Overlay places.

Is mitigation of potential cultural heritage effects proposed?

☒ NYD ☒ No ☒ Yes If yes, please briefly describe.

The Cultural Heritage Preliminary Assessment found that:

- Mitigation of impacts to both Aboriginal and Historical cultural heritage are primary considerations for both the preferred route alignment and the construction and operational stages. A desktop-based cultural heritage assessment was undertaken prior to finalisation of the alignment to avoid previously registered Aboriginal Places and listed Historical Places as well as areas of Cultural Heritage Sensitivity. Where re-alignment is constrained by other important factors such as native vegetation, directional drilling is considered to avoid such areas by installation below potential cultural heritage bearing deposits. In these instances, the required directional drilling depth will be confirmed through the CHMP process.

- As a result of initial Desktop Assessment regarding both Aboriginal and Historical cultural heritage along the preferred alignment, the Project has amended the construction corridor to avoid all Aboriginal Places and Historical heritage places except for those within the Calder Freeway median strip either by micro siting or by construction methodology. The Places that are within the Calder Freeway median strip have been subject to extensive previous disturbances associated with the freeway construction, and installation of the cable is unlikely to cause additional harm. However, each Place within the Calder Freeway median strip will be assessed for the potential to contain additional Aboriginal or historical cultural heritage during CHMP and heritage impact assessment processes.

- Mitigation will continue to be explored at every opportunity on the basis of CHMP results and will be implemented in the form of CHMP Management Conditions and Contingency Plans, as well as determining construction techniques through consultation with RAPs. Furthermore, the decision to implement the Project as an underground transmission line rather than an aboveground transmission line reduces the requirement for vegetation clearance which would have potential adverse effects on culturally modified trees.

Other information/comments? (eg. accuracy of information)

The information provided in this section is based on the findings of the Cultural Heritage Preliminary Assessment prepared by Ecology and Heritage Partners and is a desktop assessment. There is potential for unknown or intangible heritage places or values to exist along the proposed route. The preparation of CHMPs and consultation with RAPs, Heritage Victoria and Councils in the development of the Project is expected to mitigate any risk associated with these unknow values.

16. Energy, wastes & greenhouse gas emissions

What are the main sources of energy that the project facility would consume/generate?

✕ Electricity network. The Project allows the transmission of electricity and does not in itself materially consume electricity. SCC will support the existing network and facilitate a material increase in renewable energy hosting capacity across the State. Energy losses from the Project's HVDC cable and converters are reduced compared to the alternative HVAC overhead transmission options. This results is a saving from lost energy.

✕ Natural gas network. SCC's construction will increase the available capacity in the gas network by avoiding gas consumption in legacy Victorian power plants. This benefit arises from the improved energy sharing between Victoria, Snowy Hydro and the other States that is delivered from SCC creating increased interconnector flows.

✕ Generated on-site. The Jeffcott Converter Station will have a 5MW auxiliary plant to allow emergency or 'black start' of Victoria's network from that location. This will be tested and maintained regularly, but would only operate during rare contingent events.

✕ Other. Please describe.

Please add any relevant additional information.

What are the main forms of waste that would be generated by the project facility?

✕ Wastewater. Both MREH and JREH will have domestic style amenities building for a small number of site-based Project staff.

✕ Solid chemical wastes. Describe briefly.

✕ Excavated material. Describe briefly. Small amounts of soil excavated during contrition for the trench will be used to reinstate the land. If there is any residual material, as part of the farm access agreements for each property, Syncline will agree to either remove spoil or stock pile it on site for the farmer's use. Any fill that is removed from site will be appropriately tested for agricultural chemicals and removed in accordance with regulations.

✕ Other. Describe briefly.

Please provide relevant further information, including proposed management of wastes.

What level of greenhouse gas emissions is expected to result directly from operation of the project facility?

- [x] Less than 50,000 tonnes of CO_2 equivalent per annum
- [ ] Between 50,000 and 100,000 tonnes of CO_2 equivalent per annum
- [ ] Between 100,000 and 200,000 tonnes of CO_2 equivalent per annum
- [ ] More than 200,000 tonnes of CO_2 equivalent per annum

Please add any relevant additional information, including any identified mitigation options.

17. Other environmental issues

Are there any other environmental issues arising from the proposed project?

