

GOYDER

RENEWABLES ZONE

VOLUME 1 (APRIL 2024)

Goyder North Renewable Energy Facility

Planning Consent Application Report

Executive Summary

Neoen Australia Pty Ltd (**Neoen**) is seeking Planning Consent for the Goyder North Renewable Energy Facility (**Goyder North**) pursuant to the *Planning, Development and Infrastructure Act, 2016*. This report is part of an application package lodged under the Act for planning assessment. There is also a range of other legislation and processes required to address other characteristics of the project (e.g. indigenous heritage, native vegetation clearance and Commonwealth environmental approvals). Neoen is submitting applications under the relevant legislation and running concurrent processes where relevant.

Neoen is developing the Goyder North project as a part of its wider GRZ concept. As a part of this concept, the Goyder South Hybrid Renewable Energy Facility (**Goyder South**) was granted Development Approval in 2021 with construction of Stage 1, consisting of 412 MW of wind generation, beginning in 2022. The GRZ represents one of the most ambitious renewable energy developments proposed in Australia. It is ideally located to complement Project EnergyConnect, a large interconnector to New South Wales currently under construction by ElectraNet and TransGrid and will make a major contribution to servicing the substantial increase in South Australian energy demand forecast by ElectraNet. In addition to providing low-cost renewable energy, the addition of batteries to the facility will increase stability in the grid as well as reducing volatility and reliance on gas generation within the energy market.

The proposed project site is located in the Mid North region in South Australia, home to some of the best wind and solar resources in the country.

The Goyder North Renewable Energy Facility will take advantage of the high value wind resources in the Goyder region north of Burra and south-east of Hallett in the Goyder Regional Council area. Combined with the renewable energy infrastructure approved as a part of the Goyder South Hybrid Renewable Energy Project, the overall project is known as the Goyder Renewables Zone (GRZ).

The project would comprise up to 1000MW of wind generation and up to 900 MW / 3600 MWh of Battery Energy Storage Systems (BESS). The proposed connection to the grid will be made at ElectraNet's Bunday Substation via an overhead transmission line.

The Goyder North Renewable Energy Facility will ultimately comprise:

- A staged wind farm of up to 135 with a capacity of approximately 1000MW, a maximum hub height of 160m, a maximum blade length of 90m, and an overall maximum height (tip height) of 240m;
- Three stages of BESS installations across the project, totalling up to 900MW / 3600MWh in capacity;
- Associated infrastructure for connection to the electricity grid including substations, operations and maintenance facilities, access tracks, underground connection and communication cabling and overhead transmission lines;
- A number of meteorological masts (in addition to those already on site) to record wind speed and other meteorological data, both pre- and post- construction; and
- Various temporary construction facilities.

Most of the land within the proposed development site is privately owned and is largely agricultural including marginal grazing for sheep and cattle and dryland cropping. Small parcels of Crown Land are scattered within the project boundary, however the majority of the infrastructure is proposed to avoid them. The overhead transmission line is proposed to cross two small sections of Crown Land located off the World's End Highway and the Goyder Highway.

This report has been prepared to accompany an application for Planning Consent under the *Planning, Development and Infrastructure Act 2016* (SA).

The layout of the Goyder North Renewable Energy Facility and its project elements has been carefully designed to avoid and minimise impacts as far as practicable and in line with the policy set out in the Planning and Design Code.

Where relevant, specialist studies have been undertaken to demonstrate that impacts have been addressed and that the project can meet the Designated Performance Features.

Neoen has engaged independent specialists to explore key potential impacts of the project and provide professional advice to ensure that the location of the proposed development would minimise potential impacts during both the construction and operation phases. Full copies of the studies are contained in Volume 2 of the application package.

The findings and recommendations of these studies (summarised in Section 3.4) have resulted in a series of changes to the project layout as the project has evolved. As a result, Neoen has ultimately reduced the maximum number of proposed wind turbines from 143 turbines to 135, implemented evidence-based buffers and setbacks and relocated other infrastructure to avoid impacts; the project's evolution is summarised in Chapter 3.

Neoen is committed to implementing the mitigation measures identified in these studies to minimise impacts if the project is approved. These measures are set out in Chapter 6 of this document.

The scale of the project is such that detailed site evaluation for all issues (e.g. geotechnical, heritage, flora and fauna) is not possible at the planning application stage. For this reason, Neoen proposes to use a 200m micro-siting approach to the final siting of all infrastructure. This approach provides minor site flexibility to respond to sensitive issues (subject to compliance with all other impact issues)

This approach was previously approved for Goyder South and was accepted by the ERD Court in the case of the Palmer Wind Farm determination (7 March 2018). This approach is also supported as part of the Native Vegetation and EPBC approaches to on-going mitigation and reduction of impacts. and has successfully enabled the avoidance of heritage and flora and fauna issues at a number of sites for Goyder South

It is acknowledged that many of the impacts associated with this project relate to the construction phase and that further work is required in relation to a Native Vegetation Clearance application and a referral under the EPBC Act.

NOTE: Neoen lodged an application in December 2023 and requested that public consultation be put on hold until after the holiday period to ensure that the public had adequate time to review and respond to the application. In the meantime, the Referral bodies were notified and consulted, and this identified issues and information that resulted in refinements to the application documentation. The application documentation has since been updated but it is acknowledged that this has created some minor inconsistencies between this document, Volume 1 (April 2024), and the details reflected in some of the specialist reports in Volume 2. For the purpose of the planning assessment, Neoen request that the description of the project contained in Volume 1 (April 2024) prevails in the event of any inconsistencies.

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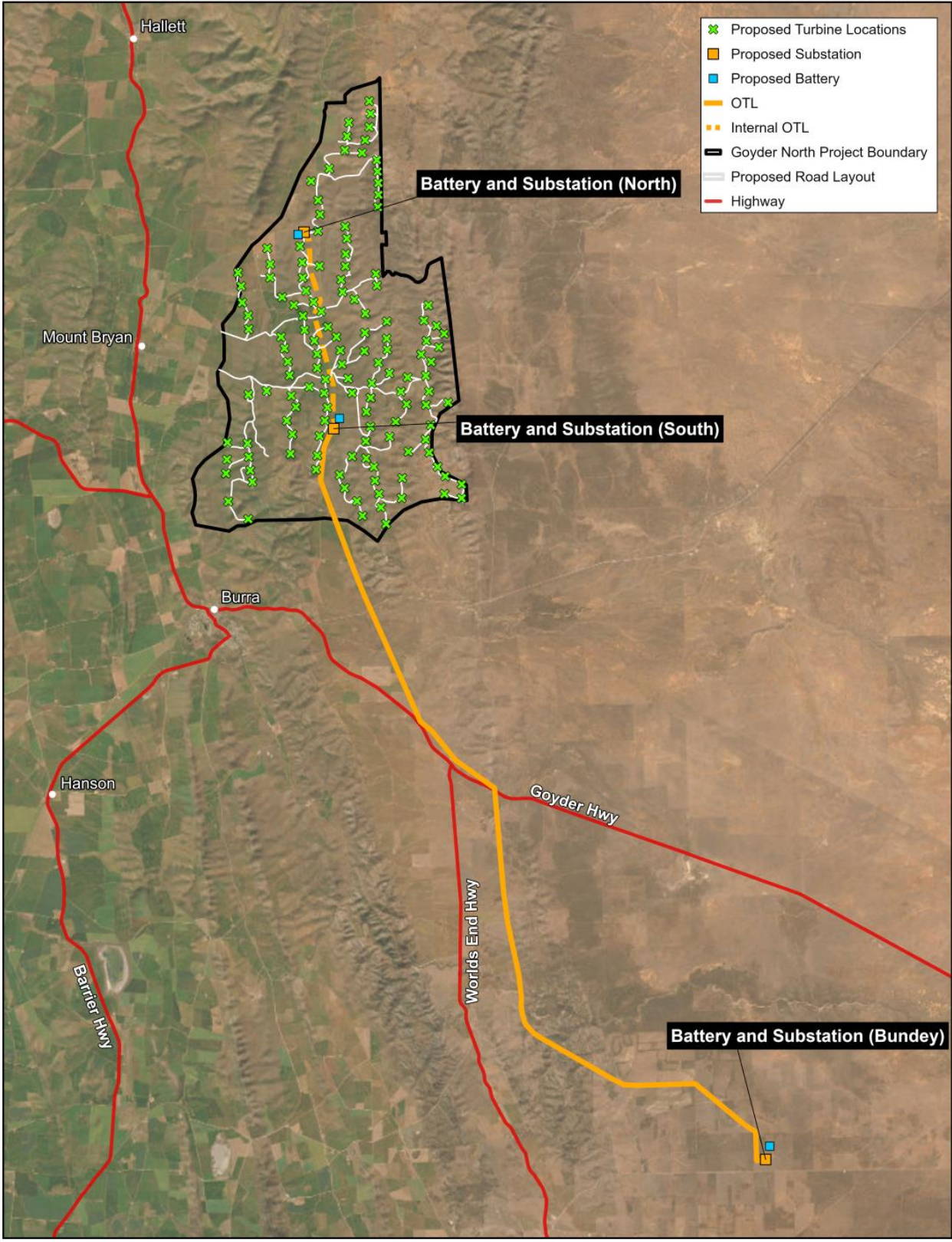


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1. Project Background and Outcomes

1.1 About the Applicant

Neoen's long-term vision is to design and implement a strategy to generate the most competitive renewable electricity on a large scale, sustainably.

Neoen is an independent power producer specialising in renewable energy projects, with over 7 GW of generation in operation or under construction worldwide. The company was founded in 2008 and was publicly listed on the French stock exchange in 2018. The company is headquartered in Paris and operates across a range of renewable energy technologies, including solar, wind and battery storage. Neoen has over 400 experienced employees across 17 countries on multiple continents. Outside of Paris the largest Neoen branch is in Australia (opened in August 2012), which represents approximately 46% of the global Neoen portfolio and approximately 100 personnel across 7 offices across Australia.

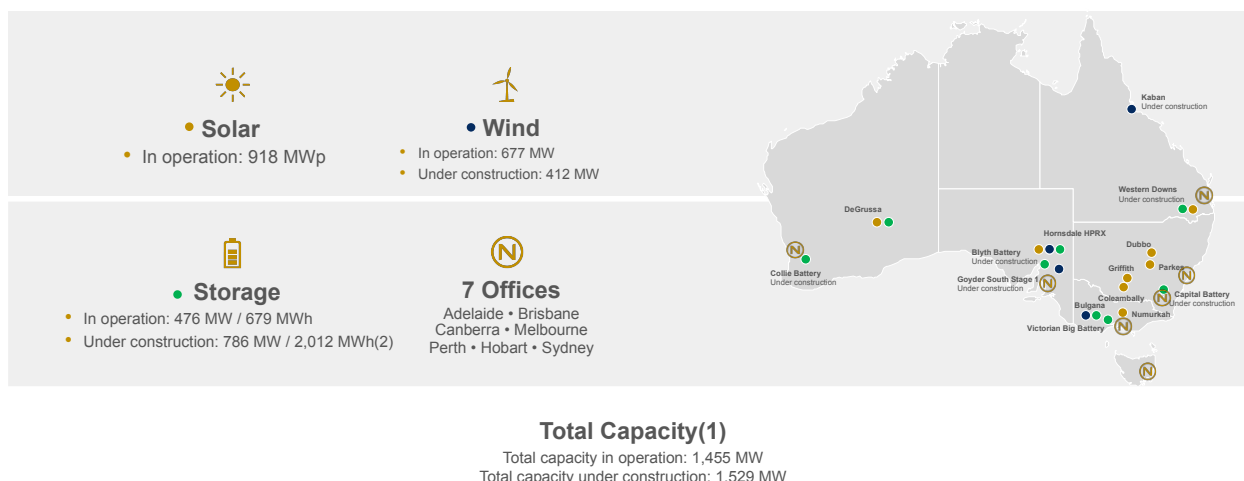


Figure 1: Neoen Australia's total capacity as of September 2023

Since 2012, Neoen Australia has brought over 3.3GW of solar, wind and storage into construction and operation through local partnerships and strategic acquisitions in Australia. Neoen is now Australia's largest renewable energy generator in terms of committed capacity.

Neoen's South Australian projects include the award-winning 315MW Hornsdale Wind Farm and the 150MW/194MWh Hornsdale Power Reserve, the world's first lithium-ion battery of that scale. Hornsdale Power Reserve, better known as the 'Tesla big battery' after its technology manufacturer, has been an immense success for both Neoen and South Australia. Not only has it intervened numerous times to help prevent blackouts, but it also saved consumers around \$40 million in 2018 and \$116 million in 2019 by suppressing the prices of various grid stability services previously provided exclusively by gas generators.¹

A key differentiator of Neoen's business model is that it is a developer-owner-operator. It develops, builds, owns and operates its projects for their entire lifespan. Consequently, Neoen has always focused on delivering the best possible projects built on the strong technical and commercial expertise from within the global team and on meaningful, long-term partnerships with local communities.

¹ <https://www.aurecongroup.com/projects/energy/hornsdale-power-reserve>
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Hornsedale Wind Farm Stage 1 was Neoen’s first major Australian asset, launched in 2016. Neoen now have 712MW of wind and 350MW of battery assets in operation or under construction, with more than 600MW and \$1.2 billion committed for investment in SA over the last 18 months alone.

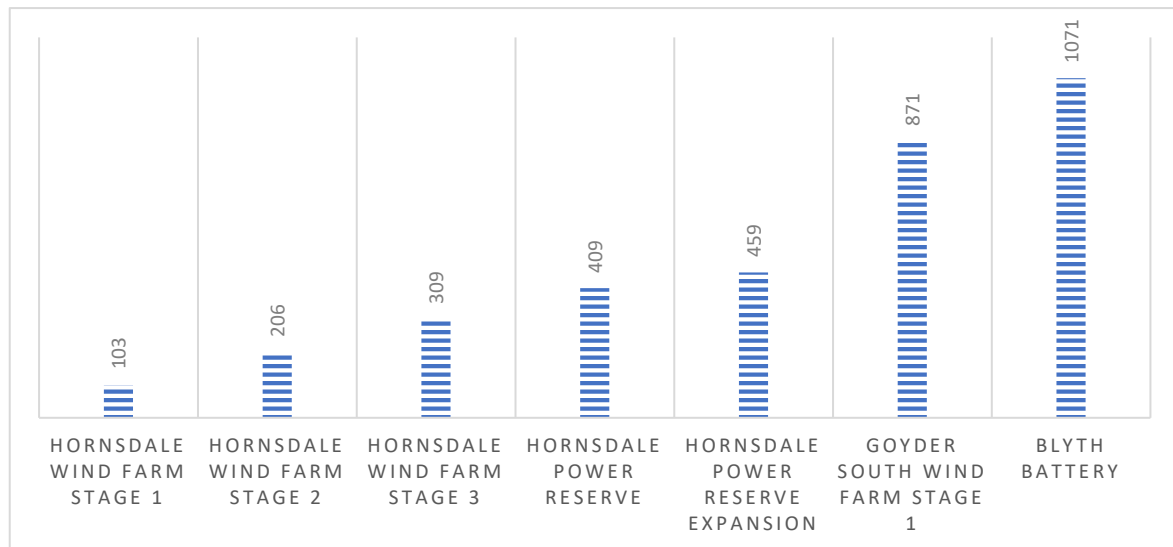


Figure 2: Cumulative South Australian MW Capacity 2016-2022

The **Goyder North** project is part of the larger **Goyder Renewables Zone (GRZ)**, a project concept which Neoen has been developing since late 2017. The GRZ encompasses both Goyder South and Goyder North, divided by the town of Burra. Goyder South was approved in March 2021 and Stage 1, representing 412MW of wind generation, commenced construction in Dec 2021 and due to be completed late 2024 – early 2025.

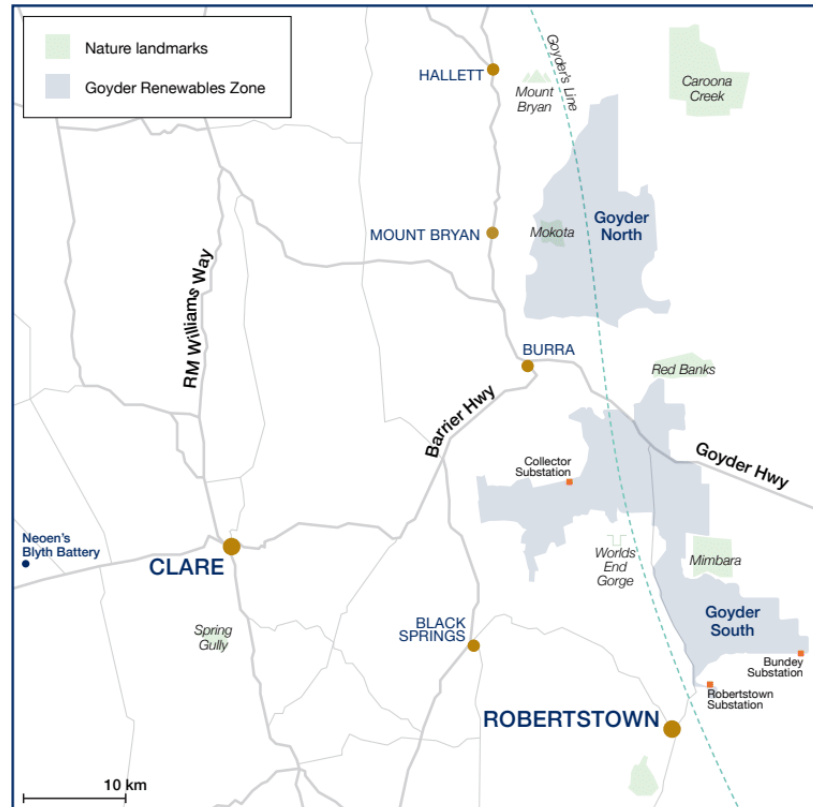


Figure 3: Overview of Goyder Renewables Zone

At its full size of approximately 1000 MW of wind, Goyder North would generate more than 3,600,000MWh of power annually, estimated to be equivalent to the following:

Table 1: Environmental and Economic Benefits

Environmental benefits		Value	
Project's annual energy in MWh		3,600,000	
Equivalent tonnes of CO ₂ avoided per year		1,262,100	
Equivalent number of cars taken off the road		352,509	
Equivalent number of households powered		781,704	
Equivalent number of trees		27,766,200	

Economic benefits		Value	
Overall Estimate Investment		\$4.75 B	
Number of jobs during Construction		1,832	
Number of jobs during Operation		58	
Community Benefit Fund contribution over 30 years		\$30 M	
Neighbour Benefit Scheme contribution over 30 years		\$4.2 M	

The GRZ is ideally located between Adelaide, SA's major energy demand centre, Whyalla, SA's future potential major demand centre, and Project EnergyConnect, the transmission interconnection to NSW. The Goyder North project will connect to the grid via ElectraNet's Bunday Substation which is the South Australian terminus of Project EnergyConnect.

The Goyder North project development has ramped up over the last 18 months during which Neoen have commissioned extensive background impact studies and undertaken involved landowner and neighbour engagement. This work has identified various impact issues and sensitivities which has led to an iterative process of project refinement.

Australia has an urgent need to transition its energy supply from fossil fuelled generation to renewable energy both to ease energy costs and to decarbonise in response to climate change. However, Neoen is also acutely aware of the need for this transition to occur in an environmentally and socially sustainable manner. For this reason, Neoen has aimed to achieve a reasonable balance between reducing reasonable impacts but also making the most of the valuable wind resource in the area.

1.2 Energy System Outcomes

As the first state to introduce legislation establishing greenhouse gas emissions reduction and renewable energy targets, South Australia has a strong record of leading Australia in action on climate change.

South Australia has achieved an average penetration of renewables of greater than 70% over the last 12 months. With further development of large-scale renewable projects, continual uptake of rooftop solar and the completion of Project EnergyConnect, it is well on its way to achieving the SA Government's goal of 100% net renewables by 2030 and playing a key role in achieving the broader goal of net zero emissions by 2050.

Despite this significant deployment of low-cost energy production, South Australians have not seen the benefits of this transition flow through in the form of reduced residential power bills. This is largely due to the state's reliance on gas generation to provide system stability services and fill in gaps in generation when the renewable generation fleet is not generating. The addition of more renewable generation in combination with large scale batteries will reduce the amount of time that gas generators operate, providing the lowest cost firm energy supply.

The transition to stationary renewable energy generation through projects such as Goyder North remains one of the fastest and most cost-effective ways to ensure the achievement of the state's target of zero emissions by 2050. Further, large-scale renewable energy projects will not only decarbonise South Australia's electricity supply, but also enable the electrification of industrial processes (such as 'green steel') and the production of alternative fuels such as hydrogen, while reducing Australia's reliance on global commodities for its energy requirements.

1.3 Community Outcomes

Neoen has aimed to include as many landowners as possible in the project to ensure a wide distribution of benefits to the local and regional community if it is approved.

Renewable energy infrastructure provides a secure annual income stream to host landholders, providing security to farming families during challenging times, which are becoming increasingly frequent as the impacts of climate change become more apparent. Depending on the size of a landholder's land and the amount of renewable assets located on it, this income stream can range in size from modest to highly significant.

As with its other significant scale projects, Neoen proposes to make an annual contribution to a Community Benefits Scheme to provide benefits to the wider community. Neoen will also implement a relatively new form of benefit-sharing—a Neighbour Benefits Scheme—which is considered the current best-practice for these types of projects.

1.3.1 Community Benefits Scheme

As a part of Stage 1 of Goyder South Wind Farm, Neoen has committed to establishing the GRZ Community Benefits Scheme (CBS) which will initially provide an annual amount of \$250,000 (indexed to CPI) to be distributed for the benefit of the broader community in the region once the project begins operations (targeting 2025).

The Goyder North project would contribute an additional amount, to the same CBS, up to a total cumulative value of \$1,000,000 per annum over the project's operational life (inclusive of any Goyder South contributions). The contribution will increase as each stage of the development is built:

- \$70,000 per 100 MW of wind generation constructed, and
- \$12,000 per 100 MW of battery storage constructed.

These values would be adjusted in accordance with inflation from December 2024 to the date of the first payment. They are fixed and will not vary according to energy yield or project financial returns. The first payment will be made when the project commences commercial operations.

Traditionally, Community Benefit Schemes act as a 'pool' of funds that are allocated annually via single, one-off grants. These schemes usually have established criteria and decisions are made by a panel of community stakeholders representing a range of interests. However, the potential size of the combined GRZ scheme would likely to justify supporting some longer-term initiatives and programs indefinitely or for several years.

Neoen envisages that:

- 1) A portion of the funds would be made available in the form of a traditional Community Fund to support various community initiatives via a standard grant process.
- 2) Through discussions within the community, three 'legacy' areas have been identified which Neoen are considering allocating longer-term funding to:
 - a. Education and Training: for example, multi-year funding dedicated to a scholarship program for high school students, or improvements to local school infrastructure;
 - b. Culture and Heritage: for example, funding for a community arts program, or eco-tourism initiatives; and
 - c. Health and Well-being: for example, improvement of mental health or aged-care facilities / programs, or upgrades to exercise or general health facilities.

Neoen is currently discussing with Council how a scheme of this size could be administered from year to year. Neoen's aim is to have a strong element of input from community members.

1.3.2 Neighbour Benefits Scheme

Neoen is committed to the establishment of a 'Neighbour Benefit Scheme' (NBS) if this project proceeds. This is proposed to be an annual scheme that would apply to neighbours with a residential dwelling within 6km of a wind turbine, which is occupied on a full-time or near full-time basis and within a rural development zone. As was the case in Goyder South, the NBS is essentially unconditional or 'no strings', containing only clauses required to facilitate its administration and able to be terminated at any time. Neighbours **will not be penalised** for opposing the project by exclusion from the NBS and should, accordingly, not feel obliged to temper their submissions in relation to this development application.

The NBS's purpose would **not** be to compensate neighbours for lifestyle impacts, as Neoen has instituted a 2km setback from dwellings and considers that lifestyle impacts will be minimal. Instead, its objectives would be:

- to share project benefits beyond those persons fortunate enough to own land suitable for renewable energy assets;
- to recognise that Community Benefit Schemes are often focussed on townships rather than rural areas;
- to create more stakeholders in Goyder North, increasing the project's social licence; and
- to foster support for the renewable energy transition overall.

The amount of the NBS would be a fixed (per dwelling) payment starting just prior to the start of operations.

1.4 Community and Stakeholder Engagement

1.4.1 Community Engagement

As a long-term 'owner operator', Neoen does not develop its projects to sell, and expects to operate in communities for 30 years or more. Consequently, it is vital that it creates long-term partnerships with communities.

Several key methods of engagement were implemented as a part of the Goyder South project and have been retained for the development of the Goyder North project, including:

1. **Community Liaison Officer:** Neoen employs a Community Liaison Officer, based locally and with family background in the area, as well as extensive experience with renewable energy. She has been dedicated solely to GRZ projects. She assists in locating and engaging with all potential landholders and neighbours, as well as staffing the Community Office and connecting community members with the Project Manager.
2. **Community Office:** Neoen established a community office on the main street of Burra in early September 2019 to support community and stakeholder engagement for Goyder South. The office continues to be a local base for engagement of stakeholders for the activities of the GRZ development. During open hours, the space is open to the public and offers a clear, easy way for community members with concerns or comments to get in touch with Neoen if they prefer physical communication to phone or email. Contact details for the project's Community Liaison Officer are also displayed prominently.

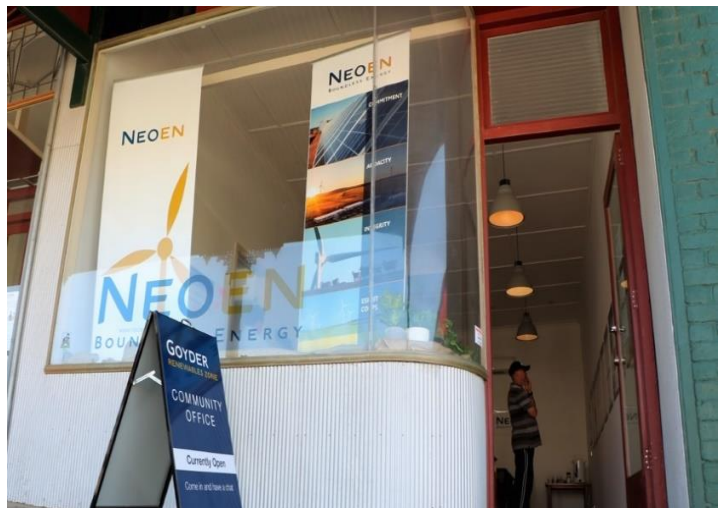


Figure 4: Community Office in Burra

3. **Neighbour Engagement:** Neoen has endeavoured to contact and meet with all neighbours living within a 6km radius of the project that are not hosting infrastructure. The purpose of these meetings was to inform the neighbours about the proposed development and introduce them to the Neighbour Benefits Scheme. The team either directly contacted or sent letters to each of these neighbours, offering face-to-face meetings, and successfully met with over 40 neighbours in response. Generally, neighbours have expressed support for the proposed wind farm and the funding and economic activity it would bring to the community.
4. **Community Information Day:** Neoen has made significant efforts to advertise and encourage attendance at the community information session held on October 18 2023, at the Neoen office in Burra. The purpose of this session was to provide an opportunity for Neoen to gauge community sentiment, incorporate feedback into the final layout and address any questions the community had regarding the project. In the month leading up to the event, Neoen ran weekly newspaper advertisements in the Plains Producer and placed posters in both Burra and Mount Bryan. Outreach was also extended to stakeholders of the Goyder South project through a group email sent to those on the mailing list. In addition, neighbours were encouraged to attend at face-to-face neighbour meetings which were carried out in the months prior to the event. The community information session, while lightly attended (as with previous Community Information Days held for Goyder South), attracted a diverse group of stakeholders. The session saw representation from various groups, including landholders, local business owners, council members, and community members. This diversity ensured a broad range of perspectives and contributions to the discussion, enabling Neoen to incorporate the community's values into the development application.

The overall sentiment from the community, based on both the neighbour meetings and the community information session, was generally positive, with most attendees expressing enthusiasm for the proposed development. Few issues were raised during the neighbour meetings and community information day, which generally revolved around queries about noise emissions and visual impacts.

The information provided in this development application package is based on the most up-to-date information and understanding and therefore some information has changed from early engagement activities but not to a significant degree.