[x] No [ ] Yes If yes, briefly describe.

There are no other environmental issues arising from the proposed Project.

18. Environmental management

What measures are currently proposed to avoid, minimise or manage the main potential adverse environmental effects? (if not already described above)

- [x] Siting: Please describe briefly
- [x] Design: Please describe briefly
- [x] Environmental management: Please describe briefly
- [ ] Other: Please describe briefly

Add any relevant additional information.

The proposed route has been sited implementing the avoid, minimise and offset hierarchy. This is further explained in the Design Evolution Memo (Attachment 2).

As an underground transmission line, the proposed route avoids most adverse environmental effects from the outset (including ecological, hydrological, visual and noise). Further avoidance of significant impacts on existing infrastructure, environmentally sensitive areas including threatened species habitat and threatened ecological communities, and land use was a key objective and is the primary focus during the route selection process.

Additional avoidance, minimisation and offset measures implemented to reduce impacts from the Project include:

- Using cleared sites with no significant environmental values for laydown areas where practicable.
- Sourcing quarry material, concrete and other construction materials from existing licensed facilities where practicable avoiding the need to construct new facilities.
- Narrowing the indicative construction corridor of disturbance in some areas to avoid impacting vegetation and to provide sufficient clearance to avoid tree protection zones.
- Locating the converter stations on cleared land in proximity to existing electricity infrastructure to avoid ecological disturbance and the introduction of additional aboveground electricity infrastructure.
- Reduction of impacts to vegetation through the proposed use of HDD or other trenchless construction methods at targeted crossing sites (e.g. at waterways, sealed roads, areas of roadside vegetation, etc.).
- Micro siting joint bays and other infrastructure to avoid ecological values where practicable.
- Once final ecological impacts are known, offsets will be implemented in accordance with the requirements of Victorian and Commonwealth guidelines.
- Reinstatement and rehabilitation of the construction corridor, temporary access and

laydown areas to pre-construction uses, or as agreed with the landowner/s.
- Design of the converter stations to reduce landscape impacts e.g. orientation/placement away from sensitive viewpoints, colour of materials used.

Mitigation measures for Aboriginal Cultural Heritage are not yet proposed. However, a mandatory CHMP will be developed in line with the *Aboriginal Heritage Act 2006*. The CHMP will include measures to manage and mitigate potential impacts to both known and unknown sites of Aboriginal cultural heritage.

An Environmental Management Framework will be developed to support detailed design, construction and operation. The purpose of the Environmental Management Framework is to describe how the management measures will be implemented to reduce adverse environmental effects from the Project.

The framework will include:
- Objectives and targets for environmental management.
- Roles and responsibilities in relation to environmental management of the Project.
- Environmental Performance Requirements.
- Change management protocols.
- Environmental management practices and procedures to be implemented.
- Requirements for inspections and compliance monitoring.
- Advice on relevant sub-plans needed such as traffic management plan, noise and vibration management plan, weed and pathogen management plan.
- Management protocols for specific species and activities.

It is expected that the following environmental management plans will be prepared as subsidiary documents to the Environmental Management Framework:
- Construction Environment Management Plan
- Operation Environment Management Plan
- Traffic Management Plan/s
- Hydrology / Waterway Crossing Management Plan
- Noise and Vibration Management Plan
- Weed and Pathogen Management Plan
- Community and Stakeholder Engagement Strategy

Compliance with the Environmental Management Framework and Environmental Performance Requirements will be monitored via implementation of an Environmental Management System developed in accordance with *AS/NZS ISO 14001:2016 Environmental management systems* (or equivalent standard).

Compliance with the Environmental Management Framework and Environmental Performance Requirements will be enforced through the contractual requirements for the construction and operation of the Project, and during construction it will be verified, audited and reported on by an Independent Environmental Auditor.

19. Other activities

Are there any other activities in the vicinity of the proposed project that have a potential for cumulative effects?

☐ NYD ☒ No ☐ Yes If yes, briefly describe.

The route has no other activities in the vicinity that could be considered to have a cumulative effect. At Jeffcott, there is interface with the VNI West Overhead Transmission Line. At MREH, the Project is adjacent to the BESS which will be commissioned and operational at the time of SCC's construction. Accordingly, the noise assessment for SCC at MREH includes the cumulative impacts from the BESS.