1.4.2 Council and Agency Consultation

Neoen has maintained a positive and ongoing relationship with the Goyder Regional Council during the development of the Goyder South and Goyder North projects. In addition to specific requests made by the Council for the Goyder South project (including turbine setbacks from Burra Town Centre, avoiding heavy construction traffic through Burra centre and comprehensive community consultation), Neoen has engaged with the Council on topics specific to Goyder North:

- **Turbine setback from Burra Town Centre**

The planning system policy indicates that a 2.9km setback from Burra township boundary is appropriate. Following discussions, Neoen has increased the setback from the town centre from an initial 4km to almost 6km to reduce the visual impact of the project on the township.

- **Burra World Heritage Bid**

Neoen is supportive of Council's interest in seeking World Heritage Listing and is committed to working with them to preserve the unique heritage values of the area. In addition to the consultation undertaken to date, Neoen are continuing to undertake formal consultation with the Council via the planning assessment process so that Neoen can formally respond to any issues that may be raised by Council. Further, preservation of National / World Heritage values in the area will be assessed in more detail through the Environment Protection and Biodiversity Conservation (EPBC) process, with consultation continuing throughout.

Neoen and the specialist team have also begun consultation with key State Agencies to understand their expectations in relation to the provision of information as part of approval processes, including:

- Department of Environment and Water (Native Vegetation);
- Department of Environment and Water (Heritage SA) and;
- Department of Mining and Energy (DEM) (including the Office of the Technical Regulator (OTR)).

Neoen acknowledge that the State Heritage Agency does not have any formal role in the planning assessment process for this application because the project does not trigger a referral. Nevertheless, as a courtesy, Neoen have kept the Department informed of the project and the approach taken to relevant State Heritage places, which has been to avoid impacts as much as possible.

1.4.3 Consultation with Traditional Owners

The relevant Aboriginal stakeholders for the Goyder area are the Ngadjuri Nation and the First People of the River Murray & Mallee Region, whose traditional lands include the proposed project land and who also have a Native Title Determination/Application over parts of this land (see Section 2.4.1). A relationship between Neoen and the Ngadjuri Nation already exists as a result of the Hornsdale Wind Farm and Power Reserve, as well as the Goyder South project.

Dialogue between Neoen and the Traditional Owners has primarily focused on two topics:

1. Avoidance and preservation of any Traditional Owner's cultural heritage; and
2. Broad benefit-sharing by committing to training and employment opportunities for Aboriginal people, with particular focus on benefiting members of the Traditional Owner's community.

Neoen have commenced discussions with the members of the Ngadjuri community to inform the detailed design of Goyder North. A physical anthropological site survey has been conducted to inform infrastructure layout and design.

Neoen have also commenced engagement with the First People of the River Murray & Mallee region, whose native title claim area intersects with the proposed overhead transmission line route, the proposed BESS and Bunday Substation. Discussions are in their infancy however a physical anthropological site survey is currently being scheduled, which will inform design of the transmission line route and Bunday Battery site.

Regarding benefit-sharing, Neoen has committed to (and is in the process of delivering) ambitious benefit-sharing programs with Ngadjuri Nation for Goyder South, though details are confidential and can only be disclosed with Ngadjuri Nation's consent. Discussions around benefit-sharing on Goyder North are at a much earlier stage but will be of proportionate scale. As with Goyder South, Neoen is also committed to introducing (and fulfilling) best-practice First Nations participation targets for employment and supply chain.

1.4.4 Freehold Title Consultation

A significant challenge for the Goyder North Project has been the scale of the engagement process with landowners. The scale of the project means that there are potentially more than 30 landowners directly involved, and many more neighbours within a 6km radius. Challenges have arisen not only from the perspective of finalising so many landholder negotiations, but also from the difficulty of determining land ownership and dwelling status (noting the abundance of abandoned or empty buildings in the area) and even obtaining accurate contact details (noting that many landowners, involved and neighbouring, do not live on their land).

The majority of potentially involved landowners have indicated their intent to be involved in the project and Neoen is confident that these discussions will result in agreement between Neoen and landowners if the project is approved. The current layout has been drafted on this assumption. Neoen acknowledges that there are some on-going discussions and outstanding agreements to be signed at the time of lodgement of

this application. Neoen has informed these landowners that **while their properties may be included in the proposed DA layout, they are entirely free to withdraw from negotiation processes as and when they see fit.**

In the event that any landowners decide **not** to participate in the project, Neoen would seek a variation to the project layout to reflect their decision, including:

- removing any proposed asset locations on their properties;
- unless agreed otherwise as project neighbours, instituting full 2km minimum setbacks between turbines and occupied dwellings; and
- unless agreed otherwise as project neighbours, removing any assets as required to achieve EPA noise limits applicable to uninvolved dwellings.

1.4.5 Neighbour Consultation

In accordance with industry best practice, Neoen has endeavoured to contact every neighbour within a 6km radius of the proposed Goyder North project area (except population centres such as Burra and Mount Bryan) via letter or phone to offer personal face-to-face meetings at their home or at Neoen's Burra office (at the choice of the individuals). In some cases, Neoen's Community Liaison Officer has also sought out acquaintances and extended family to find other methods of contact.

At these meetings, the project team has aimed to provide accurate information about Neoen, renewable energy technology and the Goyder North project, noting that the design has evolved as consultation continues.

Neighbours have been provided with contact details for the Community Liaison Officer and Project Manager and, where agreeable, added to the Goyder North mailing list to receive project updates. Neoen has also encouraged a number of neighbours to submit their details to the project's register of jobseekers and potential suppliers of goods and services (<https://goyderenergy.com.au/workwithus/>). These engagement efforts have been successful and positive in the overwhelming majority of cases and Neoen looks forward to maintaining a close ongoing dialogue with neighbours as development of the project continues subject to approval.

Dwelling Identification

Due to the size of the proposed project, Neoen notes that there are well over 150 buildings within the 6km radius (mostly on the western boundary of the project), excluding population centres. During the development process, Neoen has identified approximately 100 of these buildings as dwellings with the remainder being sheds or clearly ruins. However, the use status of these dwellings varies greatly falling into the following categories:

1. Occupied (by owner or renter);
2. Occupied part-time (e.g. as shearers' quarters, worker accommodation);
3. Habitable but unoccupied (may be used occasionally);
4. Uninhabitable but with a clear intention of future refurbishment; or
5. Uninhabitable and abandoned.

Neoen's project team has categorised owners of dwellings falling into the first four categories as 'neighbours' for setback and noise limit purposes. It has also been assumed that dwellings in the first four categories are "occupied" for the purpose of impact assessment.

The team has made every effort to correctly ascertain the status of these dwellings and contact every associated landowner, but if any nearby residents believe that any errors or omissions have inadvertently been made and neighbouring dwellings have been missed or miscategorised, then Neoen urges those persons to contact the company for immediate correction and, if necessary, amendment to the project design. Neoen commits to promptly remedying all errors which can be substantiated.

1.5 Other Approvals, Licences and Permits

There are a number of assessment and approval requirements that must be addressed before a project can proceed to construction. The purpose of this application package is to address those planning matters and issues that are required by the *PDI Act 2016 (SA)*, which focusses its assessment on land use impacts.

Neoen is also addressing the requirements of a range of other legislation that apply to this project, as described below.

1.5.1 *Aboriginal Heritage Act 1988 (SA)*

The ***Aboriginal Heritage Act 1988 (SA)*** protects Aboriginal heritage and archaeology. It is important to highlight that the legislation requires that information about Aboriginal heritage is kept confidential. It is a requirement of this Act that no activity (including development, farming etc.) impacts on Aboriginal heritage without Ministerial consent, a process that includes consultation with Aboriginal cultural stakeholders.

The vast majority of the Goyder North site falls within the traditional lands of the Ngadjuri Nation, with part of the overhead transmission line, the Bunday Battery and the Bunday substation expansion located within the traditional lands of the First People of the River Murray & Mallee Region. Neoen has undertaken preliminary studies to identify the likely potential for heritage impacts, which was found to be low. Neoen has recently conducted physical on-site anthropological survey with Ngadjuri and is in the process of initiating survey with the River Murray & Mallee region experts.

Ongoing engagement will continue as the development approval process progresses. Neoen will utilise industry best practices with regard not only to avoidance of impacts on Aboriginal heritage but also to benefit-sharing and employment opportunities for Aboriginal people. Neoen will aim to extend the work done on Goyder South with the Ngadjuri to develop a training and employment program associated with construction of the Goyder North project.

Neoen acknowledge that the Ngadjuri Nation and the First People of the River Murray & Mallee Region are the recognised Native Title owners and applicants of their respective areas. The legislative protection of cultural heritage is separate to the matter of Native Title rights. Neoen is committed to work with the Ngadjuri Nation and the First People of the River Murray & Mallee Region to recognise Native Title rights as part of the project development where these rights have not been legally extinguished.

1.5.2 *Heritage Places Act 1993 (SA)*

This Act makes provision for the protection of all non-First Nations heritage places including those that might be unknown at this point in time. The applicant has avoided impacts on known places of heritage significance as identified in the Planning and Design Code.

The applicant is also addressing the matter of undocumented built heritage and archaeological features of heritage significance (which, due to the scale of the project, may not be found until after development approval) by undertaking a more detailed survey of construction sites prior to finalising the location of the footprint. Where practical, the requested 200m micro-siting allowance will then be utilised to avoid and mitigate heritage impacts.

1.5.3 *Aviation Safety*

Aviation impacts are addressed by a number of Commonwealth bodies including the Civil Aviation Safety Authority (CASA) and the Department of Defence. An aviation impact study has been prepared and consultation with these bodies has been completed. An Aviation Impact Assessment is included in this package of information and identifies that there are no material risks to aviation practices.

1.5.4 *Native Vegetation Act 1991 (SA).*

Native vegetation is protected by the **Native Vegetation Act 1991 (SA)**. Any clearance (unless exempt) requires an application to the Native Vegetation Council and is assessed against the Principles of Clearance under the Act. A net 'Significant Environmental Benefit' (SEB) is generally a condition of approval. No clearance approval would be issued unless a Development Approval has been obtained first. Neoen has undertaken the investigations required to commence preparation of an application under this legislation and will ensure all reasonable efforts have been made to minimise impact on native vegetation. It is noted that the project area has a long history of grazing and cropping and, as such, the majority of the land that would be directly impacted by the development has already suffered severe vegetation degradation.

Neoen recognises that a specific vegetation assessment based on the Bushland Assessment Methodology (BAM) will need to be undertaken across the Project Area. The BAM is endorsed by the Native Vegetation Council and used to assess areas of native vegetation requiring clearance and calculate the SEB requirements for the Project.

Neoen recognise that the documentation provided in the planning application is not an NVC clearance application and therefore does not include the level of detail that would normally be provided to the NVC in such an application. Neoen are finalising additional surveys and information as recommended following the preliminary ecological assessments. It should be noted that a clearance application cannot not be finalised until the micro-siting process is complete and the design is finalised and therefore the final disturbance footprint can be determined.

It is Neoen's intent that a Native Vegetation Clearance Application would be lodged with the NVC following a planning decision.

1.5.5 *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*

The **Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)** addresses the protection and management of nationally and internationally important flora, fauna, ecological communities and heritage places. Neoen has engaged consultants to undertake studies that address matters that may be of relevance to this legislation and will hold preliminary discussions with the Department responsible for the implementation of the EPBC Act. A key consideration of this Department is whether the applicant has reasonably addressed or can reasonably manage the potential impacts to nationally listed species and Burra's national heritage values.

Neoen is committed to supporting the aspiration to have Burra listed as part of a World Heritage listing. To the extent that it is reasonably possible, the design and layout of the project has attempted to take this into account through discussions with Council and expert consultants.

While the specific heritage values of Burra are not assessed through the State level planning assessment, Neoen have included the Heritage assessment report for information purposes.

2. Existing Conditions

2.1 Locality and Landuse Context

The proposed project area is located in the eastern portion of the northern Mount Lofty Ranges and wholly located within the Regional Council of Goyder. The region is serviced predominantly by the Barrier Highway and the Burra-Morgan Highway (Goyder Highway).

The area is within the Mid North Region (for the purposes of strategic land use planning) and the SA Murray-Darling Basin Natural Resource Management (NRM) area. It is also located within the 'Northern Ranges' of the Rangelands part of the SA Murray-Darling Basin NRM. The area is generally described as a transitional zone between cropping and pastoral country. It is noted that the project is not located within a prescribed water resources area.

Prior to European settlement, the Ngadjuri people occupied the land which encompasses most of the project boundary. In addition, part of the overhead line route and a proposed battery and substation site is situated on land that was occupied by the First People of the River Murray and Mallee Region. European exploration and use of the land began in around 1838-39 and focussed on cereal grain and grazing, including vast sheep and cattle runs. The Burra copper deposit was discovered in 1854 and railway lines were established in 1870.

Today, Burra remains a key regional service centre providing for aged services, affordable housing, and temporary housing for short-term residents. This region has a relatively low population density, with most residential premises being located in a number of small towns of which Burra is the largest, followed by Eudunda.

The proposed wind farm is located to the northeast of Burra and extends north for approximately 23km. The northern extent is approximately 12km to the southeast of Hallett. The main wind farm area is located approximately 5 km directly to the east of Mount Bryan, which is located on the Barrier Highway.

The project's transmission line will extend from the project site to the south-east for approximately 57km to ElectraNet's Bunday Substation.

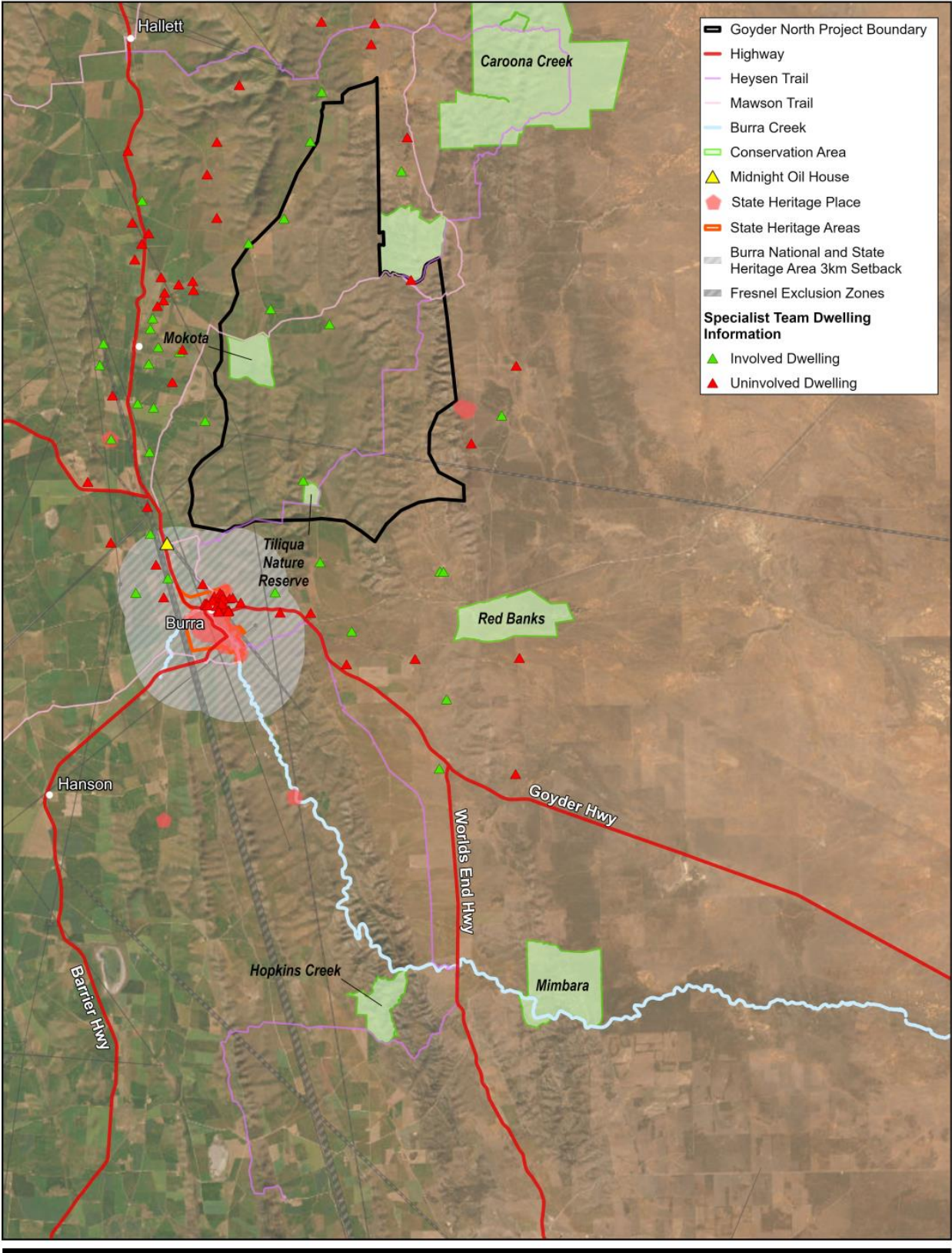
The land within the proposed development site is generally privately owned and is largely marginal agricultural land including grazing for sheep and cattle and dryland cropping. Due to the long settlement history of the area, there are a number of "paper" roads in the area, which comprise Council-owned corridors where a road has not actually been constructed.

The strong mining history of this region highlights a potential construction hazard relating to unexploded ordnance (UXO). Neoen has also been advised by the Department of Defence of the potential for UXO associated with Defence activities (via the Aviation consultation process).

Neoen experienced similar warnings for Goyder South and commissioned a Preliminary Environment Site Assessment for the Goyder North Area (July 2023), a copy of which is include in Volume 2. This assessment included a consideration of UXO (both mining and defence related). It concluded that:

- The likelihood of any explosives was considered to be linked with the location and probability of historical mining.
- A review of historical information did not identify any military activity in the area and the likelihood of military UXOs in the area is considered to be very low.

The report recommends the implementation of an "unexpected finds protocol" in the contingencies for micro-siting and as part of the construction safety management systems.



Paper Size ISO A4
0 1.5 3 4.5 6
Kilometers

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 54



NEOEN AUSTRALIA PTY LTD
GOYDER NORTH WIND FARM

Project No. 12590014
Revision No. G
Date 03/04/2024

**GOYDER NORTH
PROJECT CONTEXT AND LOCALITY**

FIGURE 5

C:\GISDATA\12590014\GIS\Map\Working\12590014 - Development Application\12590014 - Development Application.aprx - 12590014_005_ProjectContextAndLocality_Rev
Print date: 03 Apr 2024 - 17:18 Data source: World Imagery: Earthstar Geographics. Created by: jiggins

2.2 Climate & Topography

The region has a Mediterranean climate in which hot dry summers are followed by cool, relatively wet winters. As it is located in the rain shadow of the Mount Lofty Ranges, the region has a marked reduction in rainfall compared to the country to the west (SAMDBNRMB 2009). The Millennium Drought which began in 1995 and continued across much of Australia until late 2009 severely affected the region. Over the last three years the conditions have been milder, but drought conditions were experienced in the three years prior. The coming summer season is expected to be warmer and dryer.

Climate change modelling suggests the region will become even hotter and drier which would see an increase in drought periods that may ultimately affect water resources and biodiversity in the region (DEWNR Technical Report July 2016/08 Non-prescribed Surface Water Resources Assessment South Australian Murray-Darling Basin Natural Resources Management Region).

Long-term rainfall monitoring in the region is relatively sparse in this part of South Australia. However, a long-established monitoring site at Burra indicates a steady trend in average annual rainfall of 448mm (over 125 years of records) with June, July and August receiving the bulk of the rainfall and significantly drier periods from November to March inclusive.

The Project area is dominated by ridges, plains and undulating hills. The highest ridge is situated on the western edge of the Project area, spanning the entire length of the site (north to south) with the elevation lowering towards the east of the site. The general region is open, low hills with occasional rocky outcrops that fall away to low foot slopes and drainage channels at regular intervals. Vegetation cover is dominated by grasses and sparse incidents of remnant woodlands.

2.3 Natural Resources

The project is proposed to be located in a region identified as the Northern Ranges portion of the SA Murray-Darling Basin.² This is more specifically an area that represents the northern portion of the Eastern Mount Lofty Ranges. This area is generally described as a transitional zone between cropping and pastoral country and is further described in the following quote:³

- *The northern Eastern Hills are located in the west of the district and are mainly comprised of hills and slopes with shallow soils formed on basement rock grading to plains and gentle slopes with soils formed of outwash sediments derived from basement rock grading to plains and gentle slopes with soils formed of outwash sediments derived from basement rock highs.*
- *These lower rainfall ranges support extensive natural grasslands and open grassy woodlands, with mallee and riparian woodlands dominating drainages and plains between the rises.*
- *The northern Eastern Hills retain a range of significant biodiversity assets that are threatened, including the EPBC-listed Pygmy Blue Tongue Lizard, Spalding Blown-grass, Iron-grass Natural Temperate Grassland, and Peppermint Box (*Eucalyptus odorata*) Grassy Woodland.*
- *Recovery Plans have been developed at a national or regional level for some threatened species and ecological communities, including the Pygmy Blue-Tongue Lizard, Spalding Blown-grass and Iron-grass Natural Temperate Grassland.*



Figure 6: Extract from the SA MDB Natural Resources Management Plan

² SA Murray-Darling Basin <https://www.naturalresources.sa.gov.au/samurraydarlingbasin-rap/Subregions/Northern-Ranges>

³ South Australian Murray-Darling Basin Natural Resources Management Board, 2015. *Natural Resources Management Plan: Volume A Strategic Plan*. P48
Goyder North Renewable Energy Facility
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- While the northern Eastern Hills are largely used for grazing domestic stock, significant areas of cereal crops also occur in the southern parts of this landscape.
- Water erosion is an important issue across the landscape, but particularly in the north-eastern Mt Lofty Ranges. The risk of water erosion is increased where inappropriate grazing and vegetation management occurs.
- A significant and emerging land use issue in the northern ranges relates to the development of wind farms.

The area's natural resources are managed through the SA Murray-Darling Basin Natural Resource Management Plan. The four highest priority issues for natural resource management in this area are:⁴

- Containing new environmental weeds;
- Sustainable livestock grazing;
- Containing new agricultural weeds; and
- Threatened species recovery.

The Project area also falls within the Flinders Lofty Block IBRA bioregion and Broughton and Olary Spur subregions.

A total of nine vegetation types are located within the Project area including:

- Rushland / Sedgeland (slopes and ridges, streams and channels) - dominant vegetation type within the Project area;
- Eucalyptus mallee forest and mallee woodland (plains and hills, ridges and slopes and swales) - significant coverage within the Project area;
- Shrubland >1m - small coverage across the Project area;
- Chenopod shrubland - small coverage across the Project area; and
- Eucalyptus forest and woodland (hill and footslopes) - small coverage across the Project area.

A number of conservation and native vegetation protection areas are located adjacent and within the project area (wind and OTL) including:

- Four Heritage Agreements and two Significant Environmental Benefit (SEB) areas
- Tiliqua Nature Reserve
- Caroon Creek Conservation Park
- Mokota Conservation Park
- Red Banks Conservation Park
- Mimbara Conservation Park

Goyder's Line runs through the project area, meaning that the land is already considered marginal for agriculture. An increasing challenge for the region will be the potential impact of climate change on rainfall patterns and temperatures. Trends associated with climate change could have significant impacts on the viability of current agricultural activities.

Based on Neoen's discussions with landholders and Council, a greater proportion of the land in and around the project, which was once used for cropping, is already transitioning to grazing, a transition which has been accelerated by previous drought conditions in recent years.

A report prepared by the Climate Council in 2016 identified that a key barrier to adaptation is a 'lack of financial resources (that) is preventing many landholders from preparing for climate change' (p. 59).⁵ This report identified renewable energy projects as one opportunity to provide an alternative source of income for landholders and to support economic growth (p. 66).

In the longer term, landowners in this already marginal area may struggle with increasingly frequent and severe periods of drought. Given this, some may find the diversified and secure income associated with the Goyder Renewables Zone helpful in working towards drought resilience, and Neoen's discussions with landowners have indicated that this has been one of their main motivations in deciding to participate in the projects within the GRZ.

⁴ South Australian Murray-Darling Basin Natural Resources Management Board, 2017. *Regional Action Plan: A guide to natural resource management priorities in the South Australian Murray-Darling Basin, Northern Ranges subregion summary*.

⁵ Climate Council, 2016 'On the Frontline: Climate Change & Rural Communities'
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2.4 Cultural Heritage

Neoen have commissioned and completed a preliminary desk top heritage study, which is the first step taken by proponents to identify heritage risks, constraints and management requirements for the project.

The project has been designed to avoid direct impact on known state and local heritage sites. The study has highlighted that there is a strong risk that unidentified cultural features and items are present within the project boundary. Neoen will undertake appropriate cultural heritage surveys that will inform the micro-siting and detailed design stage of the project.

2.4.1 Aboriginal Heritage

The proposed project area is recognised as being within the traditional lands of the Ngadjuri Nation and the First People of the River Murray & Mallee Region. There are limited publications available relating to specific ethno-history of these Traditional Owner groups which may be due in part to European interaction and subsequent cultural losses. However, the Ngadjuri Nation are known to have lived a rich ceremonial life and to have been bound by complex social and marriage laws. The First People of the River Murray & Mallee Region are known to have a strong connection to the River Murray, or Murrundi, which is fundamental to their culture and beliefs.

Aboriginal heritage is protected by the *Aboriginal Heritage Act 1988* (SA) which also requires that the location and nature of known heritage is kept confidential.

The main requirement for compliance is that projects do not damage, disturb or interfere with Aboriginal heritage sites, objects or remains. It is the responsibility of the applicant to take the precautionary steps required to minimise the risk of disturbance. However, much of the focus of heritage protection occurs during the construction phase when ground works may reveal material of heritage value. If this occurs, it is at this point that works are carefully managed in line with the requirements of the *Aboriginal Heritage Act* (including consultation with Traditional Owners, archaeologists, DPC-AAR and the Minister for Aboriginal Affairs).

The requirement to keep Aboriginal heritage sites confidential and the recognition that a significant amount of Aboriginal heritage and artefacts are not known or recorded means that this is not an issue that can be addressed as part of the Development Assessment process. However, should the project be approved, Neoen would continue to work closely with the Traditional Owners and its own heritage consultants to minimise these risks during development and construction, noting Neoen's experience to-date in successfully managing these risks across numerous other projects in Australia (including the Goyder South project, which is also located on Ngadjuri land).

2.4.2 European Heritage

The proposed project area is located in a region that has played an important role in the development of South Australia, with its significant pastoral and mining history. The importance of the pastoral and mining history of the region is reflected in the many towns, areas and structures of European heritage interest and their inclusion on National, State and local heritage registers.

Mining activity in the region commenced in the mid-1840s and continued until the mid-to-late 1870s. With a decline in mining, the region re-focused on agricultural activities and services to support farming families. The prosperity of the 1870s and early 1880s came to an end with a series of droughts in the mid-1880s and a drop in world prices for wool, wheat and copper. The numerous ruins of farms and farm buildings in and around the project site attest to the resulting population decline in the region.

In more recent times, the name 'Burra' has become globally synonymous with heritage management and protection. The Australian ICOMOS Charter for the Conservation of Places of Cultural Significance is known as 'The Burra Charter' and was first adopted at an international conference held in Burra in 1979. The principles of the Burra Charter are incorporated into legislation in Australia and around the world.

Neoen has discussed this issue with Goyder Regional Council extensively and commits not only to ensuring that Goyder North does not negatively impact Burra's heritage, but also to actively supporting it wherever possible.

There are no formally listed Local Heritage Places within the Regional Council of Goyder. There is one State Listed place on the outer edge of the wind farm project boundary (SHR 14397 Mongolata Mine) and it is acknowledged that the Burra State Heritage and National Heritage area is located 4km to the south-west of the wind farm (from the nearest turbine).

While not formally listed, the "Midnight Oil House" featured on the cover of Midnight Oil's iconic 'Diesel and Dust' album is located approximately 3.5km north of Burra on the Barrier Highway. It attracts a modest but steady stream of visitors. The nearest turbine to this feature is approximately 3.6km to the northeast. Neoen has consulted with the band and received a response that strongly supports a view of the house that includes wind turbines in the background!

While the project would not have a direct physical impact on these places, Neoen acknowledges that the project may have a limited indirect impact by changing the appearance of the nearby landscape. Neoen has therefore commissioned specialist advice in relation to this potential impact from both a state and national perspective.

While there are a number of registered places of European heritage, it is likely that the area may contain archaeology that is not formally recorded. It is noted that the *Heritage Places Act 1993* requires all developments to address and manage the potential for archaeological finds to occur during construction and ensure that they are recorded, a process that has often been overlooked in the past. This is a very similar approach to that required to address Aboriginal archaeology.

Neoen would also carry out a heritage survey for the proposed footprint of the project prior to micro-siting to identify any European archaeological/heritage risks and develop management recommendations in line with the relevant legislation.

3. Project Concept Evolution

This chapter provides a more detailed description of the approach to the development of the project concept layout.

3.1 Conceptual Design Approach

This application represents the conceptual design which has been subject to an iterative design process using the Code Policy, landowner requirements and the results of impact assessments to minimise landuse planning impacts.

Neoen has employed independent specialists to explore key potential impacts of the project and provide professional advice to ensure that the location of the proposed development infrastructure would minimise impacts that may be generated by this project during both the construction and operation phases. The studies are summarised in Section 3.3 and full copies of the studies are contained in Volume 2 of the application package.

The findings and recommendations of these studies have resulted in a series of changes to the project layout as the project has evolved. As a result, Neoen has ultimately reduced the maximum number of proposed wind turbines from 143 turbines to 135, implemented evidence-based buffers and setbacks and relocated other infrastructure to avoid impacts.

A micro-siting allowance is proposed as part of this application to enable limited flexibility (up to 200m) in final placement of project element in order to address site specific environmental impacts. The experience in Goyder South is that this approach has enabled the avoidance of heritage and flora and fauna issues at a number of sites.

3.2 Project Evolution

All large infrastructure projects evolve over time as more detailed information becomes available and impact issues are assessed. This process of evolution continues past planning approval and through to construction.

The initial layout was developed based on early setbacks targets and avoiding obvious impact issues and exclusion areas.

Neoen has also aimed to build on the learnings and success of the Goyder South project and continue the development of the GRZ concept with the Goyder North development. As Goyder South commences construction a number of lessons have been learned including:

- 200m micro-siting allowance has successfully enabled the GS Stage 1 development to respond to detailed on-ground impact issues such as flora, fauna, cultural heritage, and geology that have become present during design finalization phase;
- The allocation of land for the substations should be increased to accommodate all site works; and
- The total area allowed for temporary construction facilities, and the distribution of these facilities across the site, was inadequate.

3.2.1 Turbine Layout Setbacks

Following a similar process to that of the Goyder South project, Neoen has determined a number of setbacks and exclusion zones for locating infrastructure, in particular, wind turbines. The following Table 1

below details the setbacks that have been applied to determine the WTG layout for Goyder North and the justification for each.

Table 2: Proposed minimum wind turbine setbacks.

WTG Setback	Minimum Setback Distance	Reason
Property Boundaries	100m	To avoid infrastructure crossing property boundaries
Residential zones / townships	3000m	To reduce the visual impact on the amenity of residential development (Code DPF)
Tourist Accommodation	1500m	To reduce the visual impact on the amenity of tourist development (Code DPF)
Uninvolved dwellings	2000m	To reduce the visual impact on the amenity of residential development (note: 500m greater than the requirement of the Planning Code)
Involved Dwellings	N/A	Setback determined by minimum EPA noise requirements unless otherwise specified by the landholder
National Heritage Areas	3000m	To reduce the visual impact on the amenity of heritage areas
State Heritage Areas	3000m	To reduce the visual impact on the amenity of heritage areas
EMI no-go zones	100m	To avoid interference with existing communications infrastructure

Table 3 below details the areas that have been considered as exclusion areas where no infrastructure (including WTGs, roads, cables etc.) will be located and a setback of 100m from property boundaries has been adopted.

Table 3: Proposed exclusion zones for infrastructure

Exclusion Area (+ 100m buffer)
Existing Heritage Agreement Areas
National Heritage areas
State Heritage areas
Landholder Exclusion zones
Mine lease areas
Conservation Areas
Identified ecological zones or cultural heritage sites
Crown Lands (<i>where possible</i>)
State Owned Land (<i>where possible</i>)

The turbines in the south-western corner of the project are expected to be the highest performing turbines of the project, potentially delivering up to 30% more energy than the lowest performing locations. Figure 7 shows the proposed WTG layout for Goyder North considering the setbacks and exclusion zones identified above.

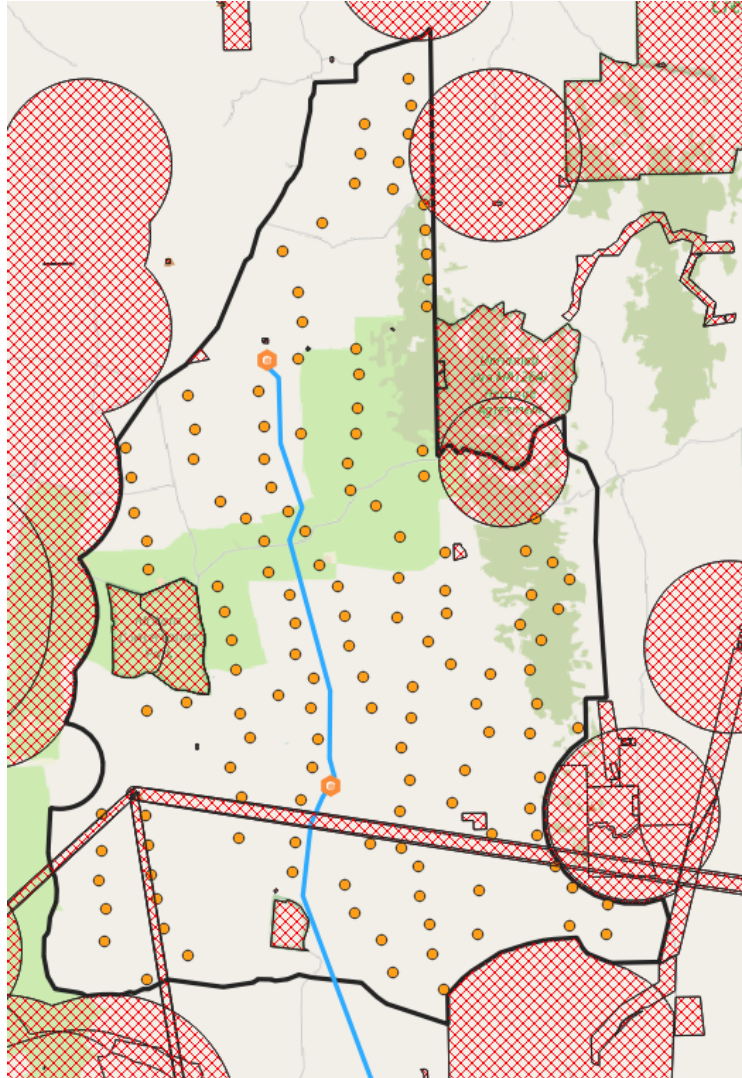


Figure 7: Proposed Wind Turbine Setbacks and Exclusion Zones

3.2.2 Visual Impact Considerations

In addition to applying the above design criteria, further consideration was given to the visual impact of the turbines and the OTL. This included the following high-level changes:

- 1) Five WTGs identified as some of the highest performing locations on the site were removed from the initial layouts even though they were compliant with the proposed setbacks. Set upon the ridge closest to the Barrier Highway and Burra Township it was deemed that, despite their expected performance, they provided an unacceptable visual impact to the area and were removed. This has reduced the visual impact along the Barrier Highway in the vicinity of the Midnight Oil House.
- 2) The OTL route was moved to the north side of the Goyder Highway to reduce the visual impact on views of the Worlds End Valley from the Highway.

- 3) An additional three WTGs were removed from the layout as it was deemed that creating a less cluttered view from the Cornish Mining Site would reduce the impact to the heritage values of Burra.

It is acknowledged that additional consideration of visual impact, insofar as it is relevant to heritage, will occur as part of any EPBC referral process.

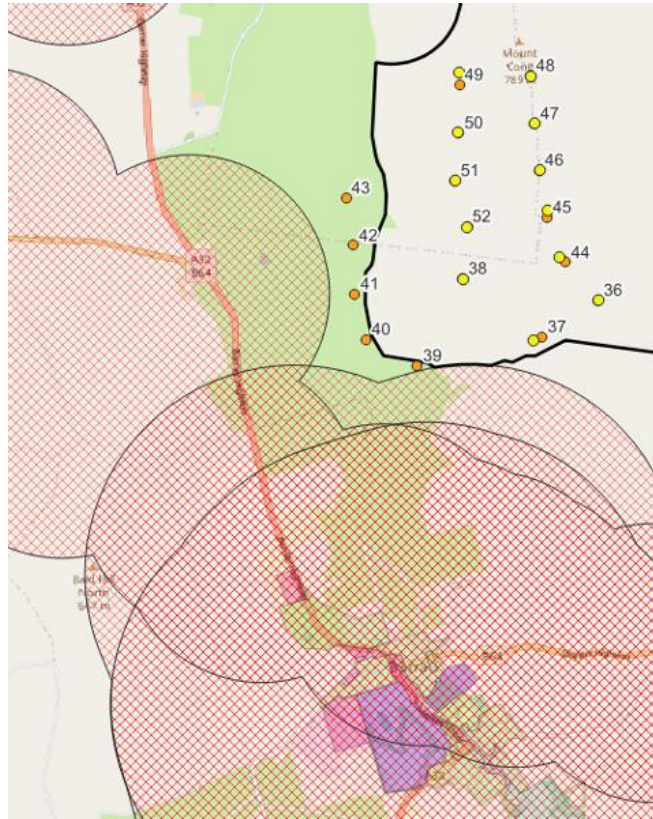


Figure 8: WTGs 39-43 were removed from the initial layout to reduce the visual impact of the project.

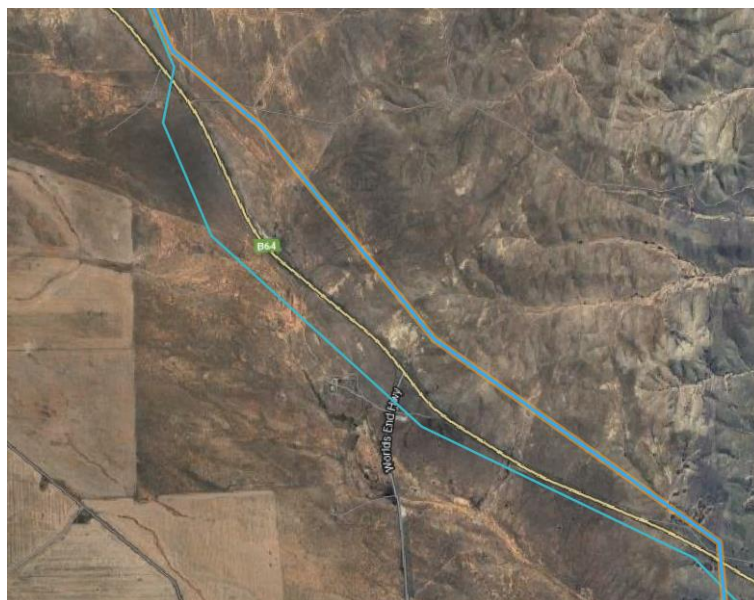


Figure 9: The OTL route was moved to the north to minimise the visual impact on views of Worlds End Valley

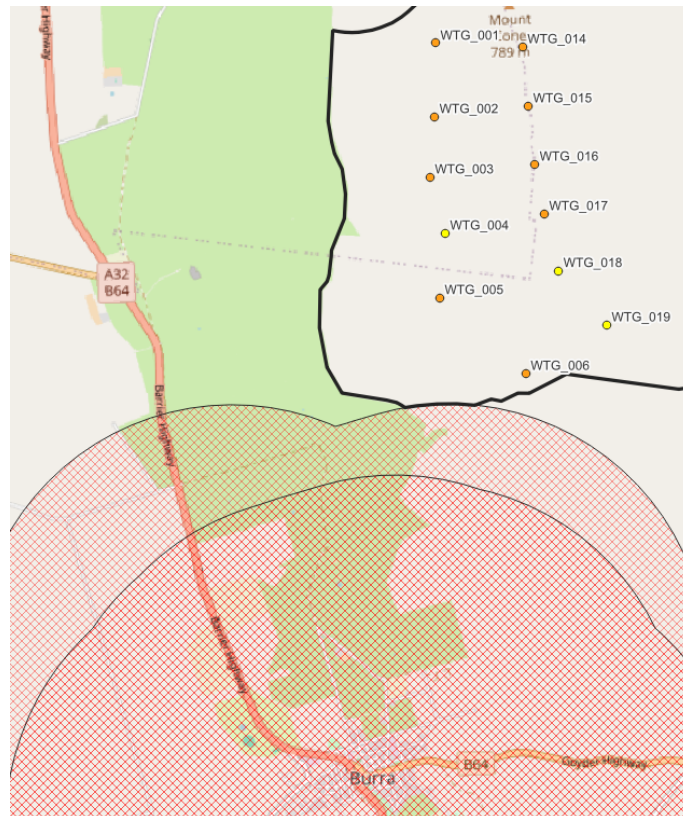


Figure 10: WTGs 4, 18 and 19 (in yellow) were removed from the layout to reduce the visual impact of the project.

3.3 Mapping Qualifications

The mapping information provided in this application uses aerial photography as the base image, where possible. This informs the assessment of the project elements in their setting.

However, the location of project elements is defined by reference to cadastral parcels such as the Certificate of Title references as listed in Appendix C: Site Definition.

It is noted that the legal cadastral boundaries do not always line up with the aerial image. This is due to the distortion in the aerial photography that occurs where there is rugged topography. This means that there are some locations where the cadastral boundaries and the aerial image information are confusing (e.g. a road that is running along a fence line on the ground does not appear to line up with the cadastral property line that is overlaid on the aerial image).

Where the mapping images show such situations, it should be assumed that the project will NOT encroach on adjacent cadastral parcels. The boundary of parcels is usually very clear on the ground due to boundary fences. In the event of a situation where the boundary is unclear (e.g. where there are no boundary fences) surveys will be undertaken to ensure that appropriate setbacks are achieved to ensure no encroachment (on ground or aerial).

3.4 Specialist Studies Summary

The following provides a summary of the specialist studies undertaken for the project. These can be found in Volume 2 of the application package.

The studies have identified mitigation practices that the applicant commits to implementing in order to minimise impacts if the project is approved. These are set out in Chapter 6 of this document.

3.4.1 Aviation Impact Assessment

Specialist	Aeronautical Impact Assessment, Chiron Aviation Consultants, 20 December 2023.
Investigations:	An Aviation Impact Statement was prepared by Chiron Aviation Consultants following consultation with CASSA, Defence and other relevant bodies. The assessment was undertaken based on a conservative estimate of structures being 250m Above Ground Level (AGL) and 138 turbines.
Findings:	<p>The AIS concluded that the Goyder North Project will not impact upon the following:</p> <ul style="list-style-type: none"> • The Lowest Safe Altitude of nearby published air routes; • The Obstacle Limitation Surface (OLS) of any certified aerodrome; • The Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces associated with the Instrument Approach Procedures at any Certified Aerodrome; • The operation of the Uncertified Aerodrome at <ul style="list-style-type: none"> ○ Clare Valley ○ Jamestown; or Peterborough; • Restricted Area R265D; • The performance of Communication, Navigation or Surveillance Facilities. <p>Airservices Australia advise that Goyder North will impact the GRID Lowest Safe Altitude east of 139 degrees longitude. This GRID LSALT will need to be raised from 3800ft to 4300ft.</p> <p>Goyder North sits near existing wind farms within Danger Area D258B, an area used for military flying training. It is unlikely to have an impact given that Goyder South did not pose an issue.</p> <p>Obstacle lighting is not required as the risk to aviation is LOW and no additional mitigating strategies are necessary.</p> <p>Department of Defence had no objection to the project but did note the potential presence of UXO and recommend taking due regard of this prior to earthworks.</p>
Recommendations:	<p>The wind turbines and meteorological monitoring masts are tall structures; therefore they must be reported to the Vertical Obstacle Database, managed by Airservices Australia.</p> <p>The potential presence of UXO should be identified and appropriate precautionary steps taken prior to construction.</p>
Neoen Response:	<p>Neoen will comply with the recommendations and ensure that all tall structures are registered and that meteorological masts are appropriately marked for safety.</p> <p>Neoen note the issue regarding UXO (similar to the Goyder South experience) and will undertake appropriate precautionary steps.</p>

3.4.2 Ecological Impact Assessment

Specialist	<p>Ecological Risk Assessment Summary, EBS Ecology, 17 November 2023</p> <p>Flora and Fauna Assessment, EBS Ecology, 21 February 2024</p>
Investigations:	<p>The ecological assessment for Goyder North commenced very early in the project planning phase and has been based on multiple surveys undertaken between 2010 and 2022. This information and the approach to the mitigation hierarchy is summarised in the “Ecological Risk Assessment Summary” (Nov 2023).</p> <p>Additional surveys are currently being undertaken to inform the Native Vegetation Clearance and EPBC processes and to assist with micro-siting issues.</p> <p>The main specialist study that informed the working approach to the layout is the “Flora and Fauna Assessment” prepared by EBS and originally issued in Dec 2022. An up-dated version of this report is also contained in Volume 2 (Flora and Fauna Assessment, 21 February 2024).</p>
Findings:	<p>The investigations identified a number of protected flora and fauna species within the project boundary or locations/habitats likely to host protected species. These included species are protected by the EPBC Act.</p> <p>The investigations also identified native vegetation that will require assessment and an application for clearance under the Native Vegetation Act.</p> <p>The presence of Southern Hairy-nosed Wombats was also identified as a project construction and operation risk.</p> <p>EBS conducted a risk assessment on a draft layout to identify those locations that have high risk of intersecting with protected flora and fauna. The layout was then amended to avoid or reduce the risk of impact where possible.</p>
Recommendations:	<p>EBS have identified numerous situations where micro-siting, particularly of turbines and OTL towers, will be able to address and minimise impacts.</p> <p>Notwithstanding this, the project will trigger the following:</p> <ul style="list-style-type: none"> • <i>Native Vegetation Act 1991</i> (NV Act) – clearance of native vegetation requires approval under the NV Act. • <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) – potential significant impacts to MNES require referral to the Commonwealth Government. <p>EBS has made several recommendations to further reduce impacts including further detailed studies to inform micro-siting.</p>
Neoen Response:	<p>While numerous impact issues have been addressed by avoiding high risk locations, additional detailed surveys have been and will continue to be undertaken. This work is feeding more detailed information for assessment via the Native Vegetation Clearance and EPBC application processes and will support the micro-siting process.</p> <p>Neoen engaged EBS to undertake subsequent required ecological surveys in spring 2023 and early 2024, including:</p> <ul style="list-style-type: none"> • Native vegetation surveys in accordance with the Native Vegetation Council (NVC) approved Bushland and / or Scattered Tree Assessment Method. • Field assessments suitable to inform EPBC self-assessment and subsequent Referrals (if required) for relevant Matters of National Environmental Significance (MNES) including: <ul style="list-style-type: none"> ○ Targeted Lomandra Grassland (INTG) surveys to determine condition classes within the proposed impact areas (commencing November 2023 and spring 2024 if required).

- Targeted Pygmy Bluetongue Lizard (*Tiliqua adelaidensis*) (PBTL) field surveys to determine the occupancy and abundance of PBTL across habitat identified as known, likely and possible in the Project impact area (commencing February 2024).
- Seasonal Bird and Bat Utilisation Surveys (BBUS) to inform EPBC interim bird and bat wind farm guidelines (commenced November 2023).

Survey work will inform an ongoing commitment by Neoen to minimise ecological impacts through adaptive management of the Project and micro-siting of infrastructure components.

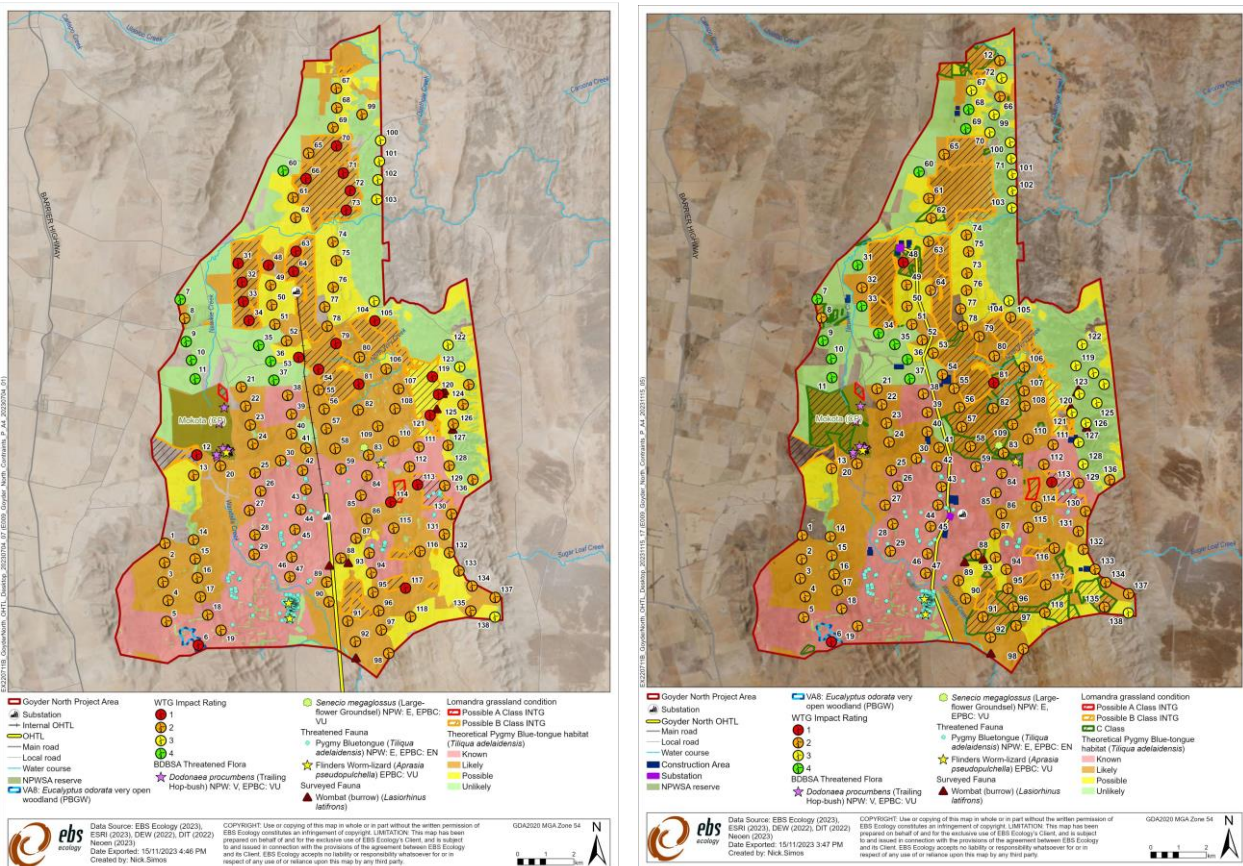


Figure 11: Response to Ecological Risks (left: preliminary WTG layout and risk assessment, right: current WTG layout and risk assessment)

3.4.3 Electromagnetic Interference Assessment

Specialist

Electromagnetic Interference Assessment, GHD Pty Ltd, 12 January 2024

Investigations:

The EMI study explored the full range of potential impacts using Section F of the *Draft National Wind Farm Development Guidelines* (Environment Protection and Heritage Council of Australia and New Zealand, EPHC July 2010) as a basis for the methodology.

The assessment was used to determine which areas of the project site are unsuitable for the installation of turbines as well as to consider the impacts on wide-area services in the region.

The initial turbine layout was amended to remove turbines from locations that were identified as EMI “no-go” zones and a 100m setback was applied.

Findings:	<p>The report noted that the turbines have been spaced to mitigate the effect of creating a “virtual wall” of turbines.</p> <p>The investigations identified that, subject to avoiding exclusion areas and complying with setbacks, the project will mostly have nil to negligible impacts. There were three cases where “minor to no impact” was identified, in which case monitoring or consultation strategies were recommended and known mitigation strategies can be applied.</p>
Recommendations:	<p>Notwithstanding that the impact is likely to be “minor to no impact” or “minor to manageable”, the EMI Report makes the following recommendations:</p> <ul style="list-style-type: none"> • Fixed Point-to-Point Radio Links – maintain 100m of separation between any SA Government Radio Network path and the outer diameter of any turbine blade if possible. • Digital Television Broadcast – pre and post construction surveys and mitigation techniques applied if required. • AM/FM Narrowcast and Broadcast – pre and post construction surveys and mitigation techniques applied if required. • Meteorological Radar – maintain regular communication with the Bureau of Meteorology, informing them of changes to the wind farm, any planned shut-downs and collaborate with the Bureau during severe weather events. • 50Hz Transmission Lines – transmission and substations designed as per relevant Australian standards. <p>It was also recommended that the project utilise (wherever practicable) equipment complying with the Electromagnetic Emission Standard, AS/NZS 61000.6.4:2012 to avoid the creation of excessive RF noise at frequencies that interfere with radio communication signals. Electrical insulation and shielding should be considered in the turbine design to reduce the RF noise emitted from the electronic control systems located in the nacelle.</p>
Neoen Response:	<p>Neoen acknowledges the issues raised and has adopted the recommendations for micro-siting four turbines, pre and post surveys and communication.</p> <p>The provision of greater setbacks than those normally applied will be considered and addressed as part of the micro-siting process if required.</p>

3.4.4 Heritage Impact Assessment

Specialist	Heritage Assessment Summary, Independent Heritage Consultants, January 2024.
Investigations:	<p>IHC undertook a desktop heritage assessment covering all forms of heritage protected at the State level by the Heritage Places Act 1994 (HPA), the Planning, Development and Infrastructure Act 2016 (PDIA), and the Aboriginal Heritage Act 1988 (AHA).</p> <p>This work aimed to highlight known/documented heritage (to be avoided by the project) and identify the likely risk of impact on undocumented heritage.</p>
Findings:	<p>The investigations identified the following findings:</p> <ul style="list-style-type: none"> • the OTL route will not intersect with any listed heritage places; • there is a high risk of works encountering the remains of undocumented built heritage and archaeological features of heritage significance; • there is a low risk of works encountering unknown Aboriginal sites and objects in previously developed soils and a moderate risk in undeveloped soils.

Recommendations:	<p>In the event that works encounter the remains of undocumented built heritage and archaeological features of heritage significance these should be managed under the requirements of s.27 of the <i>Heritage Places Act</i>.</p> <p>The report also recommended the following:</p> <ul style="list-style-type: none"> • consultation with the relevant Aboriginal groups; • implementation of a site discovery procedure; • site inductions; • have archaeologists on call to identify potential discoveries.
Neoen Response:	<p>Neoen acknowledges the recommendations and commits to undertaking the above, including identifying and avoiding undocumented remains as part of the micro-siting process.</p> <p>In addition to the above, Neoen is working with the Ngadjuri Nation to undertake initial indigenous archaeological survey work. This will feed into the micro-siting process.</p>

The proposed development does not trigger any State level planning referral regarding heritage impacts . However, it is acknowledged that the project will trigger an EPBC process because Burra is also nationally listed heritage site. The following report has been prepared for the EPBC process, but also includes an assessment of state heritage values and is provided in Volume 2 for information purposes.

Specialist	Heritage Impact Assessment, Biosis Pty Ltd, 1 February 2024
Investigations:	<p>Biosis undertook a Heritage Impact Assessment (HIA) for the project. This report was prepared to advise Neoen and address potential impact issues relating to the <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i>. This work identified the likely risk of impact on EPBC heritage values. Consideration was also given to the <i>SA Heritage Places Act 1993</i>.</p>
Findings:	<p>The investigations influenced the project layout at several key points in the iterative design process. The final report (dated 1 Feb 2024), is based on the final 135 turbine layout and notes the following:</p> <ul style="list-style-type: none"> • there are no direct impacts to the physical fabric of the listed sites. • the potential impacts on the National Heritage and State Heritage values are therefore visual. • the proposed GNREF project has a moderate indirect visual impact. The distant rural setting would be altered to the north-east by the proposed works as they are a new element in the currently empty horizon. However, the altering of the distant views to the north-east from the mine site would not impact on the understanding of the revolutionary mining technology. • there is one CMP Policy that relates to the setting of Burra (policy 5.9), and the HIA has noted that the proposed works are not generally in accordance with this policy. However, the view to the turbines is mostly obstructed by the topography when exploring the mine site and reading interpretive signage at lower ground level. The proposed turbines would also be completely out of view when observing the mine site from the Mine Lookout, as the view faces south. <p>As the views from Burra are not specifically cited in the NHL criteria, the proposed Goyder North project would not have a significant impact as defined by the <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i>. The</p>

	proposed project will not have a substantive impact on the National Heritage values of the Australian Cornish Mining Sites (Burra).
Recommendations:	The HIA noted that a reduction of the number of turbines has already aided in decreasing the potential for adverse impacts on the heritage values of Burra. Further reduction in the number of turbines that are visible from the mine site further reduce the adverse visual impacts and should be considered where changes are possible to the turbine layout.
Neoen Response:	Neoen notes that the turbines in the southern portion of the project area represent very high value wind resource locations. While Neoen are open to improving the layout, the loss of such valuable turbine locations will need to be considered with great care.