20. Investigation program

Study program

Have any environmental studies not referred to above been conducted for the project?

☒ No ☐ Yes If yes, please list here and attach if relevant.

All studies undertaken to inform the proposed route and this referral have been identified above.

Has a program for future environmental studies been developed?

☐ No ☒ Yes If yes, briefly describe.

A wide range of technical studies, as part of a comprehensive suite of measures, will be undertaken to continue to reduce impacts, refine the proposed route, assist avoidance and minimisation measures, and to support the preparation of a Planning Scheme Amendment.

Assessments are likely to include:

- Land use and planning, to inform the proposed Planning Scheme Amendment and associated planning controls.
- Flora and fauna, including a detailed ecological assessment along the entire length of the investigation area to determine the condition of native vegetation and ecological values and targeted surveys for significant flora and fauna as required. The detailed ecological assessment and targeted surveys may result in further micro siting to reduce impacts. If impacts to significant flora and fauna are anticipated, Significant Impact Assessments will be undertaken to inform an EPBC Act referral. The detailed ecological assessment and targeted surveys will also inform the Environmental Management Framework and the permits and authorisations required under the FFG Act and the *Wildlife Act 1975*.
- Cultural heritage, including Cultural Heritage Management Plans to identify and manage impacts to Aboriginal Places.
- Historic heritage, to inform the preparation of a permit or consent application for management of impacts to historic heritage places pursuant to the *Heritage Act 2017*, if required.
- Bushfire, to inform detailed design and siting and construction methodologies, compliance with CFA/FRV requirements, and the Environmental Management Framework.
- Hydrology and groundwater, to inform detailed design and siting and construction methodologies, the Environmental Management Framework, and works within waterways permits for works affecting designated waterways pursuant to the *Water Act 1989*, as required.
- Landscape and visual, to further inform detailed design, particularly the above ground elements of the project.
- Acoustic, to inform detailed design and siting and construction methodologies, and the Environmental Management Framework.
- Agricultural, to inform detailed design and siting and the preparation and finalisation of farm access agreements, including rehabilitation measures.
- Social impact, to inform the ongoing Community and Stakeholder Engagement Strategy, engagement activities, and the Environmental Management Framework.
- Traffic and transport, to inform detailed design and siting and construction methodologies, and the Environmental Management Framework, and consents for works within a road reserve pursuant to the *Road Management Act 2004*.

As set out in Sections 10, 11 and 18, above, a Planning Scheme Amendment, which is expected to implement a Specific Controls Overlay and associated Incorporated Document is proposed to facilitate the Project.

The Specific Controls Overlay will apply to the land required to facilitate construction and operation of the Project and the Incorporated Document will enable the development and use of the land for the Project.

The Incorporated Document will act in place of the planning scheme, and will set out controls and conditions to manage the development and use of land. These controls and conditions aim to further reduce the impact of the project, particularly during construction and operation. It is anticipated that conditions will relate to:

- Alignment Plans and Development Plans – to be submitted to and approved by the

Minister for Planning which show the route, associated infrastructure and construction areas, including layout plans and elevations for above-ground infrastructure.
- Environmental Management Framework – to be submitted to and approved by the Minister for Planning, including a set of Environmental Performance Requirements that must be achieved, the process for the preparation of Construction and Operation Environmental Management Plans and any sub-plans, and the process for monitoring and reporting.
- Native Vegetation – information, in accordance with the relevant requirements of the Guidelines, including an avoid and minimise statement, must be prepared to the satisfaction of the Secretary of DEECA, biodiversity impacts must be offset in accordance with the Guidelines.

While the Project has undertaken a significant amount of work to site the preferred route, it is expected that as a result of the further studies outlined above, and in response to ongoing landowner and community consultation, that further micro-siting of the route will be required, mainly to further reduce impacts. It is therefore proposed that the Environmental Management Framework will set out a change management process which will allow for micro-siting of the route subject to the preparation and approval of Alignment Plans and Development Plans, compliance with Environmental Performance Requirements, consultation with relevant agencies and stakeholders, assessment and approval by the Minister for Planning. The change management process will set out the level of assessment and approval required depending on the significance of the change, including whether it remains within the investigation area and construction footprint and whether the change results in a material adverse increase in impacts.

Section 18, above, provides further detail regarding the Environmental Management Framework.