3.4.5 Visual Impact Assessment

Specialist	Visual Assessment, Green Bean Design Pty Ltd, 4 April 2024
Investigations:	<p>GBD was commissioned to prepare a visual assessment to consider the potential for visual effects associated with the proposed Goyder North Renewable Energy Facility and to address various 'landscape' and 'scenic amenity' statutory requirements of the SA Government as presented in the Planning and Design.</p> <p>The assessment involved a methodology that was guided by a number of national and international Guidelines and included consideration of information obtained from site visits and investigations and relevant zone, overlay and general Code Policy.</p> <p>The report identified that the key principles of visual assessment consider a combination of: receiver sensitivity (landscape or people) and potential magnitude of visual effects. For wind farm projects the magnitude of visual effects is primarily determined through:</p> <ul style="list-style-type: none"> Distance between wind turbines and receiver locations; Horizontal field of view occupied by wind turbine structures; and Vertical field of view occupied by wind turbines.
Findings:	<p>The assessment found the following:</p> <ul style="list-style-type: none"> The project complies with the relevant Code Policy in relation to the impact on individual dwellings (particularly in meeting setback suggestions); the key viewpoint assessment identified that the visual impacts are likely to have moderate or moderate low visual effect; and the Project would not significantly increase the magnitude of cumulative visual effect for most dwelling locations surrounding the Project site. <p>It noted that, for the key viewpoint of Burra, the overall extent of wind turbine visibility would be restricted to a small number of wind turbines within the southern portion of the Project site.</p> <p><i>"Views toward the proposed wind turbines from most public spaces within the Burra township would be largely screened by buildings and/or vegetation and tree cover within surrounding streetscapes, located within parks and gardens or following the Burra Creek corridor. Views from public spaces within the north section of the Burra township would also be subject to screening through undulating landform north of the township. Ancillary electrical infrastructure, including substations, transmission lines and BESS facilities, would not be visible from public spaces within the Burra township".</i></p> <p>The assessment acknowledges that wind farms are of a form and nature that visual impacts will be experienced.</p>

	The Visual Assessment concluded, having assessed the potential visual effect of the Project against relevant policies and guidelines, the level of landscape and visual effects are acceptable.
Recommendations:	<p>The report acknowledged that there are limitations to mitigation strategies applicable to wind energy facilities and that potential for visual impacts must be balanced against other project requirements and impact issues.</p> <p>A level of acceptance for unavoidable low to moderate visual impacts should be considered appropriate without the need for mitigation as is indicated by the Code policy.</p> <p>Nevertheless, the report identifies a number of mitigation measures that could be applied at the final detailed design stage, construction and operation.</p>
Neoen Response:	Neoen notes the findings and will consider the detailed design, construction and operation mitigation measures.

Specialist

Shadow Flicker and Blade Glint Assessment, GHD Pty Ltd, 19 March 2024

Investigations:

GHD undertook an assessment of potential Shadow Flicker impacts based on the 135-turbine layout. The assessment used a recognised, conservative modelling program to simulate and calculate the theoretical number of hours of shadow flicker at each dwelling.

GHD has conducted the shadow flicker assessment in accordance with the Draft National Wind Farm Development Guidelines for Australia (2010) (Draft Guidelines), which state that maximum value of shadow flicker duration experienced within 50 m of the centre of a dwelling must not exceed 30 hours per year (or 10h expected case).

Exception is given if the operator of the wind energy facility has entered into an agreement with a landowner under which the landowner acknowledges and accepts that shadow flicker may exceed 30 hours per annum at the landowner’s residence.

Findings:

The findings of the modelled assessment are summarised in the Table below (p10):

Table 4Calculated shadow flicker 135 x WTG at 160 m hub height and 180 m rotor diameter

Receptor ID	Easting (m)*	Southing (m)*	Elevation ASL (m)	Worst Case Shadow Flicker (h/year)	Shadow Flicker (days/year)	Max Shadow Hours per Day (h/day)	Expected Case Shadow Flicker (h/year)	Modified Case (h/year)
Receptor GN05	311137	6287605	580.0	143:14	211	1:09	84:51	57:01
Receptor GN06	314087	6286844	600.0	93:07	168	0:58	54:58	40:54
Receptor GN09	312769	6279026	541.3	114:51	140	1:12	56:37	37:16
Receptor GN59	313127	6295993	575.9	34:58	98	0:30	22:30	14:05
Receptor GN54	311807	6292129	533.7	35:29	113	0:27	22:45	15:01
Receptor GN57	310035	6290891	550.0	77:52	94	0:58	52:00	32:30
Receptor GN90	317688	6294500	437.7	65:28	155	0:35	40:06	29:21

WTG Downtimes.zip emailed on 19/02/24

UTM(South) WGS84 Zone 54

In accordance with the Draft Guidelines, blade glint is not expected to be an issue provided that wind turbine blades use non-reflective coatings.

Recommendations:

Upon finalisation of the turbine locations and prior to construction, it is recommended that Neoen undertake an updated shadow flicker assessment to minimise shadow flicker impacts on nearby receptors where possible, and to ensure there is no increase in exceedances. Should there be an exceedance, the expectation is that there is an appropriate agreement in place with the affected landowner and that mitigation measures are considered and/or implemented.

Additional landscaping or screens should be considered to help reduce shadow flicker impact, particularly for Receptors surrounded by sparse vegetation and little vegetation coverage (i.e. due to trees).

Wind turbine technical specifications and procurement documentation should specify that all wind turbine blades be finished with a low reflectivity treatment to minimise possible effects of blade glint on neighbouring dwellings and communities as reflected in the Scoping Requirements.

Neoen Response:

Neoen confirms that all of the affected dwellings are either involved landowners or close neighbours, with whom Neoen have or are currently negotiating an agreement.

Notwithstanding this, Neoen undertook additional on-ground investigations in response to the results of the Shadow Flicker assessment. The results of the investigations are provided in the following table:

Modified Case (hr/yr)	Ref ID	Occupancy Status	Observed Conditions (Mitigation/Management)
57:01	GN05	Occupied (rented/worker accommodation)	Reasonable potential for existing surrounding vegetation to screen from impact.
40:54	GN06	Occasional Use	Screens or landscaping to the west may be required.
37:16	GN09	Occasional Use	Reasonable potential for existing surrounding vegetation to screen from impact.
32:30	GN57	Occasional Use	Further planting in the front yard may be required.
29:21	GN90	Occasional Use	Screens or landscaping may be required to the west.
15:01	GN54	Occupied (owner residence)	Reasonable potential for existing surrounding vegetation to screen from impact.
14:05	GN59	Occupied (rented/worker accommodation)	Screens or landscaping may be required to the east.

The investigations found that there is reasonable potential for shadow flicker impacts to be screened by the existing physical structures or vegetation or mitigated using physical or landscape screening techniques.

Neoen is aware that there is growing pressure on housing in the region and is keen to ensure that the project has minimal impact on this supply. For this reason, Neoen will:

- Ensure that all landowners of affected dwellings are informed of the potential for shadow flicker impact and provided with information to this effect;
- The potential impact will be modelled again when the micro-siting process has been finalised and again post-construction; and
- Work with landowners to identify and implement reasonable measures to reduce any actual shadow flicker to an acceptable level .

Neoen accepts the recommendation to minimise blade glint.

3.4.6 Noise Impact Assessment

Specialist	<p>Environmental Noise Assessment (Wind Farm), Echo Acoustic Consulting, 14 November 2023</p> <p>Environmental Noise Assessment (BESS), Echo Acoustic Consulting, 14 March 2023</p>
Investigations:	<p>The project has been assessed having regard to:</p> <ul style="list-style-type: none"> • Relevant Policies contained in the Rural Zone of the Planning and Design Code • Wind farms environmental noise guidelines 2021 • Environment Protection (Commercial and Industrial Noise) Policy 2023 <p>The environmental noise assessment predicts the noise associated with the WTGs and transformers to ensure the acoustic amenity of the surrounding existing and approved dwellings, and tourist accommodation (receivers) is not adversely affected by the project.</p> <p>A battery (BESS) component was added to the project later in the design process. As a result, a separate noise assessment for the BESS sites was undertaken and is included in Volume 2 of this application.</p> <p>The assessment considered the impact on uninvolved and involved receivers as well as issues such as cumulative impact (including the potential impact of the Goyder South development). The modelling has been based on conservative estimates and without adjustment (increase) for background noise.</p>
Findings:	<p>The predicted noise levels for the wind farm were modelled, and the results are shown in the following Figure. The results are summarised as follows:</p> <ul style="list-style-type: none"> • the 40 dB(A) criterion is achieved at all uninvolved receivers for all candidate WTGs. • the 45 dB(A) criterion is achieved at all involved receivers with the exception of GN06, where it is understood that there is an agreement in place relating to the dwelling not being inhabited for the life of the project (should the noise be considered unreasonable by the owner). Alternatively specific noise reduction treatments could be incorporated to the dwelling to satisfy the Guidelines. • based on the above, the project can reasonably satisfy the Guidelines for the conservative assessment scenario of the highest sound power levels based on three candidate WTG types, and across all integer hub height wind speeds up to rated power (highest predicted noise level generation). <p>In relation to the three battery sites, the predicted noise levels can be achieved at all receivers except GN54 (when assuming cooling fans operate at 100% capacity at all hours of the day). When a more realistic operating assumption is applied to the cooling fans, the noise criteria is achieved.</p>
Recommendations:	<p>That Neoen prepare a noise monitoring plan to establish a compliance monitoring regime prior to construction and accept a Condition to this effect.</p> <p>The noise assessment should be updated if:</p> <ul style="list-style-type: none"> • the warranted sound power levels of the final WTG increase above those presented in Table 3 of the report (Nov 2023) in Volume 2, • the final WTG data exhibit tonality, or • there are changes to the status of the involved receivers. <p>In relation to battery noise impacts, the assessment be updated once the final equipment selections and operational characteristics are known. This will confirm the extent to which GN54 might be impacted.</p> <ul style="list-style-type: none"> • If required, the residual noise reduction measures could comprise glazing or insulation upgrades at the GN54 dwelling, or localised shielding of the key BESS components, subject to the final equipment selection and arrangement.

Neoen Response:

Neoen accepts the recommendations and, in addition, will update the noise assessment once the final equipment and models have been selected and the micro-siting process has been completed. However, it is highly unlikely that changes within 200m will result in any material change to noise predictions for the wind farm.

Neoen has agreed with involved landowners and involved neighbours to conduct noise assessments at locations where the noise criteria might be exceeded (e.g. GN06 and GN54).

Neoen acknowledge that the noise modelling for the BESS indicates that the EPA noise policy may be exceeded at one neighbour residence (GN45) which is an involved neighbour. Neoen would accept a Condition to ensure that this matter is resolved either by reducing the noise impact or dwelling treatments.

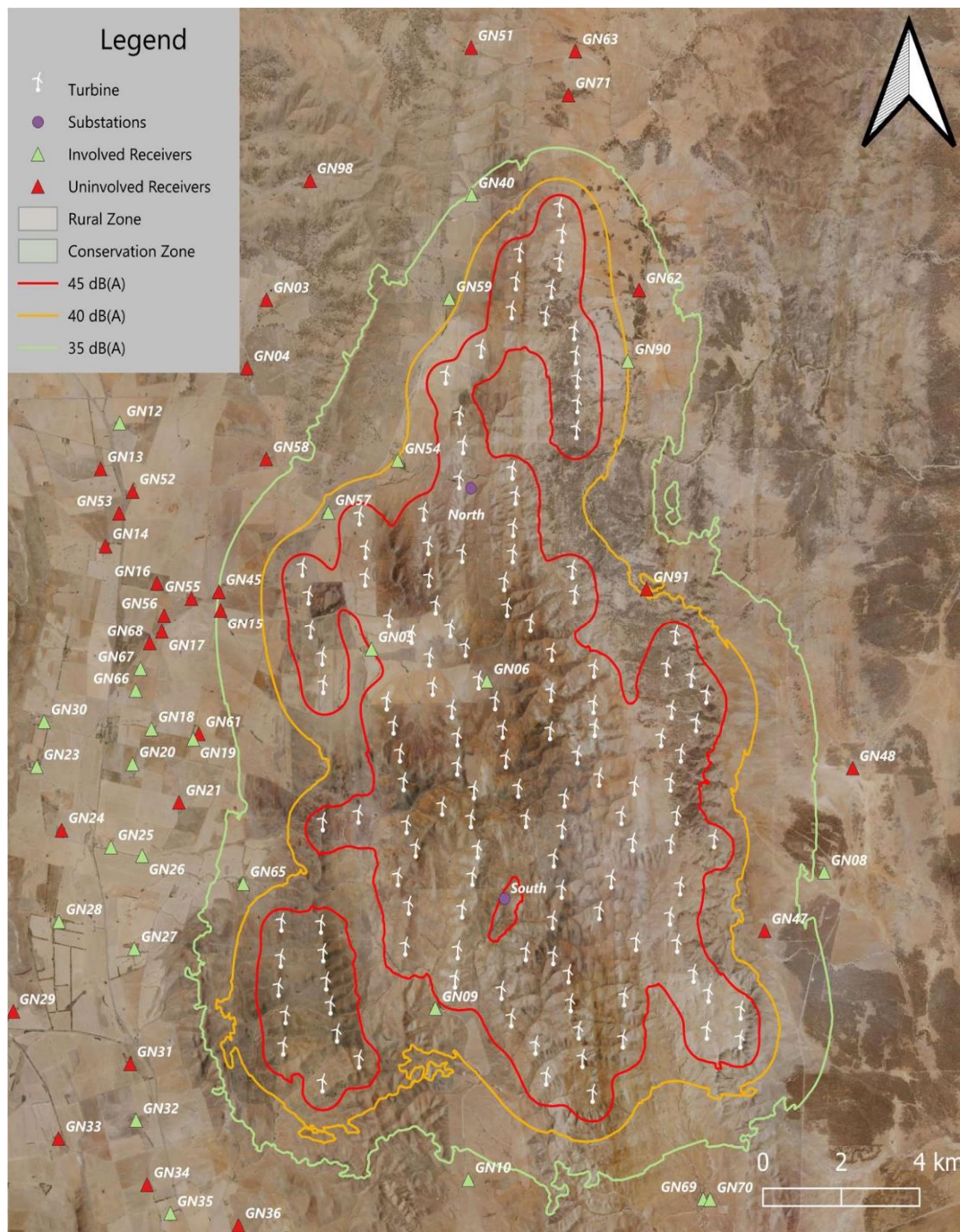


Figure 12: Wind Farm Noise Impact Assessment

3.4.7 Traffic Impact Assessment

Specialist	Traffic Impact Assessment, Jacobs Pty Ltd, 9 February 2024
Investigations:	<p>This report outlines the traffic and transport impacts of the project with a focus on the most impactful phases of construction, operation and decommissioning and provides recommendations to mitigate the impacts.</p> <p>The assessment considered:</p> <ul style="list-style-type: none"> • site accessibility (existing arterial and local road conditions); • transportation requirements for the development (construction, operation, and decommissioning); • projected traffic generation and impacts; and • recommended upgrades to access points and along designated routes. <p>The report also considered the current construction experience for Goyder South as the regional access options are essentially the same.</p>
Findings:	<p>The investigations found that the project will have a traffic impact, primarily during the construction phase. By adopting the recommendations, the traffic impact should be minimised, and safety levels maintained.</p> <p>The assessment identified three regional scale access routes but highlights the following qualifications:</p> <ul style="list-style-type: none"> • Route D1: Proposed to be used for the transport of OSOM vehicles, up to the vertical clearance limits identified, as well as currently gazetted vehicles. • Route D2: Proposed to be suitable for use solely by currently gazetted vehicles. • Route D3a: Proposed to be used for the transport of OSOM vehicles, up to the vertical clearance limits identified, as well as currently gazetted vehicles. • Route D3b: Proposed to be used for the transport of OSOM vehicles, up to the vertical clearance limits identified, as well as currently gazetted vehicles. <p>Route D1 is the preferred route, with Route D3 to serve as an alternative route in the event that Route D1 cannot be used by any or all of the development vehicle types.</p>

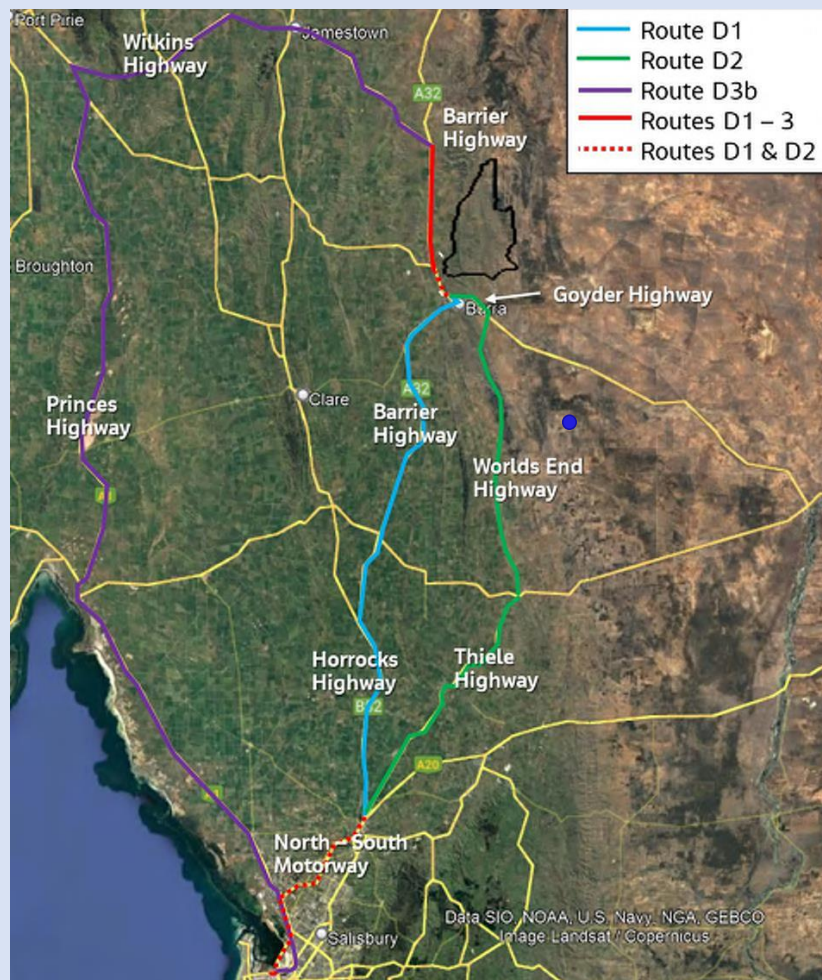


Figure 3.3: Designated Routes to Goyder North

The report recommended that a specific Traffic Management Plan (TMP) be developed, in consultation with DIT and Council to ensure all road safety and traffic issues are addressed and the impacts to the local communities and road users are minimised. The TMP should include:

- Specified delivery periods, routes and access points to the development area for all equipment and materials supplied.
- Designated warning signage, appropriate controls and procedures to address potential traffic impacts and to ensure vehicles use the designated routes.
- Controls to inform road users and local communities of the changed traffic conditions.

Local access to the Goyder North development area is proposed via four points (T1 – T4) located along Barrier Highway.

- Access points T1, T2 and T4 are considered suitable for all vehicle types, including OSOM vehicles.
- Access point T3 is considered suitable for all vehicle types, but with gazetted and OSOM vehicles approaching from the south only.
- Access point T5 is considered suitable for general access vehicles only, due to the proximity to Mount Bryan. However, it is not recommended as a site access point for the project given the other site access points are more suited.

It is proposed that there are at least two access points from the Barrier Highway for the whole duration of the construction phase as a back-up in the event one access becomes unusable: T1 is nominated as the preferred access point, with T2 as preferred back-up.

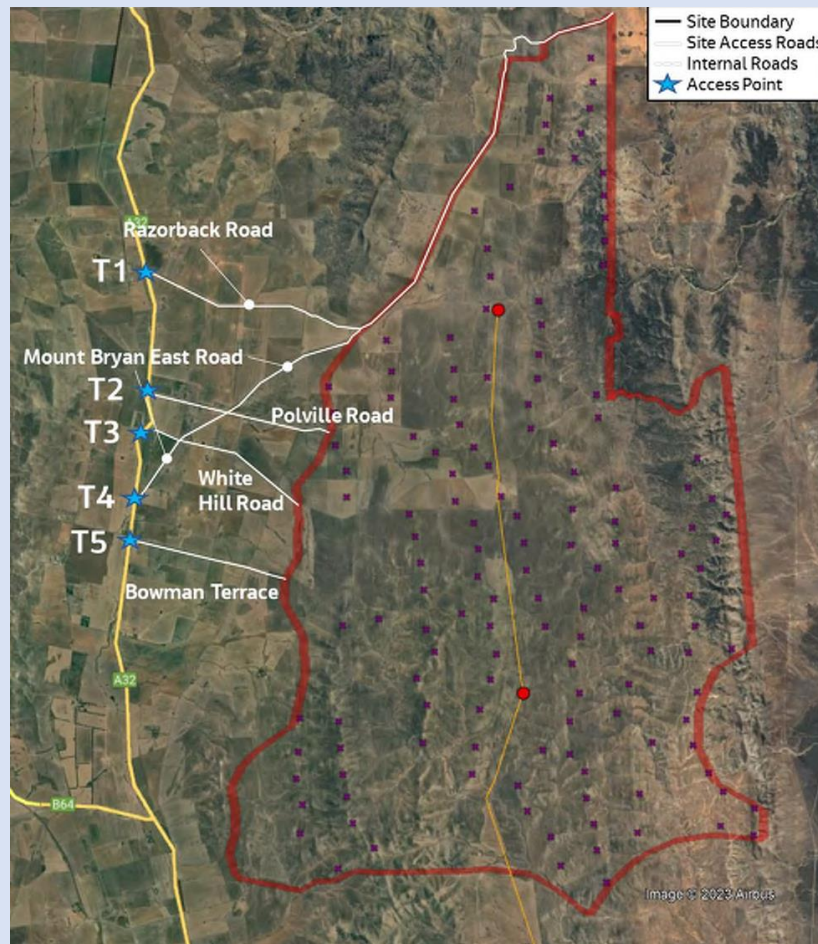


Figure 6-3: Assessed Site Access Points

Access Point T6, which provides access to the Bunday substation and battery site, is considered sufficient to accommodate construction traffic in its current arrangement.

Recommendations:

The report makes the following recommendations:

A Traffic Management Plan (TMP) is developed in consultation with DIT and Council based on the following:

- Route D1, via Horrocks Highway and Barrier Highway, is the preferred route for all construction traffic, including restricted access and OSOM vehicles, up to the vertical clearance limits. In the event of Route D1 being unavailable or not suitable for OSOM vehicles, Route D3 is the recommended alternative. Route D2 is recommended for use by vehicles up to the current gazetted limits only.
- When final component dimensions have been confirmed, conformance with available bridge clearance on the assessed routes will need to be verified.
- It is proposed to use at least two of the assessed four existing site access points via rural access roads to access the site from the State controlled road, with intersection upgrades proposed where necessary to accommodate vehicle movements. T1 has been nominated as the preferred site access point, with T2 as the preferred back-up.
- The access points (T1 – T4) are considered suitable for use by all construction vehicle types, including restricted access and OSOM vehicles.
- The access points were ranked regarding suitability as an access and the scale of upgrades required to be used as an access. The rankings were, from highest to lowest, T1, T2, T4, T3.
- Recommendations for turning treatment upgrades at intersections have been provided to improve the efficiency and safety of traffic movement, due to the large number of turning vehicle movements in the construction phase.

	<ul style="list-style-type: none"> • Access Point T6, which provides access to the Bundey battery site, is considered sufficient to accommodate construction traffic in its current arrangement. • There will be a substantial increase in heavy vehicle traffic during the construction stages of the project, however existing traffic volumes surrounding the project area are relatively low. There is a risk of surrounding drivers unexpectedly encountering slow-moving vehicles. Signs warning drivers to expect slow moving traffic should be considered as part of the TMP to manage this risk. • Due to the greatly reduced traffic generation during the operational phase of the project, no significant operational traffic impacts have been identified in addition to construction stage impacts. • The lifespan of the technology associated with the project is approximately 30 years. Towards the end of this lifespan a decision will be made either for decommissioning or renewal. In either instance another assessment of traffic impacts will be required; • Permits will need to be obtained from NHVR and DIT for all vehicles transporting equipment and materials to the site which are outside the mass and size limits of current gazetted highways and roads specified in the document.
Neoen Response:	Neoen acknowledges the TIA recommendations and will undertake more detailed investigations when the selection of equipment becomes known and the approach to construction is further developed.

3.5 Variation between reports

Neoen has gone to significant lengths to ensure that the detailed description of the proposed project is consistent across all of the specialist reports that are contained in Volume 2 of the application package. However, it is recognised that all large-scale project applications display some level of inconsistency between the details of the final proposal and the project description used in the specialist reports. This is because:

- The specialist reports are intentionally commissioned early in the layout development process to identify potential impacts and avoid these where possible. The specialist studies are therefore undertaken based on early versions of the project layout. The project design also evolves during this time and updated information is passed to specialists as this occurs. With multiple separate teams of specialists, minor errors are all but inevitable.
- Specialists often choose to base their qualitative conclusions on assumptions about the proposed equipment to be used (number, size, scale, type, model) that represent a **conservative** impact scenario. This enables the studies to factor in a reasonable contingency when predicting impacts to ensure that the final project layout and approach would perform better than the acceptable impact thresholds.
- A number of notable changes have been made between the initial lodgement and the public consultation version of the application. These changes included reduction of turbines from 138 to 135, an updated noise assessment for the batteries and the addition of information as identified by referral bodies.

Neoen therefore respectfully requests that where inconsistencies of a minor nature appear within the documentation, the details contained in **this application report (Volume 1), and not the specialist reports (Volume 2)** are recognised as the true and correct description of the proposed project. Where necessary, Neoen will promptly issue any required clarifications.

4. Detailed Project Description

4.1. Application Plans

A set of plans that provide more detail on key sites and typical layouts is provided in Appendix B.

As the micro-siting process is undertaken for each site, the detailed plans would be prepared in stages. These detailed plans would then be submitted for approval leading up to the construction process (including Building Rules approval).

Adequate land area has been identified to include all the site works needed for each element including site preparation, levelling and foundations and stormwater management systems.

4.2 Site Definition

Please refer to Appendix C for a full list of ‘involved’ land parcels for statutory purposes. The following distinctions should be noted:

- The ‘Project Boundary’ has been delineated to broadly identify the cluster of project elements that comprise the proposed development. This includes turbines, substations, batteries, and transmission lines. The boundary includes the land that hosts this infrastructure as well as some parcels which do not.
- The ‘development area’ includes those parcels and portions of parcels directly affected by (i.e. hosting) the project elements and, where appropriate may not include the whole of the parcels of land identified within the project boundary.

4.3 Micro-Siting Allowance

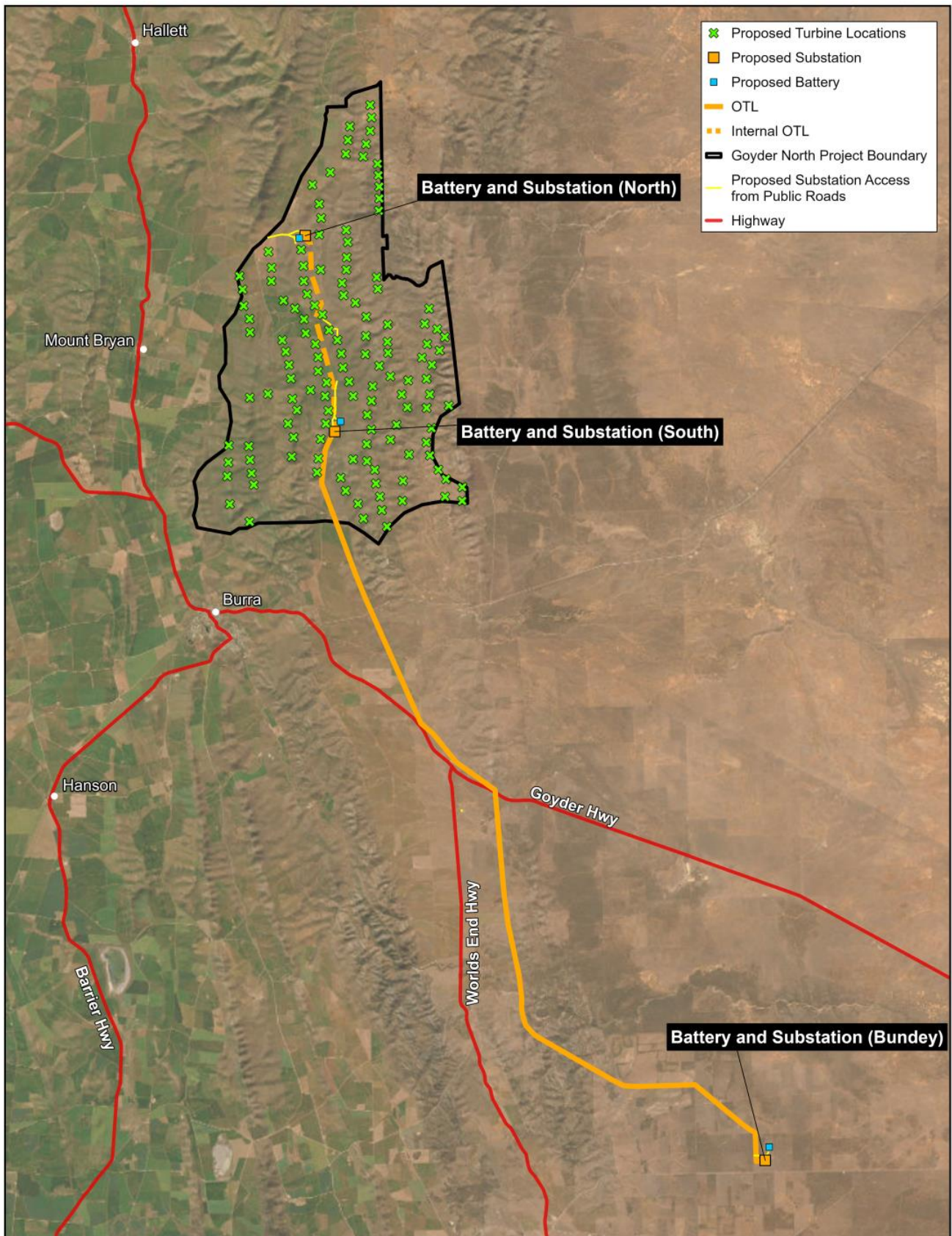
The scale of the project is such that detailed site evaluation for issues such as geotechnical, heritage, flora and fauna etc. is not possible at the planning application stage. Hence, it is proposed for micro-siting to occur at the detailed design stage so that all site information can be taken into consideration.

This approach was previously approved for Goyder South and was accepted by the ERD Court in the case of the Palmer Wind Farm determination (7 March 2018). This approach is also supported as part of the Native Vegetation and EPBC approaches to on-going mitigation and reduction of impacts.

This approach provides limited site flexibility to respond to sensitive issues on the basis that it is within 200m of the original location and complies with all other impact issues such as planning setbacks, EPA Noise levels and EMI separation requirements. Neoen proposes to use a 200m micro-siting approach to the final siting of all project elements to:

- Ensure that sub-surface conditions are suitable for turbine footings – for example, where a cavity is encountered (whether natural or due to abandoned mine shafts) a turbine will need to be moved;
- Ensure that there is sufficient flexibility to avoid:
 - site-specific flora and fauna impacts, noting that some factors such as nests, PBTL burrows and sensitive flora may move between first ecological surveys and the commencement of construction; and
 - impacts on cultural heritage (Aboriginal or European).
- Help facilitate a compromise position to allow shared land uses (such as mining and farm management); and
- Address any unexpected finds.

However, Neoen emphasises its understanding that post-approval micro-siting does not permit a project to exceed the impact limits imposed by any condition of approval such as minimum separation distances from dwellings or maximum noise limits.



Paper Size ISO A4
0 1.5 3 4.5 6
Kilometers

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 54



NEOEN AUSTRALIA PTY LTD
GOYDER NORTH WIND FARM

**GOYDER NORTH
PROJECT LAYOUT**

Project No. 12590014
Revision No. E
Date 15/03/2024

FIGURE 13

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Data source: World Imagery, Earthstar Geographics. Created by Jiggins

4.4 Permanent Project Components

The following table provides a more detailed description of the proposed project components and elements. The table also lists the relevant Certificate of Title and Plan numbers (relating to the set of plans contained in Appendix B).

Table 4: Permanent Project Components

Component	Description	Location & Plan Reference
Wind Turbine Generators	<p>Max Number – 135 Max Tip Height – 240m Max Blade length - 90m Max Rotor diameter – 180m Max Hub Height – 160m</p> <p>Blades will have non-reflective coatings. Footings may be either a mass concrete footing (raft style), pile-type rock anchors or a combination of both, and up to 30m in diameter, the vast majority of which would be buried.</p> <p>Crane hardstand area and laydown areas at the base of each turbine.</p>	<p>135 turbine locations identified on Plan GNDA-001 (CTs are identified in Appendix C).</p> <p>Maximum turbine dimensions - GNDA-002</p> <p>Typical turbine site layout & hardstand arrangements – GNDA-003</p>
Substation and O&M - North	<p>A compound of 205m x 205m (4.2ha) including:</p> <ul style="list-style-type: none"> • Substation and ancillary equipment • Operations & Maintenance facility • Max 3m high, chain mesh, security fencing • Stormwater management • Laydown areas <p>Access from Mount Bryan East Road.</p>	<p>Located on CT5894/43 (H200700S432)</p> <p>Site location – GNDA-004</p> <p>Typical Substation & O&M Plan – GNDA-007</p>
Substation and O&M - South	<p>A compound of 205m x 205m (4.2ha) including:</p> <ul style="list-style-type: none"> • Substation and ancillary equipment • Operations & Maintenance facility • Max 3m high, chain mesh security fencing • Stormwater management • Laydown areas <p>Access from Gum Hill Road.</p>	<p>Located on CT5410/475 (F206353A102)</p> <p>Site location – GNDA-005</p> <p>Typical Substation & O&M Plan – GNDA-007</p>
Substation - Bunday (Grid Connection)	<p>A compound of 220m x 440m (9.68ha) including:</p> <ul style="list-style-type: none"> • Substation and ancillary equipment • Max 3m high, chain mesh security fencing • Stormwater management • Laydown areas 	<p>Located on CT6270/132 (D128813AL622)</p> <p>Site location – GNDA-006</p> <p>Note: this facility will be designed to ElectraNet required standards.</p>

	Access from Sutherlands Road.	
Battery (BESS) 3 Sites	<p>There are three sites allocated for battery (BESS) facilities including associate O&M. These are located close to the substation and O&M sites.</p> <p>The total capacity will be up to a maximum of 900MW power output and energy storage of up to 3,600MWh. This will be distributed across three approximate stages:</p> <ul style="list-style-type: none"> - Battery North 225MW/900MWh - Battery South 225MW/900MWh - Bunday Battery 450MW/1800MWh <p>A compound of approximately 10ha for the North and South sites and approximately 20ha at Bunday with a 3m high security fence, containing batteries, switchyard and associated equipment, underground cabling and OTL connection. Security CCTV cameras and lighting. O&M facilities. Lightning rods of up to 21m.</p>	<p>Battery North Located on CT5894/43 (H200700S432) Site location – GNDA-004</p> <p>Battery South Located on CT5410/475 (F206353A102) Site location – GNDA-005</p> <p>Bunday Battery Located on CT6270/131 (D128813AL621) Site location – GNDA-006</p> <p>Typical Battery Plan – GNDA-017</p>
Transmission Lines	<p>A 275kV (or 330kV) overhead transmission line connecting the internal substations (north and south) with the grid at Bunday for a distance of approximately 57km.</p> <p>Transmission line towers of up to 65m height with a footprint of 26m x 26m. Spaced approximately 200-400m apart.</p>	<p>Route identified on Plan GNDA-001 (CTs are identified in Appendix C).</p> <p>Typical towers Plan – GNDA-018</p>
Meteorological Masts	<p>Up to 6 permanent met masts per stage, with heights up to a maximum of 160m including appropriate aviation safety specifications.</p> <p>The specific locations have yet to be identified which depends on final micro-siting of turbines and staging.</p>	Typical Meteorological Mast Plan – GNDA-019
Access Tracks	<p>Construction Phase - up-to 10m wide and at grades that can accommodate construction activities, cranes and vehicles carrying heavy and oversized parts and equipment.</p> <p>Operation Phase - 6m as the minimum for ongoing operations and CFS access.</p>	Typical Access Track Design – GNDA-020
Underground cabling	Underground cabling for transmission (33-66kV) and communications (fibre).	Typical MV Cable Cross Sections – GNDA-21 to GNDA-024

Wind Turbine Generators

The development will comprise up to 135 turbines with a maximum tip height of 240m. The final sizing of turbines will follow detailed consultation with OEMs during the procurement phase and will be dictated primarily by the suitability of various models for the site's wind resource characteristics. The wind turbines associated with Goyder North would be dispersed across an area of approximately 19,000 hectares and would have a generating capacity of between 5-8MW per turbine. The actual footprint of the turbines would be approximately 0.3% of the total project land area and would impede neither grazing nor cropping.

Substations and Operations and Maintenance Facilities

The proposed Goyder North project includes two Substation and Operation and Maintenance (O&M) facilities. Layout plans of the sites are provided in Plans GNDA-004 and GNDA005. A typical substation and O&M layout is provided in GN007. Neoen is also seeking approval for the expansion of the new Bunday substation which is owned and operated by ElectraNet.

Each substation includes a range of electrical equipment that manages and controls the supply of electricity. The substation needs to be specifically designed to electrical industry standards which includes design features for a range of safety purposes. Should this Application be successful, the substation would be designed in detail to meet all relevant technical industry requirements.

Each O&M facility is used on an on-going basis to support maintenance and repair activities for the relevant portions of the project. This includes an office with staff amenities (kitchenette, toilets, shower), car park, workshop/shed and laydown/temporary storage. Each proposed wind O&M facility has been co-located with the north and south substations to minimise footprint impacts. The O&M facility would be designed in detail to suit the requirements of the maintenance contractors.

Supporting services would be small scale and comprise standard electricity supply, water connection (where available) or suitably sized water tanks and wastewater disposal in accord with Council requirements.

Typical office and workshop plans and elevations are provided in Plans GNDA-008 – GNDA-016

Substation North

This site is shown in Plans GNDA-004 and is proposed to be located in the north-west sector of the project area. It has been sited to avoid visual impact and native vegetation to minimise unnecessary ecological impact. The substation is also sited more than 50m from watercourses.

Substation South

This site shown on GNDA-005, has been located in the southern portion of the project area to minimise visual impact from public roads. It has also been sited to avoid areas of native vegetation to minimise unnecessary ecological impact. The substation is also sited more than 50m from watercourses.

Bunday Substation Expansion

This substation expansion has been sited (GNDA-006) in accordance with ElectraNet's plans to expand the Bunday Substation to allow for the connection of any future energy assets. Neoen are seeking development approval for the expansion of this site with the agreement of ElectraNet.

Battery (BESS) Facilities

The battery storage infrastructure is expected to be located in proximity to the two project substations and the grid connection infrastructure located adjacent to the ElectraNet substation at Bunday (refer plans

GND-004-006). These batteries have each been sited away from watercourses and located to minimise potential ecological impacts.

Because the battery will provide key grid stability services, it is desirable to locate the battery storage directly adjacent to the Bunday substation (up to 450MW/1800MWh) to reduce the likelihood of physical disruptions to the transmission line ‘islanding’ the batteries from the grid. However, Neoen has also proposed that some battery storage (up to 225MW/900MWh at each location) may be included at the project substation sites should this better support the technical project and grid support outcomes.

Overhead transmission line

There would be a double-circuit 275kV or 330kV overhead transmission line connecting the two collector substations and then extending from the southern Goyder North substation to the to the grid substation at Bunday.

This application provides for a separate OTL for the Goyder North project. It is possible, though technically challenging, that the Goyder North and Goyder South projects could share a portion of transmission line corridor and potentially some transmission infrastructure, which may avoid the additional visual and ecological impact, cost and land use impacts associated with two separate corridors and transmission lines.



Figure 14: Indicative transmission line

High voltage overhead transmission lines would be provided as indicated on the layout to connect the various elements of the project. The transmission lines are similar to those that form the national grid network of transmission lines and would have an estimated total length of approximately 57km. The transmission lines would be supported by standard lattice or pole type towers at intervals of 200-400m depending on terrain and elevation.

The micro-siting approach will be applied to the location of the towers to minimise impacts.

Meteorological Masts

This application is seeking approval of up to 6 permeant meteorological masts per stage. The met masts will be up to 160m high depending on the final hub height of the turbines. The met masts will need to be located within the wind farm area itself and therefore would not create additional visual impact when compared to the impact of the turbines.

Access Tracks and underground cabling

The final layout of the access tracks will be subject to the final turbine micro-siting process and final negotiations with landowners. Access tracks for the construction phase would be up-to 10m wide and at grades that can accommodate construction activities, cranes and vehicles carrying heavy and oversized parts and equipment.

Following construction these tracks would be rehabilitated to a width of 6m as the minimum required for ongoing operations and CFS access.

Underground cabling will be required for both the underground electricity connections and communications (fibre). This will generally be located adjacent to access tracks and within the battery facilities.

The plans identify a range of approaches for trenching, depending on the circumstances but typically the trench width will be approximately 500mm per circuit and the depth would be approximately 1.2m (900mm coverage on top). This would represent an impact area of 5m width for single cable plus 2m for additional cable.

It is noted that there are situations where existing access tracks are located along cadastral and property boundaries. Where the project abuts an uninvolved property and the boundary is unclear, surveys will be undertaken to ensure that the access track and any underground cabling does not encroach on to the adjacent parcel.

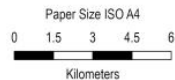
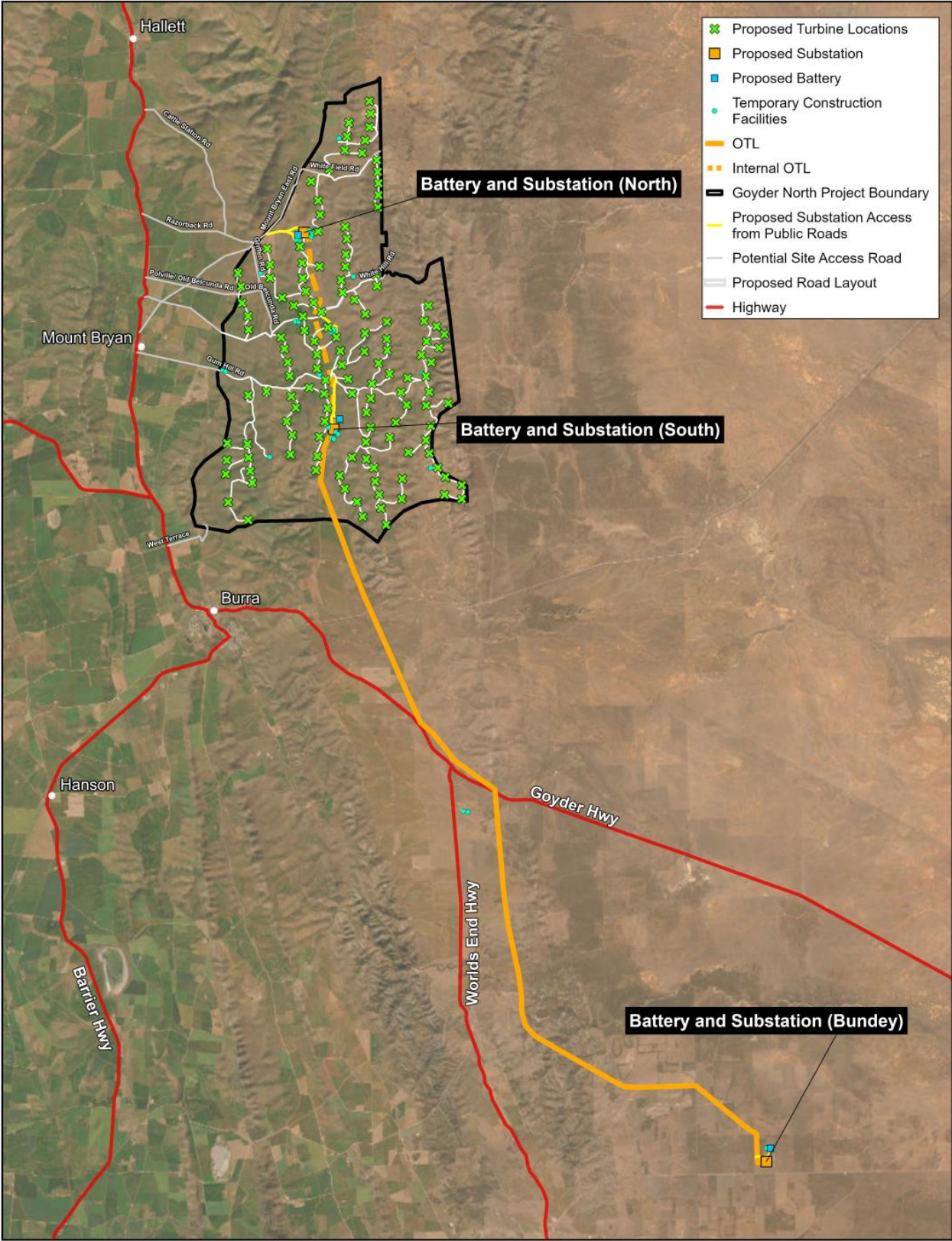
4.5 Temporary Project Components

There would be a number of facilities needed to support the construction phase of the project which include:

- Main construction compounds, co-located with the substations and battery sites and one located more centrally within the project boundary;
- Additional construction compounds and laydown areas across the site, at the base of each turbine and along the OTL;
- An option for up to 4 temporary batching plant facilities.

These facilities would be decommissioned, and the affected land rehabilitated, at the conclusion of the relevant construction stage.

The following Figure 13 identifies the likely locations of these construction facilities, and the following Table identifies the relevant title references. Plan GNDA-026 in Appendix B provides a typical arrangement for the construction compounds and plan GNDA-027 shows a typical conceptual layout for the batch plants. The operation of the batch plants would be managed by a specific section contained in the CEMP.



NEOEN AUSTRALIA PTY LTD
GOYDER NORTH WIND FARM

Project No. 12590014
Revision No. E
Date 15/03/2024

GOYDER NORTH TEMPORARY
CONSTRUCTION ELEMENTS

FIGURE 15

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Table 5: Temporary Project Components

Component	Description	Location
Temporary Construction Compounds – Wind / BESS	<p>Groups of fenced compounds of approximately 150m x 150m including a mix of secure fenced laydown areas and carparking, and site office, staff facilities and workshop if required.</p> <p>Generally co-located with substation sites.</p> <p>Sited to avoid impact on water courses.</p>	<p>Substation North – CT5894/43 (H200700S433)</p> <p>BESS North - CT5894/43 (H200700S432)</p> <p>Substation South – CT5410/475 (F206353A102)</p> <p>BESS South - CT5410/475 (F206353A101)</p> <p>Central – CT6049/595 (D81484A1)</p> <p>Bundey BESS - CT6270/131 (D128813AL621)</p>
Temporary Construction Compounds – Transmission Line	Fenced compounds of approximately 150m x 300m including site office and staff facilities, staff toilets and change rooms, workshops, car park, laydown area.	CT5914/152 (F214551AL92) CT5614/335 (H200200S17)
Temporary Batch Plant	<p>Areas of 100m x 100m containing the mobile batch plant, office, lab, staff amenities, washdown area, storage and materials stockpiles.</p> <p>Sited at least 50m away from water courses and subject to specific section in the CEMP.</p>	<p>Substation North - CT5894/43 (H200700S432)</p> <p>Substation South - CT5410/475 (F206353A101)</p> <p>Central - CT6049/595 (D81484A1)</p> <p>Transmission Line - CT5914/152 (F214551AL92)</p>
Temporary Laydown Areas	Temporary laydown areas located across the project area.	<p>CT5334/899 (F170817QP92)</p> <p>CT5491/340 (H201100SE19)</p> <p>CT6049/596 (H200700SE373)</p> <p>CT6049/596 (D81484AL3)</p> <p>CT5814/137 (H201100SE41SW)</p> <p>CT5894/43 (H200700SE408)</p> <p>CT5359/909 (H200500SE615)</p> <p>CT5823/468 (F186712AL200)</p>
Turbine laydown Area	A laydown area of approximately 90m x 20m adjacent to each turbine	Adjacent each turbine
Temporary Subcontractor Compounds	Areas of 300m x 150m containing office, staff amenities, storage, materials, car park.	CT5642/393 (D51013AL41) CT6201/785 (D117144AL50)
Meteorological Masts	<p>Up to 6 temporary met masts per stage, with heights up to a maximum of 160m including appropriate aviation safety specifications.</p> <p>The specific locations have yet to be identified which depends on final micro-siting of turbines and staging.</p>	Typical Meteorological Mast Plan – GNDA-019

Construction Compounds and Laydown Areas

Construction compounds and laydown areas are features of most projects which involve some form of building or infrastructure construction. These elements and locations are highlighted in electricity projects because the construction phase often represents a period of time that carries the most significant impacts (noise, traffic etc.).

The approach to construction is managed via a range of statutory obligations, permits and licencing that are not normally part of the development assessment system. Construction contractors and developers are very well versed in these requirements.

Neoen undertakes to ensure that lead contractors are made fully aware of their statutory obligations to protect the environment and archaeology. Neoen would ensure that contracts require construction contractors to prepare all the necessary documentation for construction facilities, undertake the works needed to ensure that impacts are minimised, and rehabilitate sites following construction.



Figure 16: Example of wind turbine blade transport

Temporary Concrete Batching Plants

Mobile, temporary concrete batching plants are likely to be required to supply the concrete needed for the turbine footings, which are substantial. The need for on-site concrete batching plants would depend on the requirements of the final selected civil contractor and the practicalities of sourcing concrete from other locations. On-site plants significantly reduce project cost and heavy traffic in the local area. Neoen understands that additional approvals from the EPA would be required before these plants can be established.

Goyder North is more remote from potential sources of concrete, therefore a nominal provision has been made for four such plants at the northern, central, and southern wind construction compounds, as well as the overhead line construction compound. Care has been taken to ensure that the potential site of the batch plants is at least 65m from a watercourse (the minimum recommended set back is 50m to minimise stormwater contamination).

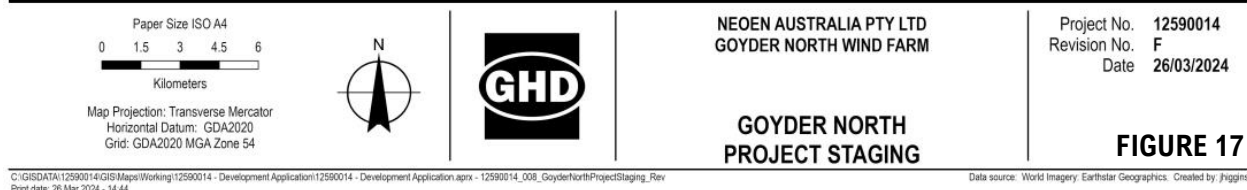
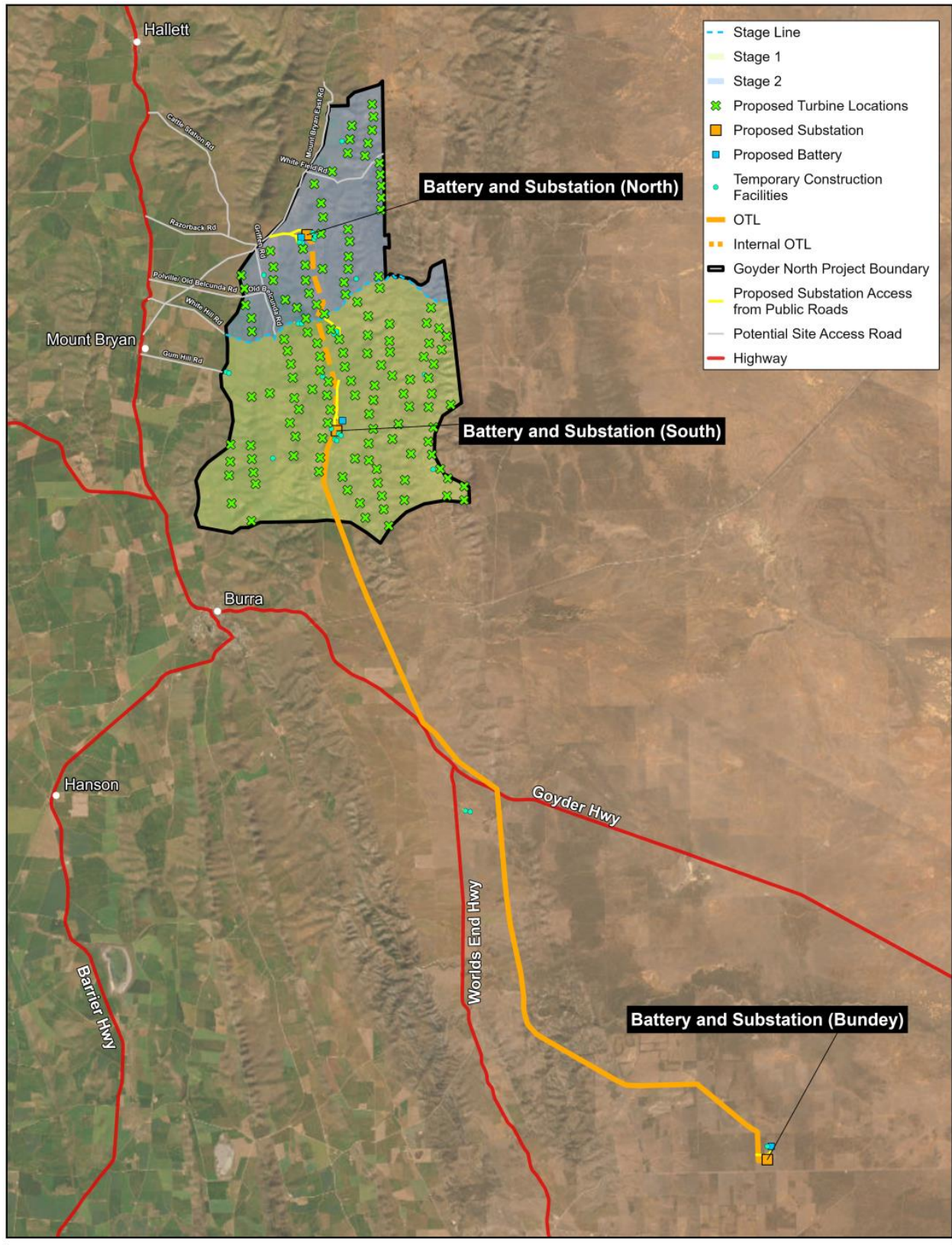
Should the batch plants be required, Neoen would ensure that the contractor prepares the following:

- A detailed layout plan that specifies the plant and equipment to be used on the site;
- A site-specific stormwater management approach that contains potentially contaminated water on site and diverts, clean stormwater runoff to natural drainage lines; and
- A Construction Environment Management Plan (CEMP).

4.6 Staging and Timeframes

Due to the sheer size of capital investment associated with the full build out of the Goyder North project (>\$4.7B), it is necessary for Neoen to deploy the project in stages. The stages will likely be defined by Power Purchase Agreements (PPAs), which are agreements between generators and electricity consumers to sell electricity from generation projects at a fixed price. These agreements are vital to achieving financial close on any large-scale generation project and will generally inform the sizing of each stage of the project.

It is not yet possible to be certain about the size and composition of the wind component of each stage as this depends on the size and type of the PPAs secured amongst other factors. Indicatively and subject to this uncertainty, Neoen hopes to construct Goyder North in approximately two separate stages of wind, with the first stage comprising up to 700MW as indicated in the following Figure 15.



The battery component may be developed in three stages of 225MW/900MWh within the windfarm area or 450MW/1,800MWh adjacent to the Bunday Substation.

Given the scale of the project stages, significant time would be required to achieve financial close and construction commencement on each stage. Thus, Neoen requests that the development timeframes be structured on a 'rolling' basis as follows:

- 3 years to substantially commence Stage 1 (from the date of approval)
- 6 years to complete Stage 1 (from the date of approval)
- 9 years to substantially commence Stage 2 (from the date of approval)
- 12 years to complete Stage 2 (from the date of approval)

Each stage is likely to take in the order of two years to construct, potentially with some construction time overlap to enable work teams to move from stage to stage if they are able to be deployed continuously. As noted, this would depend partly on the size and technology composition of stages. Neoen has proposed 3 years for construction of each stage to provide a necessary margin for unforeseen delays and contingencies, given the current state of material procurement worldwide. This margin is necessary in order to reduce perceived project risks for construction contractors and financiers.