The proposed Planning Scheme Amendment will be developed in consultation with the community and key stakeholders who would ordinarily be involved in a technical reference group (if an EES is required) or planning permit application (if a Planning Scheme Amendment was not being sought), including:
- Melton, Brimbank, Hume, Macedon Ranges, Mount Alexander, Greater Bendigo, Loddon, Buloke Councils
- Country Fire Authority
- AEMO
- VicGrid
- SEC
- Department of Transport and Planning (Renewables team)
- Department of Transport and Planning (Impact Assessment Unit)
- Department of Transport and Planning (VicRoads)
- Department of Energy, Environment and Climate Action (Flora and Fauna and Crown Land)
- Wurundjeri Woi-wurrung Aboriginal Cultural Heritage Corporation (WWCHAC), Taungurung Land & Waters Aboriginal Corporation (TLaWAC) and Dja Dja Wurrung Clans Aboriginal Corporation (DJAARA) RAPs
- Heritage Victoria
- Melbourne Water

Many of these groups and agencies will be referred the planning scheme amendment for comment in line with the standard process.

Once the proposed Planning Scheme Amendment is submitted to the Minister for Planning for consideration, it is expected that it would be subject to the following steps:
- The Minister for Planning must authorise the Planning Scheme Amendment
- The Planning Scheme Amendment is publicly exhibited (unless the Minister decides exhibition is not required).
- The Minister for Planning may appoint an independent panel to consider the submissions if they cannot be resolved by the planning authority (Department of Transport and Planning / the Minister for Planning).
- The planning authority (Department of Transport and Planning / the Minister for Planning) will consider all submissions, and the panel report if needed, and decide whether to adopt or abandon the amendment.
- If adopted, the amendment is submitted to the Minister for Planning for approval and once

approved the amendment becomes part of the planning scheme once published in the Victorian Government Gazette.

Consultation program

Has a consultation program conducted to date for the project?

☐ No ☒ Yes If yes, outline the consultation activities and the stakeholder groups or organisations consulted.

The Proponent has undertaken consultation to date using a 'grass roots' approach, with a senior member of the Proponent team contacting landowners and neighbours personally, improving community 'buy-in' for the Project. It is expected that this form of consultation will be expanded upon and supplemented by additional measures, as detailed in the Community and Stakeholder Engagement Strategy, as the Project progresses through the approvals process and detailed design. This will include broader engagement with the wider community the surrounds the route.

This has included detailed discussions with landowners and neighbours along the route, along with targeted community meetings in key locations from Bendigo to Charlton. This has involved discussions with key representatives from community groups such as the CFA and town community associations.

Additional consultation undertaken to date include lengthy discussions with key Government agencies, such as:

- VicGrid
- Department of Transport and Planning (Renewables team)
- Department of Transport and Planning (Impact Assessment Unit)
- Department of Transport and Planning (VicRoads)
- Department of Energy, Environment and Climate Action (Flora and Fauna and Crown Land)

As a result of the undergrounding, the community reaction to the Project has been very positive, with positive comparisons made to the overhead alternative. This includes parts of Victoria where there is strident opposition to overhead transmission lines.

A detailed Community and Stakeholder Engagement Strategy is being prepared which will set out the engagement objectives and principles for the Project, identify stakeholders and the key demographic profile of the route and surrounds. The Strategy will set out the proposed engagement methodology, key messaging and monitoring, evaluating and reporting for the Project.

Has a program for future consultation been developed?

☐ NYD ☐ No ☒ Yes If yes, briefly describe.

Yes – a range of engagement activities are proposed as the Project progresses, as guided by the Community and Stakeholder Engagement Strategy. This will include:

- Face-to-face and online stakeholder meetings
- Project webpage
- Distribution of Project fact sheets
- Letter of introduction to all involved landowners and properties within proximity to the proposed route
- Door knocking of properties within proximity to the proposed route, and within key communities
- Community drop-in sessions
- Ongoing Government and Agency meetings.

As noted above, community and stakeholder consultation will also occur associated with the development and potential exhibition of the proposed Planning Scheme Amendment.

Authorised person for proponent:

I, ……(full name),

……(position), confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature _____

Date

Person who prepared this referral:

I, ……(full name),

……(position), confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature _____

Date