Neoen notes that if a stage of wind or storage reached financial close separately (i.e. without the other technology), the development and build schedule would need to be customised accordingly.

It is proposed that within each stage, conditions of authorisation may be satisfied, and Building Rules consent may be obtained, as applicable and in relation to each sub-stage separately, and in any order, such that construction of any sub-stage may commence once the conditions are satisfied and Building Rules consent has been obtained in relation to that sub-stage, without the need to satisfy all conditions and obtain Building Rules consent for the other sub-stages within the stage, or the subsequent stages of the project.

Building Rules consent would be sought from a Private Certifier or Council for all relevant components of the project.

4.7 Final Detailed Layout

Should this application be approved, the project would follow a standard process leading up to construction (noting that this process would be repeated for each stage):

1. Neoen would tender for one or more head contractors to take on responsibility for delivery of the overall project. Typically, this would be a wind turbine/battery storage manufacturer/installer or a large-scale civil works company;
2. Detailed site investigations would be performed (geotechnical testing, high-resolution topographical surveying) and the micro-siting process (Section 4.3) would also be conducted; and
3. Using the results of these investigations, the selected contractor would undertake detailed site evaluation and project design.

This would lead to the preparation of a final layout designs and detailed construction impact management plans, as well as supporting information that demonstrates compliance with the conditions of approval.

4.8 Decommissioning and Rehabilitation

The proposed technology is expected to have an economic life of approximately 25-30 years. The landowner agreements make provision for an initial lease term of 30 years as well as an additional term of 30 years. At the end of the current lease term, a decision would be made whether to:

- decommission the project permanently; or
- to remove the old infrastructure and seek to replace it with new, upgraded technology.

If the project is to be upgraded, then a new development application would be lodged at that time.

In the event that the project is permanently decommissioned, Neoen would take full responsibility for decommissioning and rehabilitation works. A decommissioning plan would be prepared and submitted to the relevant authority for approval.

Decommissioning would include the following:

- De-energising plant and equipment;
- Dismantling and removal wind turbines, battery energy storage units and transmission lines, as well as all other aboveground buildings, foundations and equipment;
- Rehabilitation of disturbed land; and
- Recycling of recyclable materials (including batteries).

Decommissioning of some elements may be subject to the landowner's discretion (such as access tracks).

As per accepted industry practice, decommissioning does not include the removal of infrastructure that is located more than 600mm below the surface, as the earthworks required cause considerable and unnecessary vegetation and soil disturbance, and this infrastructure, if left in place, causes no harm to the environment or disruption to agricultural practices.

5. Planning Assessment

5.1 Assessment Process and Requirements

Since the Goyder South assessment process was undertaken, the South Australian planning system has changed. The Goyder South development was assessed as a Crown Development application (pathway) under the Development Act 1993 and the policy in the Goyder Regional Council Development Plan applied.

This application for Goyder North will be assessed as a Code Assessed: Performance Assessed application (pathway) under the Planning, Development and Infrastructure Act 2016 and the Planning and Design Code (the Code) is the relevant reference for planning assessment policy and procedure.

This application will be assessed and decided by the State Commission Assessment Panel which is identified in Schedule 6 of the General Regulations as the Relevant authority:

Development for the purposes of the provision of electricity generating plant with a generating capacity of more than 5 MW that is to be connected to the State's power system.

The Regulations also make provision for the following:

- The applications above 5MW require a certificate from the Technical Regulator (Schedule 8);
- That the Application is provided to the Council for review and comment.

The Code make provision for the following procedures:

- Referral to the Environment Protection Authority (Code Part 9, 9.1 – Wind farms)

5.1.1 Nature of the proposed development

The proposed development is a “Renewable energy facility” in the form of a wind farm, battery storage and ancillary components.

Previous applications for renewable energy projects under the Development Act prompted the question as to whether renewable energy projects are a form of industry for the purposes of the planning assessment. The term ‘industry’ means something quite specific in the planning system and is defined in the *Code* as follows:

Means the carrying on, in the course of a trade or business, of any process (other than the generation of electricity using a renewable energy source or a process in the course of farming or mining) for, or incidental to:

1. *the making of any article, ship or vessel, or of part of any article, ship or vessel; or*
2. *the altering, repairing, ornamenting, finishing, assembling, cleaning, washing, packing, bottling, canning or adapting for sale, or the breaking up or demolition, of any article, ship or vessel; or*
3. *the getting, dressing or treating of materials.*

The use may include:

1. *selling by wholesale of goods manufactured on site.*
2. *selling by retail of goods manufactured on site, provided the total floor area occupied for such sale does not exceed 250m² (and industrial will be construed accordingly).*

This question was considered by the Environment, Resources and Development Court (ERDC) in relation to an appeal against a wind farm (ERDC Number 106 of 2010, decision dated 17 June 2011). The Court found that the process of making an article in the definition of ‘industry’ contemplates and is limited to the

production of something physical or tangible’ and consequently the Court did not consider the conversion of wind energy into electrical energy, to be ‘caught’ by the definition of ‘industry’.

From a planning perspective, the definition of industry has been drafted having regard to the typical impacts a land use will generate, not necessarily by reference to its size or scale. Most forms of industry have ‘inputs’ (such as raw materials and chemicals) and generate ‘waste’ as part of the production process. In this context, industrial land uses would generate traffic on an on-going basis (delivery of materials and removal of waste) and may represent a pollution risk due to the tangible types of waste generated (air emissions, wastewater, materials). Planning provisions addressing the development of ‘industry’ are designed to manage these impacts.

Other than during the construction phase, renewable energy generation developments do not generate significant on-going tangible impacts in the way industrial facilities do. Consequently, it is appropriate that renewable energy facilities be assessed by reference to their actual physical characteristics, rather than as ‘industry’.

Furthermore, the Code provides a specific definition for renewable energy land uses as follows:

Renewable energy facility:

Means land and/or water used to generate electricity from a renewable source such as wind, solar, tidal, hydropower, biomass and/or geothermal.

This use may also include:

1. any associated facility for the storage and/or transmission of the generated electricity;
2. any building or structure used in connection with the generation of electricity.

5.1.2 Summary of Relevant Code Policy

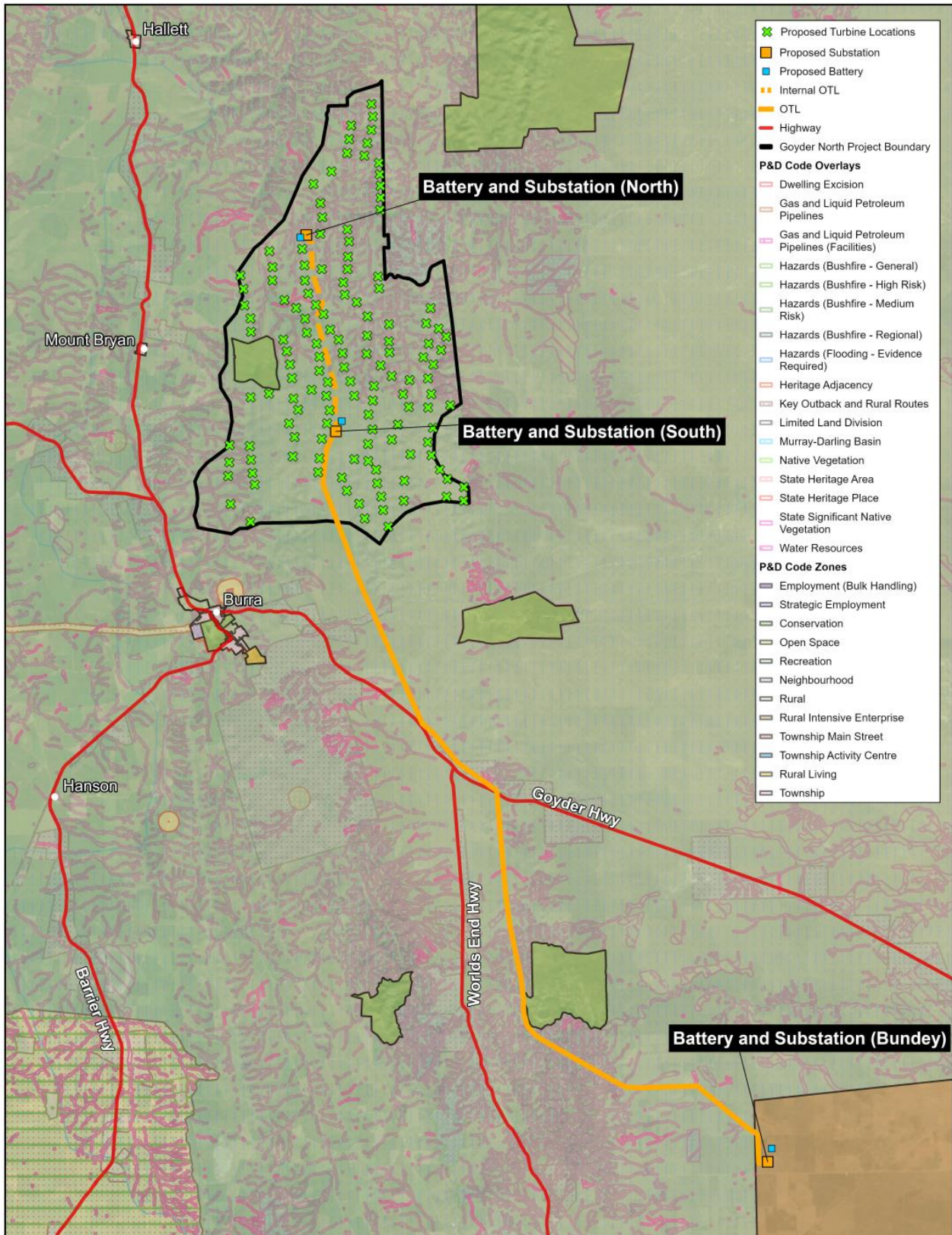
The following Tables and Figure 16 provides a summary of the Code policy considered to be relevant to the nature of the proposed land use type and the proposed location. In some cases, Overlays may also trigger a referral.

Table 6: Zones and Overlays that apply directly to the Wind Farm Site

Zone	Overlays	Coverage
Rural Zone		Whole of Site
	Hazards (Bushfire Regional)	Whole of Site
	Hazards (Flooding – Evidence Required)	Whole of Site
	Native Vegetation	Whole of Site
	Murray Darling Basin	Whole of Site
Rural Intensive Enterprise		Bundey substation and battery
	State Significant Native Vegetation	Bundey substation and battery

The Rural Zone and the Rural Intensive Enterprise Zone both indicate that the application falls within the Code Assessed/Performance Assessed pathway.

The Native Vegetation Overlay and the State Significant Native Vegetation Overlay both indicate that a referral to the Native Vegetation Council is likely to be triggered.



Paper Size ISO A4
0 1.5 3 4.5 6
Kilometers

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 54



NEOEN AUSTRALIA PTY LTD
GOYDER NORTH WIND FARM

GOYDER NORTH
CODE ZONES AND OVERLAYS

Project No. 12590014
Revision No. E
Date 15/03/2024

FIGURE 18

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Data source: World Imagery, Earthstar Geographics. Created by Jiggins

Table 7: Zones and Overlays that are adjacent the Wind Farm Site

Zone	Overlays	Coverage
Conservation Zone		Adjacent
	Key Outback Routes	Adjacent OTL and access roads
	State Significant Native Vegetation	Adjacent

The Key Outback Routes Overlay indicates that a referral to the Commissioner for Highways is likely to be triggered as the OTL spans the Goyder Highway.

There are no Sub Zones within or adjacent to the site.

Neither the site boundary nor any access roads intersect with any heritage overlay including any heritage adjacency overlay.

Table 8: General Policy relevant to a Wind Farm Development

Topic & Desired Objective	Sub-Topic	Policy Reference
Infrastructure and Renewable Energy Facilities DO 1	General	PO 1.1
	Visual Amenity (Substations & ancillary infrastructure)	PO 2.1 PO 2.2 PO 2.3
	Rehabilitation	PO 3.1
	Hazard Management (Aviation, public safety & bushfire)	PO 4.1, PO 4.2, PO 4.3
	Electricity Infrastructure and Battery Storage Facilities	PO 5.1, PO 5.3
	Renewable Energy Facilities (transmission infrastructure)	PO 7.1
	Renewable Energy Facilities (Wind Farm)	PO 8.1, DPF 8.1, PO 8.2, PO 8.3, PO 8.4, DPF 8.4, PO 8.5

	Temporary Facilities	PO 13.1, DPF 13.1, PO 13.2
Interface between Land Uses DO 1	General Land Use Compatibility	PO 1.1, PO 1.2,
	Overshadowing (Shadow Flicker)	PO 3.4
	Activities Generating Noise or Vibration	PO 4.1, DPF 4.1
	Electrical Interference	PO 8.1, DPF 8.1
Transport, Access and Parking DO 1	Movement Systems	PO 1.1
	Vehicle Access	PO 3.1, DPF 3.1, PO 3.3, PO 3.8

5.1.3 Suitability of the proposed land use

The Code identifies that the site is predominantly located on land designated as “Rural Zone” with the Bundy substation and battery located in the “Rural Intensive Enterprise Zone”.

Desired Objective 1 (quoted below) and Designated Performance Feature (DPF) 1.1 of the Rural Zone specifically envisages “renewable energy” land uses in this Zone:

DO 1 A zone supporting the economic prosperity of South Australia primarily through the production, processing, storage and distribution of primary produce, forestry and the generation of energy from renewable sources.

However, it is acknowledged that such land uses should be compatible with the Rural Zone as a zone for primary production activities. This is emphasised in PO 9.1 which states:

Renewable energy facilities and ancillary development minimises significant fragmentation or displacement of existing primary production.

The proposed development is highly compatible with primary production activities for the following two key reasons:

- wind farms, once constructed, are a benign land use in that other activities (particularly agricultural activities) can and do occur around them; and

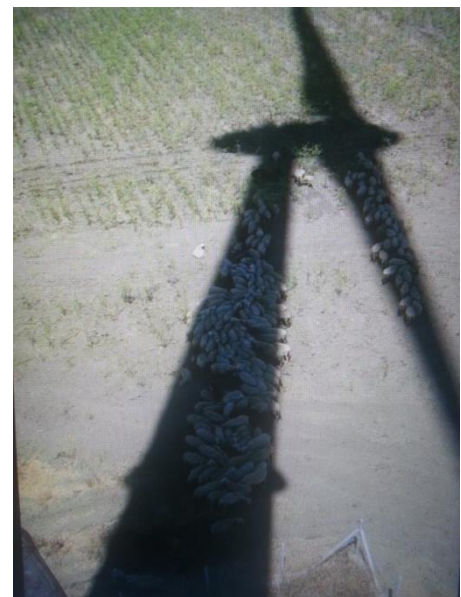


Figure 19: Sheep taking advantage of shade

- they provide an alternative source of income for landowners that enables primary production to continue with more certainty, especially in times of drought and potentially in the face of climate change impacts.

In more general terms the Code Policy specifically envisages the development of renewable energy projects and recognises the need for them to be located in rural areas that provide access to the required natural resources and space for their construction. However, the policy also recognises that a range of impacts need to be addressed to the extent possible given the nature of the land use.

The proposed development takes advantage of the very high-quality renewable resource and the infrastructure context of this locality. As stated previously, the applicant is seeking to develop this project in this location due to the following:

- a) Clearly established, excellent wind resources;
- b) Suitable topography for wind (elevation);
- c) Appropriate existing land uses (marginal agricultural viability, supporting mixed land use);
- d) Proximity to the national electricity grid infrastructure (Bundey substation and the EnergyConnect interconnector with NSW);
- e) Strong support from landowners, neighbours and Council;
- f) Accessibility for construction and on-going maintenance; and
- g) Large project scale and low density of dwellings enable generous setbacks from dwellings and sensitive ecological areas.

Only a small proportion of the project is located on the edge of the Rural Intensive Enterprise Zone, which has the following Desired Outcome.

DO1 Multi-purpose intensive agricultural production, processing facilities and supporting ancillary industries that are important economic and employment assets to the state.

The location of the grid connection is primarily driven by the location of the interconnector substation at Bundey. While the policy of this zone does not specifically envisage this form of development, it is not a form of land use that would prevent the achievement of the Desired Outcome.

Neoen submits that the proposed Goyder North Renewable Energy Facility is an appropriate form of land use within both Zones and is specifically envisaged in the Rural Zone. The proposal would not adversely affect (and indeed, would support) the sustainability of primary production and would not undermine the broad land use intent of either zone.

5.2 Setbacks and Constraints

From the early phase of the project planning process, Neoen have committed to ensuring that the wind turbines are set back from dwellings and key locations at appropriate distances. In some cases, these distances have been increased, based on further advice and consideration.

Chapter 3 of this report identifies a range of setbacks and 'no-go' areas that have been identified as parameters that have guided the layout of the project elements. These have included:

- P&D Code policy (which aims to minimise visual and EMI impacts);
- Environmental and ecological (which aim to minimise impacts on water quality, flora and fauna);
- Setbacks agreed with Council and individual landowners (which aim to minimise community impacts and farming impacts); and
- Other setback/separation requirements (industry standards and requirements).

5.2.1 Planning and Design Code Policy

Notwithstanding the above, the planning assessment will have particular regard to Planning and Design Code policy that indicates suitable setbacks as set out in the following table.

Table 9: Code Setback References

Code Section	Policy Reference	Policy Intent	Measure
Water Resources Overlay	PO 1.5 DPF 1.5	Protect water quality of watercourses from development	20m (or more) from the top of existing bank on each side of the watercourse
General Policy Infrastructure and Renewable Energy Facilities Renewable Energy Facilities (Wind Farm)	PO 8.1 DFP 8.1	Reduce the visual impact of wind turbines on residential and tourist development through appropriate separation	<p>a) set back at least 2000m from the base of a turbine to any of the following zones:</p> <ul style="list-style-type: none"> i. Rural Settlement Zone ii. Township Zone iii. Rural Living Zone iv. Rural Neighbourhood Zone <p>with an additional 10m setback per additional metre over 150m overall turbine height (measured from the base of the turbine).</p> <p>b) set back at least 1500m from the base of the turbine to non-associated (non-stakeholder) dwellings and tourist accommodation.</p>
Interface between land uses Electrical Interference	PO 8.1 DPF 8.1	Minimise the impact on communication services due to electrical interference	Is not within a line of sight between a fixed transmitter and fixed receiver (antenna)

In order to meet the Designated Performance Feature 8.1 (Renewable Energy Facilities – Wind Farm) the set back from listed Zones would need to be at least 2900m for the proposed turbines of 240m overall height (i.e. tip height).

It is noted that the Code does not specify a setback from the Burra State Heritage Area and while there are Heritage Adjacency Overlays these do not extend to the project boundary.

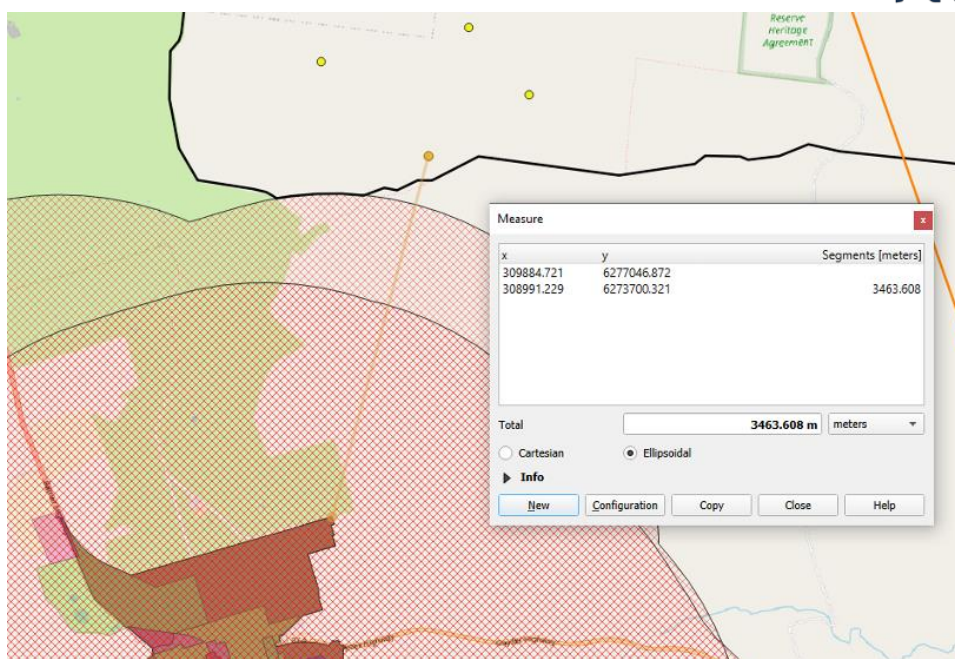


Figure 20: Extent of State Heritage Area and Adjacency Overlays

The Goyder North turbine layout has been developed and refined on the following basis:

Table 10: Goyder North Layout Setbacks

Measure	Target (m)	Goyder North Layout (m)
Code Zones (Ref DPF 8.1 a) i. – iv.)	2900	3000
Burra State Heritage Area	None specified	3000
Non-associated (non-stakeholder) dwellings	1500	2000 or as agreed
Non-associated (non-stakeholder) tourist accommodation	1500	1500
Associated (stakeholder) dwellings	None specified	Achieve EPA Noise Policy and otherwise as negotiated.

5.2.2 Ecological and Environmental

As indicated in Chapter 3, the layout of the turbines and the selection of the OTL route has had regard to a number of ecological and environmental factors. In particular, a number of turbine sites have been adjusted following the flora and fauna advice.

Other environmental setbacks include:

- Minimum 50m setback from water courses (including drainage lines) for concrete batch plants: Neoen has adopted a target 65m and minimum 50m setback for the potential batch plants and all proposed permanent and facilities;
- Neoen has implemented 'exclusion zones' based on preliminary feedback from their ecological consultants, EBS. These exclusion zones incorporate buffers around identified areas which contain PBGW and INTG.

In addition to setbacks, the overall project planning has aimed to avoid areas of native vegetation. In this context, Neoen have also routed the OTL such that it minimises the vegetation clearance required. Micro-siting of transmission towers will further reduce this impact.

5.2.3 Landscape and Visual Impact

Neoen have considered a range of visual impact issues, giving priority consideration to those dwellings closest to the project. The project meets the Designated Performance Feature with respect to addressing visual impact via appropriate setbacks. However, there are additional issues that arise on a case-by-case basis.

Communication with landowners has been undertaken and, as a result, Neoen has agreed to a range of siting and setback matters with individual landowners that address their particular needs in relation to dwellings, infrastructure visibility, access and farm operations. This communication will continue as development progresses.

In addition, Neoen has adopted approaches to minimise impacts on dwellings:

- Ensure that an appropriate agreement is in place with the affected landowners that:
 - informs all landowners of affected dwellings of the potential for shadow flicker impact;
 - makes provision for revised modelling when the micro-siting process has been finalised and again at the post-construction stage;
 - facilitates working with landowners to identify and implement reasonable measures to reduce any actual shadow flicker to below the recommended maximum; and
 - encourages landowners to inform and involve tenants (where relevant).
- Wind turbine technical specifications and procurement documentation will specify that all wind turbine blades be finished with a low reflectivity treatment to avoid possible effects of blade.

Neoen commissioned GBD Landscape Architecture to provide advice on visual impact and undertake a Visual Impact Assessment. This has informed the layout with respect to the general visual impact of the development and the following decisions were made:

- Removal of 8 turbines in the southwest portion of the project area to reduce visual impact on Burra;
- Considered placement of turbines in the southwest position of the project area to reduce crowding of turbines in the view from the higher points of the Cornish Mining Site, reducing the focus on the turbines as opposed to the landscape;
- Locating the OTL on the north-eastern side of the Goyder Highway to reduce visual impact on the Worlds End Valley (as viewed from the Goyder Highway);
- Locating the OTL below the hill tops along Goyder Highway to minimise the impact on the landscape; and
- Co-locating a portion of the OTL route with the Goyder South Stage 1 OTL to reduce visual impact of having multiple transmission lines travelling in a similar direction.

Neoen is aware of the Midnight Oil house which is considered a cultural landmark and attracts many visitors. At an early stage in the project, a row of 5 turbines was removed which reduced the visual impact from the highway and the Midnight Oil house backdrop. Neoen have consulted the band, and a representative has indicated that there is no fundamental objection to the project or its impact on the ruins.

5.2.4 Industry Requirements

The site-specific setbacks and separation distances adopted for other elements of the project such as transmission lines and substations are defined by electrical industry standards and safety design

requirements. This includes setbacks or separation distances from existing transmission lines and higher voltage distribution lines (in accord with ElectraNet and SA Power Networks requirements).

If approved, Goyder North will conform to the design requirements of these industry standards.

5.3 Relevant Planning and Design Code Policy (Version 2023.16)

The following section sets out the Code Policy that is considered to be relevant to the nature of the proposed development and its location context. It includes a project response that indicates how the project responds to the intent of the policy. The response takes into account the results of the specialist studies, the requests of landowners and neighbours and the requirements of the project.

5.3.1 Zone Policy

Rural Zone

Code Policy	Project Response
DO 1 A zone supporting the economic prosperity of South Australia primarily through the production, processing, storage and distribution of primary produce, forestry and the generation of energy from renewable sources.	The proposed development will result in the generation of energy from renewable sources.
DO 2 A zone supporting diversification of existing businesses that promote value-adding such as industry, storage and warehousing activities, the sale and consumption of primary produce, tourist development and accommodation.	The proposed development will support up to 30 rural landowners by providing an additional income stream. This supports the diversification of rural businesses and aids resilience.
Land Use and Intensity	
PO 1.1 The productive value of rural land for a range of primary production activities and associated value adding, processing, warehousing and distribution is supported, protected and maintained.	"Renewable Energy Facility" is listed in PO 1.1
Siting and Design	
PO 2.1 Development is provided with suitable vehicle access.	The TIA found that the road network can accommodate the project traffic and access requirements subject to the recommended up-grades and depending on the final selection of equipment. The development will be access via public roads that will be upgraded as required to accommodate the level and nature of traffic. This would be managed using a Traffic Management Plan that is developed and agreed with DIT and Council.
PO 2.2 Buildings are generally located on flat land to minimise cut and fill and the associated visual impacts.	The substation and battery sites have been located on relatively flat land to accommodate the nature of the development. The two wind farm substations are internal to the project and not visible from public viewpoints. The Bunday site is directly adjacent the existing infrastructure and screened by native vegetation on the western side of the parcel.
Renewable Energy Facilities	
PO 9.1 Renewable energy facilities and ancillary development minimises significant fragmentation or displacement of existing primary production.	The physical elements that make up the proposed development are widely spaced and located in consultation with the landowners. As such, the proposed development will not substantially impact on

	current primary production operations. In some cases, the access tracks will aid operations.
Built Form and Character	
<p>PO 10.1</p> <p>Large buildings are designed and sited to reduce impacts on scenic and rural vistas by:</p> <ul style="list-style-type: none"> • having substantial setbacks from boundaries and adjacent public roads; • using low-reflective materials and finishes that blend with the surrounding landscape; • being located below ridgelines. 	<p>The substation and battery facilities include electrical infrastructure of scale and larger scale buildings including a maintenance shed. All three of the selected sites have minimal impact on scenic and rural vistas. The two internal sites not visible from public roads and the Bundy site is well set back from the road and subject to different Zone provisions.</p>

Rural Intensive Enterprise Zone

Code Policy	Project Response
<p>DO 1</p> <p>Multi-purpose intensive agricultural production, processing facilities and supporting ancillary industries that are important economic and employment assets to the state.</p>	<p>The proposed development will support the electricity system that would supply these industries with power to operate.</p> <p>This Zone has been identified as a place that can accommodate impact generating activities with minimal impact on sensitive receivers.</p>

The Performance Outcomes do not address issues relevant to the proposed development but policies in the General section are of relevance.

5.3.2 Overlay Policy

Hazards (Bushfire - Regional)

Code Policy	Project Response
<p>DO 1</p> <p>Development, including land division responds to the relevant level of bushfire risk and is sited and designed to mitigate the threat and impact of bushfires on life and property taking into account the increased frequency and intensity of bushfires as a result of climate change.</p>	<p>The project involves electrical infrastructure which is required to be designed to specific standards to both prevent fires and also respond to the threat of fire.</p>
<p>DO 2</p> <p>To facilitate access for emergency service vehicles to aid the protection of lives and assets from bushfire danger.</p>	<p>The access roads required for the construction of the development need to accommodate vehicles larger and heavier than emergency vehicles. At the conclusion of the development these access roads will be retained at a 6m width and will provide on-going access superior to that currently available.</p>
Vehicle Access - Roads and Driveways	
<p>PO 2.1</p> <p>Roads are designed and constructed to facilitate the safe and effective:</p> <ol style="list-style-type: none"> a) access, operation and evacuation of fire-fighting vehicles and emergency personnel b) evacuation of residents, occupants and visitors 	<p>As stated above, the access tracks associated with the project will be retained at a 6m minimum width to facilitate on-going access for the operators, landowners and emergency vehicles.</p>

Hazards (Flooding – Evidence Required)

Code Policy	Project Response
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<p>DO 1 Development adopts a precautionary approach to mitigate potential impacts on people, property, infrastructure and the environment from potential flood risk through the appropriate siting and design of development.</p>	<p>Much of the development is located on elevated sites and is not at risk of flooding. The substation, O&M and battery sites, while on relatively flat sites, are not exposed to a high risk of flooding. Detailed design of development pads and footing will further address this issue.</p>
<p>PO 1.1 Development is sited, designed and constructed to minimise the risk of entry of potential floodwaters where the entry of flood waters is likely to result in undue damage to or compromise ongoing activities within buildings.</p>	<p>The substation, O&M and battery sites will all be developed on engineered site platforms that will be slightly elevated to avoid any risk of localised flooding. They will also include bunding where required, perimeter swales and site-wide stormwater management. These aspects have been included in the draft CEMP.</p>

Key Outback and Rural Routes

Code Policy	Project Response
<p>DO 1 Safe and efficient movement of vehicle and freight traffic on Key Outback and Rural Routes.</p>	<p>The project has had regard to the findings of the Traffic Impact Report – TIA (included in Volume 2 of the Application Package) to ensure safe and efficient movement.</p> <p>The key potential impacts relate primarily to the construction phase. The ongoing operational and maintenance phase will have significantly lower and fewer impacts.</p> <p>The TIA identified that some parts of the road network and access roads would require up-grading.</p> <p>However, the TIA found that the network could accommodated the volume, type and scale of traffic required for construction.</p> <p>The TIA has recommended that a Traffic Management Plan be prepared in consultation with DIT and Council.</p>
<p>DO 2 Provision of safe and efficient vehicular access to and from Key Outback and Rural Routes.</p>	
<p>PO 1.1 Access is designed to allow safe entry and exit to and from a site to meet the needs of development and minimise traffic flow interference associated with access movements along adjacent State maintained roads.</p>	
<p>PO 3.1 Existing access points designed to accommodate the type and volume of traffic likely to be generated by development.</p>	
<p>PO 5.1 Access points are located and designed to accommodate sight lines that enable drivers and pedestrians to navigate potential conflict points with roads in a controlled and safe manner.</p>	
<p>PO 6.1 Access points constructed to minimise mud or other debris being carried or transferred onto the road to ensure safe road operating conditions.</p>	
<p>DPF 6.1 Where the road has an unsealed shoulder and the road is not kerbed, the access way is sealed from the edge of the seal on the road for a minimum of 10m or to the property boundary (whichever is closer).</p>	

Referral Trigger: to the Commissioner of Highways - “development that changes the nature of vehicular movements or increase the number or frequency of movements through an existing access (except where deemed to be minor in the opinion of the relevant authority)”.

It is acknowledged that the project will change the nature and number of vehicle movements, primarily during the construction phase.

Murray Darling Basin

Code Policy	Project Response
DO 1 Sustainable water use in the Murray-Darling Basin area.	The proposed development is not a significant user of water resources. Limited water will be required for basic employee facilities (e.g. at the substation and battery sites). As these facilities are unlikely to be permanently staffed, rain water tanks will be adequate if mains water is not available.
PO 1.1 All development has a lawful, sustainable and reliable water supply that does not place undue strain on water resources in the Murray-Darling Basin.	The proposal does not involve the taking of water for which a licence would be required under the <i>Landscape South Australia Act 2019</i>

Native Vegetation

Code Policy	Project Response
DO 1 Areas of native vegetation are protected, retained and restored in order to sustain biodiversity, threatened species and vegetation communities, fauna habitat, ecosystem services, carbon storage and amenity values.	The project has been developed in conjunction with flora and fauna investigations to ensure that the least impactful sites are selected. Given the size of the project area, the initial assessments, provided high level guidance to avoid the most sensitive areas.
PO 1.1 Development avoids, or where it cannot be practically avoided, minimises the clearance of native vegetation taking into account the siting of buildings, access points, bushfire protection measures and building maintenance.	As the project has been refined, more targeted surveys are being undertaken to inform the next steps of the project.
PO 1.2 Native vegetation clearance in association with development avoids the following: a) significant wildlife habitat and movement corridors b) rare, vulnerable or endangered plants species c) native vegetation that is significant because it is located in an area which has been extensively cleared d) native vegetation that is growing in, or in association with, a wetland environment	The original investigations report and a summary of the results is provided in Volume 2 of the application package.. A full assessment is in the process of being developed as the more detailed surveys are undertaken. This will form the basis of the Native Vegetation Clearance application.
PO 1.4 Development restores and enhances biodiversity and habitat values through revegetation using locally indigenous plant species.	A process of micro-siting will be applied in the construction phase. Once the planning matters have been addressed and Planning Consent is issued. This begins with detailed site investigations for every project element – turbines, OTL towers, substation/O&M and battery sites. These detailed investigations include geotechnical investigations (to confirm suitable footings), site clearance for heritage (including archaeology) and consideration of minimising native vegetation impacts. The project will include rehabilitation of disturbed areas and will require the provision of a significant SEB contribution.

Referral Trigger: to the Native Vegetation Council - Development that is the subject of a report prepared in accordance with Regulation 18(2)(a) of the *Native Vegetation Regulations 2017* that categorises the clearance, or potential clearance, as 'Level 3 clearance' or 'Level 4 clearance'.

It is acknowledged that the project may impact on Level 3 and 4 clearance.

5.3.3 General Policy

Infrastructure and Renewable Energy Facilities

Code Policy	Project Response
DO 1 Efficient provision of infrastructure networks and services, renewable energy facilities and ancillary development in a manner that minimises hazard, is environmentally and culturally sensitive and manages adverse visual impacts on natural and rural landscapes and residential amenity.	The applicant has commissioned a number of specialist studies to identify impacts. These studies have informed the final layout where the applicant has made changes to minimise impacts.
General	
PO 1.1 Development is located and designed to minimise hazard or nuisance to adjacent development and land uses.	The approach to the siting of project elements has avoided hazards and limited nuisance to acceptable levels. Where modelling has identified a specific potential for impact (e.g. noise or shadow flicker), Neoen has entered into discussions with involved landowners and affected neighbours with a view to agreeing an acceptable mitigation strategy. At the time of lodgement, all involved landowners and neighbours had confirmed their willingness to agree to this approach.
Visual Amenity	
PO 2.1 The visual impact of above-ground infrastructure networks and services (excluding high voltage transmission lines), renewable energy facilities (excluding wind farms), energy storage facilities and ancillary development is minimised from townships, scenic routes and public roads by: <ol style="list-style-type: none"> utilising features of the natural landscape to obscure views where practicable siting development below ridgelines where practicable avoiding visually sensitive and significant landscapes using materials and finishes with low-reflectivity and colours that complement the surroundings using existing vegetation to screen buildings incorporating landscaping or landscaped mounding around the perimeter of a site and between adjacent allotments accommodating or zoned to primarily accommodate sensitive receivers. 	This policy indicates that some degree of visual impact must be accepted for wind turbines and OTLs. Neoen has aimed to minimise this impact where possible and as reflected in the findings of the Visual Impact assessment. The two substation/O&M and battery sites within the wind farm are situated in locations that are not visible from townships, scenic routes and public roads. The Bundey facilities are located adjacent the ElectraNet facilities and will be screened by the existing vegetation on the western side of the site.
PO 2.2 Pumping stations, battery storage facilities, maintenance sheds and other ancillary structures incorporate vegetation buffers to reduce adverse visual impacts on adjacent land.	The project does not propose to establish landscaping around the substation/O&M and battery sites. This is because the sites are located within primary production holdings and need to be as compatible with these operations as possible.
PO 2.3 Surfaces exposed by earthworks associated with the installation of storage facilities, pipework, penstock, substations and other ancillary plant are reinstated and	These facilities are also required to maintain clearances for bushfire risk reduction.

revegetated to reduce adverse visual impacts on adjacent land.	<p>Unless absolutely required or requested by the land owner, this landscaping and the additional stock fencing results in further loss of primary production land.</p> <p>Given that the sites are not readily visible to the public, screen landscaping is not considered appropriate or necessary.</p>
Rehabilitation	
PO 3.1 Progressive rehabilitation (incorporating revegetation) of disturbed areas, ahead of or upon decommissioning of areas used for renewable energy facilities and transmission corridors.	The applicant has committed to progressive rehabilitation. The Draft CEMP identifies the requirement for progressive rehabilitation which will be undertaken during and immediately following the construction phase.
Hazard Management	
PO 4.1 Infrastructure and renewable energy facilities and ancillary development located and operated to not adversely impact maritime or air transport safety, including the operation of ports, airfields and landing strips.	An Aviation Impact Statement (included in Volume 2) has been prepared for the project based on a tip height of 250m Above Ground Level (AGL), which provides additional contingency for the assessment. The assessment concluded that there would be no impact on aviation operations and the relevant bodies have confirmed this in their consultation responses.
PO 4.2 Facilities for energy generation, power storage and transmission are separated as far as practicable from dwellings, tourist accommodation and frequently visited public places (such as viewing platforms / lookouts) to reduce risks to public safety from fire or equipment malfunction.	The project has considered and taken into account all reasonable setbacks to address these issues. Most of the project is relatively remote from public access as most of the project elements are located well within large land holdings and some considerable distance from publicly accessible roads.
PO 4.3 Bushfire hazard risk is minimised for renewable energy facilities by providing appropriate access tracks, safety equipment and water tanks and establishing cleared areas around substations, battery storage and operations compounds.	<p>The substation/O&M and battery sites will all include their own fire protection equipment, water tanks, and clearances.</p> <p>As identified in the Hazards (Bushfire – Regional) Overlay – the access tracks will accommodate appropriate access.</p>
Electricity Infrastructure and Battery Storage Facilities	
PO 5.1 Electricity infrastructure is located to minimise visual impacts through techniques including: <ol style="list-style-type: none"> siting utilities and services: <ol style="list-style-type: none"> on areas already cleared of native vegetation where there is minimal interference or disturbance to existing native vegetation or biodiversity grouping utility buildings and structures with non-residential development, where practicable. 	<p>As described in Chapter 3, the project has specifically sought to:</p> <ul style="list-style-type: none"> identify sites on cleared land and separated from water courses; group buildings and structures together (clustered substation, O&M and battery elements in three locations); located these elements internal to the project and away from public view points; and locate the grid connection infrastructure adjacent existing approved infrastructure at Bundy.
PO 5.3 Battery storage facilities are co-located with substation infrastructure where practicable to minimise the development footprint and reduce environmental impacts.	
Renewable Energy Facilities	
PO 7.1 Renewable energy facilities are located as close as practicable to existing transmission infrastructure to facilitate connections and minimise environmental impacts as a result of extending transmission infrastructure.	The Goyder North project is located where the wind resource is available. While the OTL is approximately 57km long, it has been sited having regard to the same siting considerations as the other elements. Nearby transmission infrastructure

	does not have the capacity to accommodate a development of this size.
Renewable Energy Facilities (Wind Farm)	
<p>PO 8.1</p> <p>Visual impact of wind turbine generators on the amenity of residential and tourist development is reduced through appropriate separation.</p> <p>DPF 8.1</p> <p>Wind turbine generators are:</p> <p>a) set back at least 2000m from the base of a turbine to any of the following zones:</p> <ul style="list-style-type: none"> iii. Rural Settlement Zone iv. Township Zone v. Rural Living Zone vi. Rural Neighbourhood Zone <p>with an additional 10m setback per additional metre over 150m overall turbine height (measured from the base of the turbine).</p> <p>b) set back at least 1500m from the base of the turbine to non-associated (non-stakeholder) dwellings and tourist accommodation</p>	<p>The wind turbines have been sited to address visual impact issues and comply with the setbacks recommended in the DPF.</p> <p>In addition, the siting of all project elements has given consideration to general visual impact issues:</p> <ul style="list-style-type: none"> • turbines have been removed where they were considered too close to highways; • the wind farm substation and battery sites are internal to the wind farm; • the grid connection substation and battery sites are adjacent existing approved infrastructure; • the OTL route has been changed to minimise visual impacts on the Worlds End Valley. <p>Furthermore, the visual impact assessment identified that the proposed layout would have moderate to moderate-low visual impacts on surrounding key view points.</p>
<p>PO 8.2</p> <p>The visual impact of wind turbine generators on natural landscapes is managed by:</p> <p>a) designing wind turbine generators to be uniform in colour, size and shape</p> <p>b) coordinating blade rotation and direction</p> <p>c) mounting wind turbine generators on tubular towers as opposed to lattice towers.</p>	<p>The proposed development turbines will be uniform in colour and shape.</p> <p>Heights will be finalised through a detailed procurement process with OEMs, but will be uniform across each stage (it is possible, for example, that Stage 2 of Goyder North could have a slightly lower wind resource and thus require a slightly taller hub height than Stage 1). As with all horizontal-axis turbines, rotors will turn through 360 degrees to face into the wind direction at any given time. Typically, therefore, all turbines in a locality will face the same way but occasionally local wind conditions may result in slight differences in turbines' orientations.</p> <p>The turbines will be tubular towers.</p>
<p>PO 8.3</p> <p>Wind Turbine generators and ancillary development minimise potential for bird and bat strike.</p>	<p>No known communities or sites that attract species (such as large water bodies) have been identified and the likelihood of strike is low. However, Neoen will implement any avifauna monitoring and reporting measures mandated by subsequent NVC and EPBC approvals.</p>
<p>PO 8.4</p> <p>Wind turbine generators incorporate recognition systems or physical markers to minimise the risk to aircraft operations.</p> <p>DPF 8.4</p> <p>No Commonwealth air safety (CASA / ASA) or Defence requirement is applicable</p>	<p>The aviation study has identified that the project will not impact on aviation practices and consultation with air safety authorities identified no issues. However, the AIS does highlight the following:</p> <ul style="list-style-type: none"> • all "tall structures" will need to be reported to the Vertical Obstacle Database, managed by Airservices Australia • Meteorological masts are to use the recommended markings for increased visibility and safety (other than strobes or other forms of lighting, which are visually intrusive).
<p>PO 8.5</p> <p>Meteorological masts and guidewires are identifiable to aircraft through the use of colour bands, marker balls, high visibility sleeves or flashing strobes.</p>	
Temporary Facilities	

<p>PO 13.1 In rural and remote locations, development that is likely to generate significant waste material during construction, including packaging waste, makes provision for a temporary on-site waste storage enclosure to minimise the incidence of wind-blown litter.</p> <p>DPF 13.1 A waste collection and disposal service is used to dispose of the volume of waste at the rate it is generated.</p>	<p>The draft CEMP identifies this as an issue to be addressed during the construction phase of the project.</p> <p>Waste will be managed and stored appropriately within the designated construction facility sites. The allocation of land for these sites has been increased compared to Goyder South to ensure adequate land is provided for all construction activities.</p>
<p>PO 13.2 Temporary facilities to support the establishment of renewable energy facilities (including borrow pits, concrete batching plants, laydown, storage, access roads and worker amenity areas) are sited and operated to minimise environmental impact.</p>	<p>Although policy indicates a minimum setback of 20m from a water course, Neoen have adopted a 50m setback for all temporary facilities to minimise the potential for water quality impacts.</p>

Interface between Land Uses

Code Policy	Project Response
<p>DO 1 Development is located and designed to mitigate adverse effects on or from neighbouring and proximate land uses.</p>	<p>The applicant has commissioned a number of specialist studies to identify impacts. These studies have informed the final layout where the applicant has made changes to minimise impacts.</p> <p>Potential impacts such as noise and shadow flicker have been conservatively modelled. This has identified potential impacts for a number of involved landowner and near neighbour dwellings. Where modelling has identified a specific potential for impact, Neoen has entered into discussions with involved landowners and affected neighbours with a view to agreeing an acceptable mitigation strategy. In all cases there is reasonable potential for mitigation of impacts to an agreed level.</p>
General Land Use Compatibility	
<p>PO 1.2 Development adjacent to a site containing a sensitive receiver (or lawfully approved sensitive receiver) or zone primarily intended to accommodate sensitive receivers is designed to minimise adverse impacts.</p>	<p>As far as practical, the project elements have been located on sites that are not adjacent sensitive receivers or zones intended to accommodate sensitive receivers.</p> <p>Furthermore, the project complies within or exceeds recommended setbacks.</p>
Overshadowing	
<p>PO 3.4 Development that incorporates moving parts, including windmills and wind farms, are located and operated to not cause unreasonable nuisance to nearby dwellings and tourist accommodation caused by shadow flicker.</p>	<p>The shadow flicker assessment identified seven locations where the modelled shadow flicker exceeds recommended levels. The model is a highly theoretical approach and does not take into account factors such as the orientation of buildings, nearby vegetation or verandas that may screen impacts.</p> <p>Neoen has undertaken additional site investigations (results provide in Appendix E of this Volume). This work identified that there is a realistic potential that shadow flicker impacts would be screened at three of the seven sites and can be addressed through</p>

	<p>localised screening strategies at the remaining four sites.</p> <p>Neoen has entered into discussions with involved landowners and affected neighbours with a view to agreeing an acceptable mitigation strategy.</p> <p>At the time of lodgement, all affected landowners and neighbours had confirmed their willingness to agree to this approach.</p>
Activities Generating Noise or Vibration	
<p>PO 4.1 Development that emits noise (other than music) does not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers).</p> <p>DPF 4.1 Noise that affects sensitive receivers achieves the relevant Environment Protection (Noise) Policy criteria.</p>	<p>Noise impact assessments have been undertaken for the project turbines and other noise emitting elements (battery and substation).</p> <p>The project can achieve the relevant EPA (Noise) Policy criteria (and the Wind Farm Guidelines) for all uninvolved sensitive receivers.</p> <p>It is acknowledged that the modelling for the BESS highlighted a potential (albeit slim) risk for GN54 (close neighbour). Given the assumptions in the model (e.g. cooling fans operating at 100% capacity), it is likely that this impact will not occur.</p> <p>Notwithstanding this, Neoen are negotiating an agreement to ensure that additional noise assessments are undertaken as part of the equipment selection process. Should there be any residual impact, Neoen will work with the neighbour to considered acoustic shielding of the BESS or noise attenuation modifications for the dwelling.</p>
Electrical Interference	
<p>PO 8.1 Development in rural and remote areas does not unreasonably diminish or result in the loss of existing communication services due to electrical interference.</p> <p>DPF 8.1 The building or structure:</p> <ol style="list-style-type: none"> is no greater than 10m in height, measured from existing ground level or is not within a line of sight between a fixed transmitter and fixed receiver (antenna) other than where an alternative service is available via a different fixed transmitter or cable. 	<p>An EMI assessment has been undertaken and this has guided the location of turbines and other relevant infrastructure by identifying relevant “no-go” locations.</p> <p>It is acknowledged that, while a low risk, there is some potential for impacts on some services. Neoen have agreed to the recommendation that pre- and post-construction assessments are undertaken by independent assessors.</p> <p>It is noted that there may be further discussions with Telstra regarding the need for setbacks greater than normally requested. It is understood that the purpose of these additional setbacks has not been fully explained. Neoen can accommodate all reasonable technical requirements as part of the micro-siting process.</p>

Transport, Access and Parking

The approach to traffic management predominantly focuses on the construction phase as this accounts for the vast majority of impacts. A traffic impact assessment has been undertaken to identify impact issues and appropriate management strategies. Neoen understands that should this application be approved, it would be required to enter into detailed agreements (including a Traffic Management Plan) with Council and the

Department for Infrastructure and Transport (DIT) to ensure that traffic impacts and potential road upgrades and maintenance are appropriately managed and commits to doing so promptly and thoroughly.

Code Policy	Project Response
DO 1 A comprehensive, integrated and connected transport system that is safe, sustainable, efficient, convenient and accessible to all users.	<p>As indicated previously, a Traffic Impact Assessment has been undertaken for the project. Neoen will engage with DIT and Council in the development of a Traffic Management Plan. The most significant impact will occur during the construction phase.</p> <p>The road network can safely accommodate the volume, type and scale of the vehicles that will be required for the construction phase. Some works will be required to up-grade some parts of the network which will be agreed with DIT and relevant Councils.</p>
Movement Systems	
PO 1.1 Development is integrated with the existing transport system and designed to minimise its potential impact on the functional performance of the transport system.	
Vehicle Access	
PO 3.1 Safe and convenient access minimises impact or interruption on the operation of public roads.	
PO 3.3 Access points are sited and designed to accommodate the type and volume of traffic likely to be generated by the development or land use.	
PO 3.8 Driveways, access points, access tracks and parking areas are designed and constructed to allow adequate movement and manoeuvrability having regard to the types of vehicles that are reasonably anticipated.	

5.3.4 Summary

The layout of the Goyder North Renewable Energy Facility and its project elements has been carefully designed to align with the policy set out in the Planning and Design Code and to avoid and minimise impacts as far as practicable.

Where relevant, specialist studies have been undertaken to highlight potential impacts and identify mitigation or management measures. The proposed layout has addressed these potential impacts to the extent possible at the planning stage of the project.

It is noted that the Code Policy specifically envisages wind farms in the Rural Zone and that several policies relating to visual impact acknowledge that some visual impact will occur. Nevertheless, visual impact is a matter that has been taken into account from the beginning of the evolution of the project. Numerous decisions have been made to minimise this impact at the macro level and this has resulted in a visual impact assessment in the range of moderate to moderate-low.

Conservative impact modelling has identified that a small number of dwellings are potentially impacted by noise and shadow flicker. All of these, except for two, are involved landowners. The two uninvolved landowners are close neighbours and have indicated that they would sign up to the neighbour benefit scheme. Neoen acknowledges that such agreements do not absolve the requirement to meet Guideline impact levels. Such agreements do enable collaborative resolution of minor exceedances.

It is acknowledged that many of the impacts associated with this project relate to the construction phase and that further work is required to develop the detailed management responses to these matters, such as via the CEMP and other permits and licences.

These aspects and other commitments are addressed in the following Chapter.

6 Commitment to Minimising Impacts

The following is a consolidated list of actions that Neoen commit to undertaking (either themselves or through contractors) in the development and operation of the proposed project, in order to minimise impacts on the environment and community.

6.1 Community Outcomes

Community Benefits Scheme (CBS)

Neoen commits to providing up to \$1,000,000 per annum (inclusive of Goyder South Benefits) to be distributed for the benefit of the broader community in the region for the duration of the Goyder North project's operational lifespan (minimum 30 years) at full project size. While the project is undergoing staged development, the annual funding available under the scheme will be incrementally increased as each successive stage is built which will amount to:

1. \$70,000 per 100MW of wind generation constructed; and
2. \$12,000 per 100MW of battery storage constructed.

These values would be adjusted in accordance with inflation from December 2024 to the date of the first payment.

Neighbour Benefit Scheme (NBS)

Neoen commits to providing annual payments to qualifying neighbours with a residential dwelling within 6km of a constructed wind turbine, which is occupied on a full-time or near full-time basis. Annual payments will be made to qualifying neighbours for the duration of the Goyder North project's operational lifespan (25-30 years). The annual entitlement per dwelling will be set on the basis of distance from turbines and the number of turbines.

Benefits to Traditional Owners

Neoen commits to:

- engaging effectively with Aboriginal stakeholders (the Ngadjuri Nation and the First People of the River Murray & Mallee Region); and
- ongoing efforts to share project benefits by formulating binding and meaningful employment and training opportunities to Aboriginal people, with particular focus on benefiting members of the Traditional Owner communities.

6.2 Land Interests

Neoen undertakes to accommodate the reasonable interests of current landowners and close neighbours through the micro-siting process including farming practices, screening for visual impact and shadow flicker and noise attenuation.

Neoen also commits to discussion and negotiation with other holders of interests in land including, but not limited to, the Traditional Owners, the Crown Lands Agency and holders of mining interests.

6.3 Micro-siting

The micro-siting process for all project infrastructure will be undertaken to minimise site impacts. Neoen will require the head contractor to work with Neoen's specialist advisors to undertake the micro-siting process and develop the final site designs and to comply with, at a minimum:

1. Any Planning Consent conditions;
2. The parameters identified in this Application (Volume 1);

3. EPA noise policy level limits;
4. Constraints to minimise EMI impacts;
5. Constraints to minimise aviation impacts (safety);
6. Project-adopted setbacks;
7. Occupied dwelling setbacks for turbines;
8. No further exceedance of Shadow Flicker recommended limits;
9. Minimisation of impacts on sensitive flora and fauna, and general minimisation of native vegetation clearance in accordance with future EPBC and NVC approvals;
10. Address any unexpected finds (including UXO); and
11. Any agreements with involved landowners, neighbours and tenement-holders (under the *Mining Act*).

6.4 General Environmental Impacts

Neoen commits to:

- The preparation of a set of Construction Environment Management plans as indicated in the Draft CEMP contained in Appendix D to address a range of construction impact issues; and
- The preparation of an Operational Management Plan to address on-going impact management issues.
- Neoen notes the issue of UXO as highlighted by the Department of Defence and will undertake appropriate precautionary steps prior to construction.

In relation to **fire risk management** Neoen commits to the following:

- Ensure that the construction of all equipment is undertaken to industry standards and requirements;
- Preparation of a Bushfire and Emergency Services Plan for all elements of the project, including strategies such as pausing or braking of turbines, adoption of preventative strategies, notification procedures and direct communication channels between Neoen's control room and local CFS;
- Fuel load management (noting that dust management requires some vegetation be maintained); and including fuel management measures in operational and management plans such as maintaining a fire break area of ten (10) metres width around the perimeter of the facilities, electricity compounds and substations.
- Rehabilitation of access tracks to a minimum of 6m to facilitate CFS firefighting.

In relation to decommissioning and rehabilitation, Neoen commits to:

- Preparing and submitting a Decommissioning Plan to the relevant authority for approval;
- Carrying out the following decommissioning works:
 - De-energising cables and equipment;
 - Dismantling and removal of wind turbines and transmission lines, as well as all other aboveground buildings, foundations and equipment;
 - Rehabilitation of disturbed land;
 - Recycling of recyclable materials (including batteries) subject to availability of recycling capabilities at the time (noting for clarity that few large-scale renewable assets have been decommissioned in Australia to date due to the relative newness of this type of infrastructure, and that an appropriate recycling industry is therefore in its infancy as of the lodgement of this DA);
 - Decommissioning all other elements except (at landowners' request) those which are potentially useful to landowners and do not create other impacts, such as access tracks; and
 - Leaving below-ground infrastructure in-situ where it is located more than 600mm below the surface.

6.5 Setbacks

Neoen commits to the following setbacks (in addition to others specified in this Chapter 6):

- A turbine setback of 5.9km from Burra town centre;
- Unless otherwise agreed with the landowner, a minimum distance of 2km between turbines and occupied dwellings;
- A minimum 50m setback from water courses (including drainage lines) for all substation/O&M, battery and construction facility sites, including concrete batching plants;

6.6 Aviation

Neoen commits to:

- Reporting the turbines and meteorological monitoring towers used in the Goyder North project to the vertical obstruction database held by Airservices Australia in accordance with AC 139-08(1) *Reporting of Tall Structures* to ensure their position and height is marked on aeronautical charts and known to aviation industry;
- Appropriately marking all wind monitoring masts as per the Airservices guidelines (except for strobe light), notified to the Aerial Agricultural Association of Australia and subject to a NOTAM specifying their location and height.

6.7 Ecology

If this project is approved, Neoen commits to the following as set out in the preliminary ecology studies:

- Ecological impacts proposed as part of the Goyder North Windfarm development trigger legislative approval processes, including:
 - *Native Vegetation Act 1991* (NV Act) – clearance of native vegetation requires approval under the NV Act.
 - *Environment, Protection and Biodiversity Conservation Act 1999* (EPBC Act) – potential significant impacts to MNES require referral to the Commonwealth Government.
- In order to progress the Project through these legislative requirements, Neoen will:
 - Engage accredited consultant(s) to undertake a detailed vegetation survey in accordance with Native Vegetation Council methodology (Bushland Assessment Method [BAM], Scattered Tree Assessment Method [STAM]), to inform the SEB offset requirements for the Project.
 - Submit a Native Vegetation Clearance Data Report to the Native Vegetation Council (NVC) to seek approval for proposed impacts.
 - Continue to apply the mitigation hierarchy to minimise ecological impacts, through micro-siting infrastructure based on the outcomes of further ecological surveys.
 - Commission additional field assessments to inform EPBC self-assessment and subsequent Referrals (if required) for relevant Matters of National Environmental Significance (MNES) including:
 - Targeted Lomandra Grassland (INTG) surveys to determine condition classes within the proposed impact areas (commencing November 2023 and spring 2024 if required).
 - Targeted Pygmy Bluetongue Lizard (*Tiliqua adelaidensis*) (PBTL) field surveys to determine the occupancy and abundance of PBTL across habitat identified as known, likely and possible in the Project impact area (commencing February 2024).
 - Seasonal Bird and Bat Utilisation Surveys (BBUS) to inform EPBC interim bird and bat wind farm guidelines (commenced November 2023).

Survey work will inform an ongoing commitment by Neoen to minimise ecological impacts through adaptive management of the Project and micro-siting of infrastructure components.

6.8 EMI

Neoen commits to undertaking the EMI report recommendations :

- Microsite turbines to maintain 100m of separation between any SAGRN path and the outer diameter of any turbine blade.
- Fixed Point-to-Point Radio Links – maintain 100m of separation between any SA Government Radio Network path and the outer diameter of any turbine blade.
- Digital Television Broadcast – pre and post construction surveys and mitigation techniques applied if required.
- AM/FM Narrowcast and Broadcast – pre and post construction surveys and mitigation techniques applied if required.
- Meteorological Radar – maintain regular communication with the Bureau of Meteorology, informing them of changes to the wind farm, any planned shut-downs and collaborate with the Bureau during severe weather events.
- 50Hz Transmission Lines – transmission and substations designed as per relevant Australian standards.
- that the project utilise (wherever practicable) equipment complying with the Electromagnetic Emission Standard, AS/NZS 61000.6.4:2012 to avoid the creation of excessive RF noise at frequencies that interfere with radio communication signals. Electrical insulation and shielding should be considered in the turbine design to reduce the RF noise emitted from the electronic control systems located in the nacelle.
- Consulting with Telstra to come to an agreed position on any increase in standard setbacks.

6.9 Heritage

To manage the project's potential risk to unidentified Aboriginal heritage, Neoen commits to:

- Prepare a Cultural Heritage Management Plan, in collaboration with the Traditional Owners (Ngadjuri Nation),
- Through the CEMP and site inductions, ensure that all contractors and workers are aware of heritage risks and how to manage them accordingly;
- Through the CEMP, implement a site discovery procedure (as per Appendix 1 the IHC report, or similar); and
- Engage archaeologists to assist in identifying any heritage items found during works.

To manage the project's potential risk to European heritage Neoen commits to:

- Progressing an EPBC referral in relation to Burra in consultation with the relevant Commonwealth department;
- Where possible, avoid ruins and other landscape structures (in the case of single sites) or minimise impact (including by way of post-construction reinstalment) in the case of stone walls;
- Through the CEMP, ensure that any archaeological deposit uncovered by the proposed development is reported to Heritage SA;
- Ensure that a qualified archaeologist with an approved s27 permit from Heritage SA records any archaeological deposits identified during works;
- Engage a qualified archaeologist to carry out a survey of the project area and identify and record any potential archaeological sites and/or deposits in the development footprint;
- In micro-siting infrastructure, seek to avoid identified archaeological sites;
- Through the CEMP and site inductions, ensure that all contractors and workers are aware of heritage risks and how to manage them accordingly;
- Through the CEMP, implement a site discovery procedure (as per Appendix 1 of the heritage summary report, or similar);
- Engage an archaeologist to assist in identifying any heritage items found during works.

In the event that works encounter the remains of undocumented built heritage and archaeological features of heritage significance these will be managed under the requirements of s.27 of the Heritage Places Act.

6.10 Visual

Neoen has worked closely with its specialist advisors to take on board the feedback received during the layout development stage of the project. Neoen acknowledge that, at this point only minor changes are possible and would readily consider these options in the detailed design, construction and operation stages.

In order to address potential shadow flicker impacts, Neoen will:

- Ensure that an appropriate agreement is in place with the affected landowners that:
 - informs all landowners of affected dwellings of the potential for shadow flicker impact;
 - makes provision for revised modelling when the micro-siting process has been finalised and again at the post-construction stage; and
 - facilitates working with landowners to identify and implement reasonable measures to reduce any actual shadow flicker to an acceptable level.
- Wind turbine technical specifications and procurement documentation will specify that all wind turbine blades be finished with a low reflectivity treatment to minimise possible effects of blade glint.

6.11 Noise

In order to minimise noise impacts and comply with the relevant noise policy and guidelines, Neoen commits to the following:

- Preparation of a noise monitoring plan to establish a compliance monitoring regime prior to construction and accept a Condition to this effect.
- Compliance with EPA noise limits will be a fundamental and non-negotiable criterion for the micro-siting process;
- A final noise assessment will be made during the detailed design and micro-siting stage to confirm that the final selected equipment and its location will comply with the relevant criteria;
- As agreed with involved landowners and involved neighbours, conduct up-dated noise assessments at locations where the noise criteria might be exceeded (e.g. GN06 and GN54);
- In relation to turbines, a guarantee will be sought from the successful manufacturer to ensure that the final WTG selection will be free of tonality at all surrounding dwellings, or if this cannot be achieved that the appropriate tonality penalty is applied when modelling predicted dB(A) levels per EPA guidelines; and
- Preparation of a Construction Noise and Vibration Management Plan prior to the commencement of construction.
- In relation to battery noise impacts, the assessment will be updated once the final equipment selections and operational characteristics are known. This will confirm the extent to which GN54 might be impacted.
- If required, the residual noise reduction measures could comprise glazing or insulation upgrades at the GN54 dwelling, or localised shielding of the key BESS components, subject to the final equipment selection and arrangement.

Neoen would support a Condition in relation to the project BESS sites along the following lines:

An acoustic engineer shall prepare a report prior to construction which confirms that the combined operation of the BESSs and transformers for the Goyder North Renewable Energy Facility achieve the noise levels established by Part 5 Clause 19 of the Environment Protection (Commercial and Industrial) Noise Policy 2023 (the Policy) at all existing or approved dwellings or overnight tourist

accommodation at the time of this consent when measured and adjusted in accordance with Part 3 of the Policy. The report shall be based on manufacturer's noise level data for procured equipment adjusted to suit the operational characteristics of the installation. Where there is insufficient manufacturer's noise level data, a noise level measurement of a comparable installation shall be used. The report shall detail all noise reduction measures required to ensure compliance with this condition. For the purposes of this condition, an acoustic engineer is defined as an engineer eligible for Membership of the Australian Acoustical Society.

6.12 Traffic

Neoen acknowledges the TIA recommendations and commits to undertaking more detailed investigations when the selection of equipment becomes known and the approach to construction is developed. This would include:

- Further investigation of the upgrades recommended to ensure safety of all road users and that no additional cost burden falls on ratepayers or taxpayers as a result of the project;
- Seek the advice of a structural engineer to verify the load-bearing capacities of bridge infrastructure;
- Ensuring heavy vehicle traffic will not go through Burra township but will use the Copperhouse Road bypass;
- Ensuring that the TMP recognises the Heysen and Mawson Trail routes, particularly where these coincide with or cross construction access routes; and
- Ensuring that permits are obtained from NHVR and DIT for all vehicles transporting equipment and materials to the site which are outside the mass and size limits of current gazetted highways and roads specified in the document.

To ensure traffic impacts are appropriately managed, Neoen commits to entering into detailed agreements (in the form of a Traffic Management Plan) with Council and the Department of Infrastructure and Transport (DIT) based on the recommendations of the Traffic Impact Assessment and the findings of further investigations (as per above).

Appendix A Forms, Declarations and Certification

DEVELOPMENT APPLICATION FORM

Section 119(1) of the *Planning, Development and Infrastructure Act 2016*

This is an application for (tick relevant box or boxes):



Planning consent



Land division



Building consent



Development approval

Application to: STATE COMMISSION ASSESSMENT PANEL

(relevant authority)

APPLICANT NAME: NEOEN AUSTRALIA PTY LTD

Postal address: 1a FROME ROAD ADELAIDE SA 5000

Email: THOMAS.DALY@NEOEN.COM

OWNER NAME: AS PER ONLINE APPLICATION

Postal address:

Email:

INVOICE CONTACT NAME: AS PER ONLINE APPLICATION

Postal address:

Email:

BUILDER NAME: NA

Builder's licence no.

Postal address:

Email:

CONTACT PERSON FOR FURTHER INFORMATION:

Name: SIMONE FOGARTY

Postal address: 127A CROSS ROAD HAWTHORN SA 5062

Telephone: (1) 0417800468 (2)

Email: FOGARTY@IINET.NET.AU

LOCATION OF PROPOSED DEVELOPMENT:

Unit no.

Street no.

Level

Lot no.

Street name AS PER ONLINE APPLICATION

Suburb

State

Postcode

Section no.

Hundred

Volume

Folio

DESCRIPTION OF PROPOSED DEVELOPMENT:

RENEWABLE ENERGY FACILITY AND ASSOCIATED INFRASTRUCUTRE



Does the proposal involve a change in land use?

☐ NO ☒ YES

Existing land use: AGRICULTURE - GRAZING

Proposed land use: RENEWABLE ENERGY FACIL

Does the proposal involve demolition?

☒ NO ☐ YES

Describe building to be demolished:

Does the proposal involve damage/removal of a regulated tree?

☒ NO ☐ YES

Number of trees/location:

Does the proposal seek to vary an existing development authorisation?

☒ NO ☐ YES

Previous development application number:

LAND DIVISION:

No. of existing lots:

No. of proposed lots:

No. of additional lots:

Reserve area (m²):

Do you wish to have your land division consent assessed in multiple stages? If yes, detail stages:

BUILDING CONSENT:

Existing building classification:

Building classification sought:

Proposed number of employees:

Has the Construction Industry Training Fund Levy been paid?

☐ YES ☐ NO

Do you wish to have your building consent assessed in multiple stages? If yes, detail stages:

INFORMATION FOR CALCULATION OF FEES:

Estimated cost of development cost (not including fit-out costs) \$

If required, a notice of the proposed development will be placed on the relevant land by:

☒ the applicant ☐ the relevant authority at a cost of \$

DECLARATION

All documents attached to this application have been attached with the permission of the relevant rights holders. It has been acknowledged that copies of this application and supporting documentation may be provided to interested persons in accordance with the Act and Regulations.

Applicant signature:



Date: 5/12/2023

☒ If being lodged electronically please tick to indicate agreement to this declaration.

ELECTRICITY INFRASTRUCTURE DECLARATION

Planning, Development and Infrastructure (General) Regulations 2017
Schedule 8 Clause 6

To: STATE COMMISSION ASSESSMENT PANEL

From: NEOEN AUSTRALIA PTY LTD

Date of application: 5/12/2023

Location of proposed development: AS PER ONLINE APPLICATION

House no.: Lot no.: Street:

Town/Suburb:

Section no.: Hundred:

Volume: Folio:

Nature of proposed development:

RENEWABLE ENERGY FACILITY AND ASSOCIATED INFRASTRUCTURE

I: THOMAS DALY

☐ being the applicant

☒ a person acting on behalf of the applicant

for the development described above declare that the proposed development will involve the construction of a building which would, if constructed in accordance with the plans submitted, not be contrary to the regulations prescribed for the purposes of section 86 of the *Electricity Act 1996*. I make this declaration under clause 6(1) of Schedule 8 of the Planning, Development and Infrastructure (General) Regulations 2017.

Signed:



Date: 05/12/2023

☒ If being lodged electronically please tick to indicate agreement to this declaration.

Note 1

This declaration is only relevant to those development applications seeking authorisation for a form of development that involves the construction of a building (there is a definition of 'building' contained in section 3(1) of the *Planning, Development and Infrastructure Act 2016*), other than where the development is limited to –

- a) an internal alteration of a building; or
- b) an alteration to the walls of a building but not so as to alter the shape of the building.

Note 2

The requirements of section 86 of the *Electricity Act 1996* do not apply in relation to:

- a) an aerial line and a fence, sign or notice that is less than 2.0 m in height and is not designed for a person to stand on; or
- b) a service line installed specifically to supply electricity to the building or structure by the operator of the transmission or distribution network from which the electricity is being supplied.

Note 3

Section 86 of the *Electricity Act 1996* refers to the erection of buildings in proximity to powerlines. The regulations under this Act prescribe minimum safe clearance distances that must be complied with.

Note 4

The majority of applications will not have any powerline issues, as normal residential setbacks often cause the building to comply with the prescribed powerline clearance distances. Buildings/renovations located far away from powerlines, for example towards the back of properties, will usually also comply.

Particular care needs to be taken where high voltage powerlines exist; or where the development:

- is on a major road;
- commercial/industrial in nature; or
- built to the property boundary.

Note 5

An information brochure: 'Building Safely Near Powerlines' has been prepared by the Technical Regulator to assist applicants and other interested persons.

This brochure is available from council and the Office of the Technical Regulator. The brochure and other relevant information can also be found at sa.gov.au/energy/powerlinesafety

Note 6

In cases where applicants have obtained a written approval from the Technical Regulator to build the development specified above in its current form within the prescribed clearance distances, the applicant is able to sign the form.



Ref: 2023D097685

23 November 2023

Thomas Daly
Project Manager
NEOEN
Level 1 – Margaret Graham Building, 1a Frome Road
Adelaide SA 5000

Regulation and Compliance

Office of the
Technical Regulator

Level 8, 11 Waymouth Street
Adelaide SA 5000

GPO Box 320
Adelaide SA 5001

Telephone: 08 8226 5500
Facsimile: 08 8226 5866

www.otr.sa.gov.au

Dear Mr Daly,

RE: Goyder North Renewable Energy Project

The development of the Goyder North Renewable Energy Project has been assessed by the Office of the Technical Regulator (OTR) under section 122 of the *Planning, Development and Infrastructure Act 2016*.

The *Planning, Development and Infrastructure (General) Regulations 2017* prescribe if the proposed development is for the purposes of the provision of electricity generating plant with a generating capacity of more than 5 MW that is to be connected to the State's power system – a certificate from the Technical Regulator is required, certifying that the proposed development complies with the requirements of the Technical Regulator in relation to the security and stability of the State's power system.

In deciding on your application, I have taken the following information into account:

- Your letter received 22nd November 2023

After assessing the information provided, I advise that approval is granted for the project on the following condition:

- 472MW of fast frequency response is provided by the 900MW battery energy storage system.

It should be noted that should the proponent subsequently decide not to construct the BESS, as outlined in the Development Application (DA) and agreed to in this certificate, the proponent is advised that they must apply for a variation to the DA. Any such variation will require the proponent to obtain a new certificate from the OTR.

Regulation and Compliance



If a certificate is not obtained, formal referral to the OTR will be required during the DA assessment process. Any formal referral may be subject to referral fees applicable at the time.

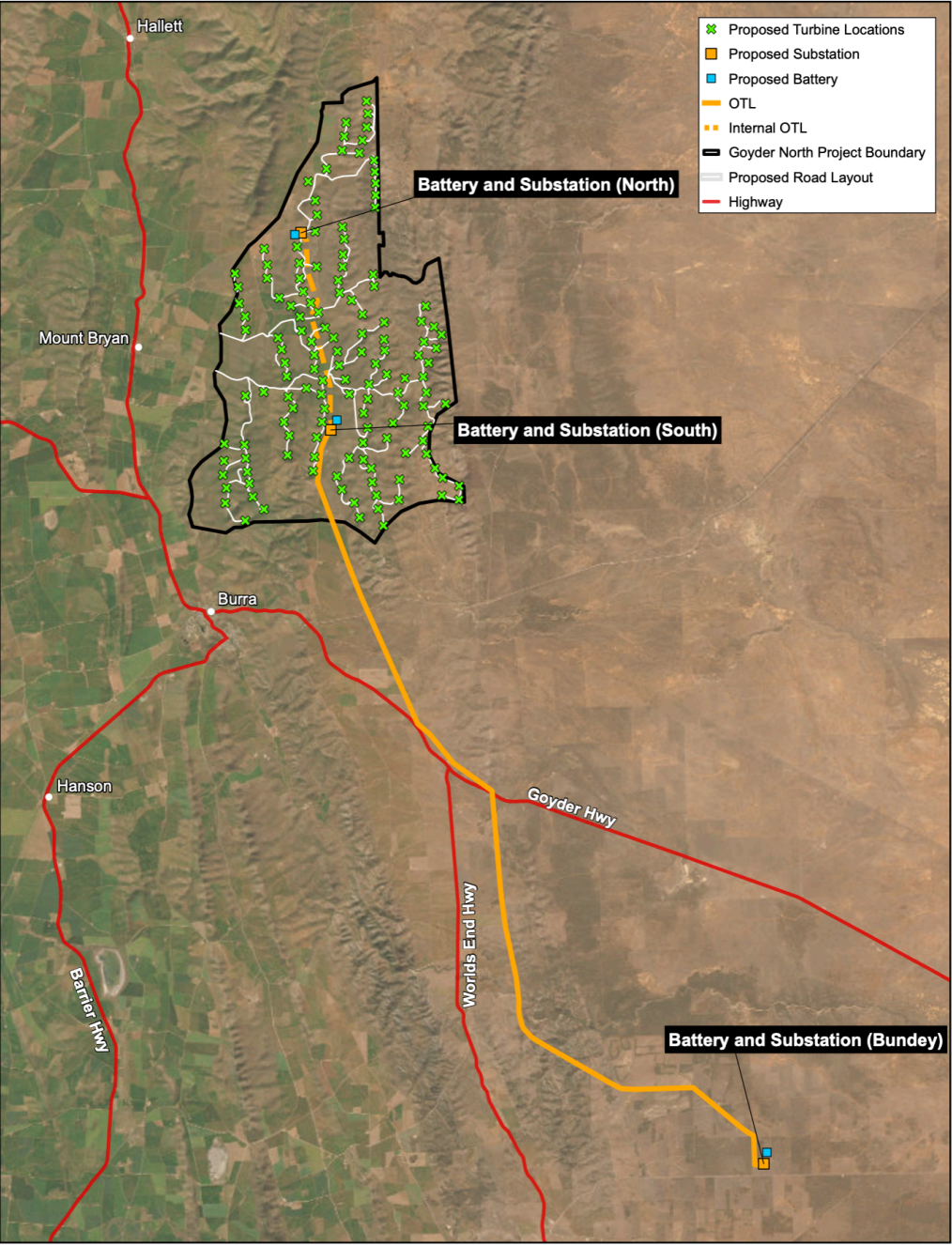
Should you have any questions regarding this matter, please do not hesitate to call Mark Burns on (08) 8429 2707.

Yours sincerely

A handwritten signature in blue ink, appearing to read "R J Faunt".

Rob Faunt
TECHNICAL REGULATOR

Appendix B Application Plans



FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

A ISSUED FOR REVIEW				SF	TD	17/10/2023
Rev	Description	Checked	Approved	Date		
Author	M. PEREZ	Drafting Check	S. ZAMAR			
Designer	S. FOGARTY	Design Check	T. DALY			

Plot Date: 20 October 2023 - 3:44 PM Plotted by: MJ Perez

File Name: C:\Users\mperez\Documents\12623773\GNWF-DWG-0012.dwg

NEOEN

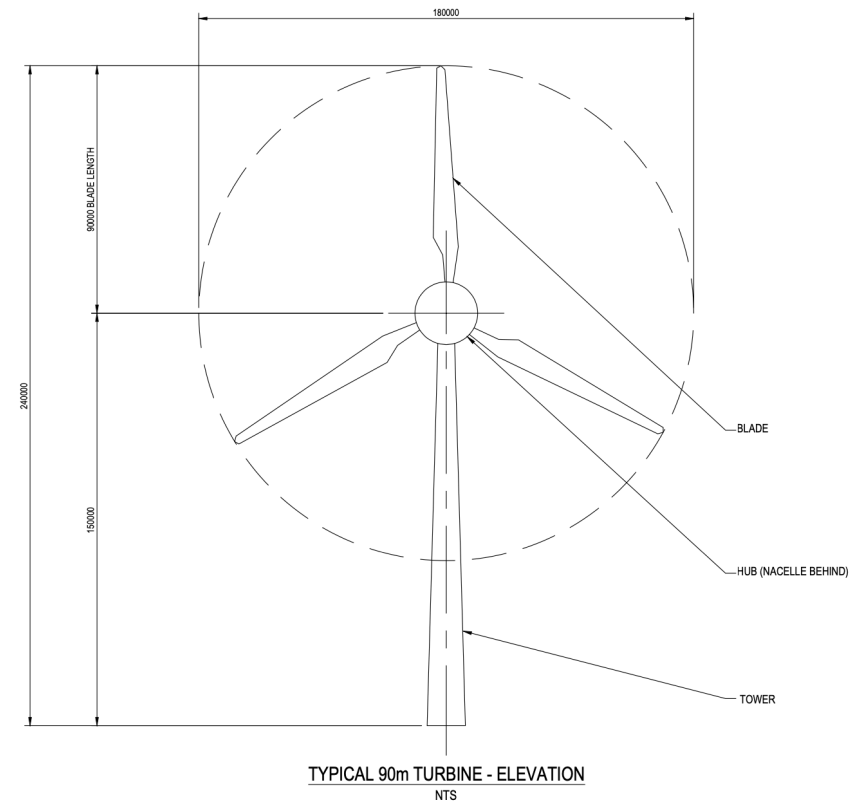
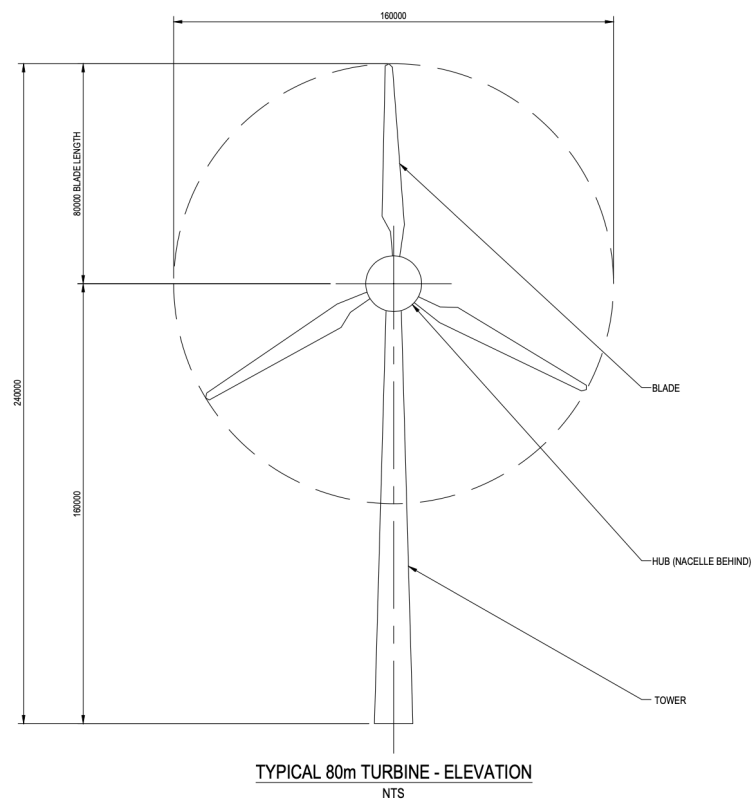
GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
PROJECT LAYOUT

GNDA-001

Size
A1
Rev
A

1. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.



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Designer	S. FOGARTY	Design Check	T. DALY		

NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title GOYDER NORTH PROJECT

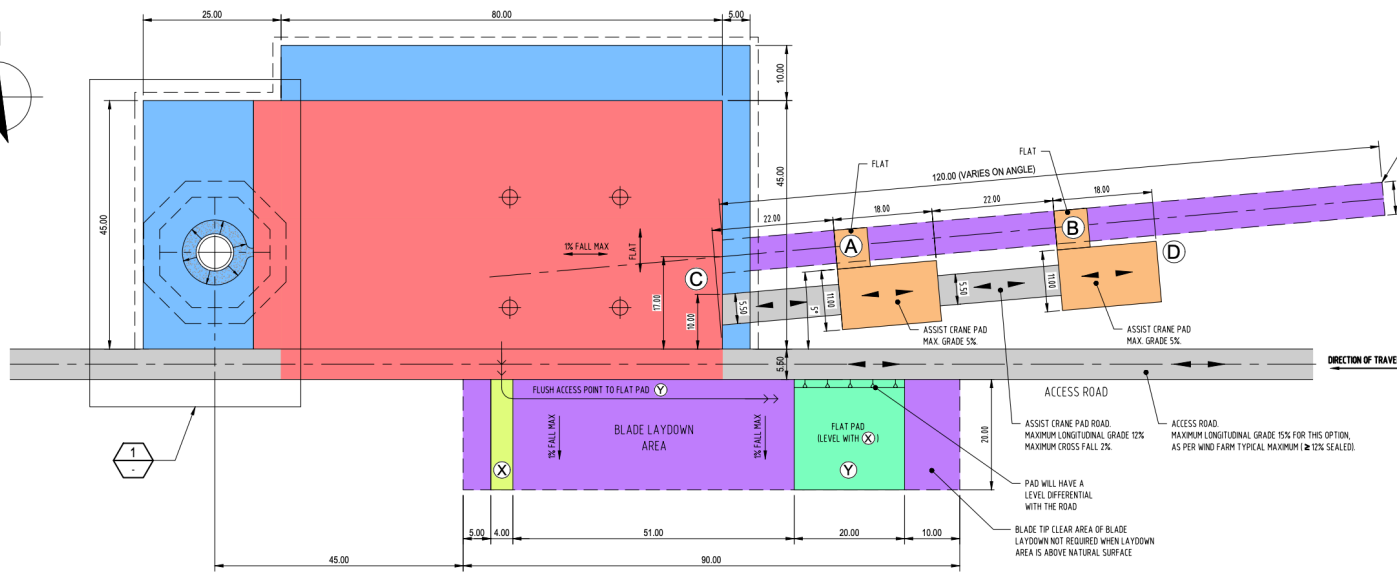
TYPICAL TURBINE DIMENSIONS

GND A-002

Size
A1Rev
A

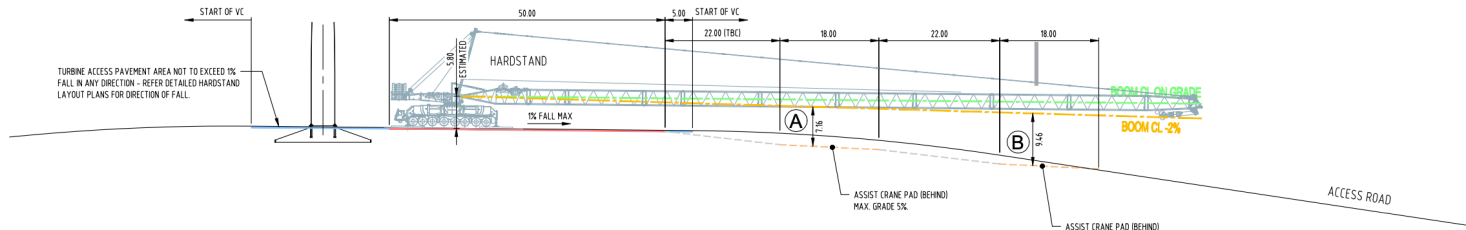
Plot Date: 30 November 2023 - 1:19 PM Plotted by: MJ Perez

File Name: C:\Users\mperez3\Documents\12623773\GNWF-DWG-0021.dwg



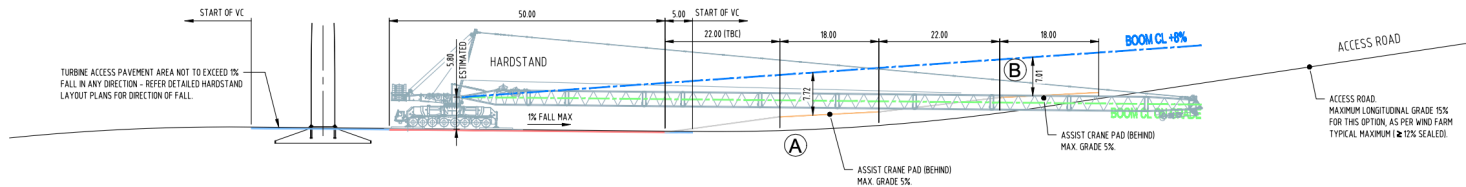
HARDSTAND GENERAL ARRANGEMENT

SCALE 1:500



HARDSTAND GENERAL ARRANGEMENT LONGITUDINAL SECTION

SCALE 1:500

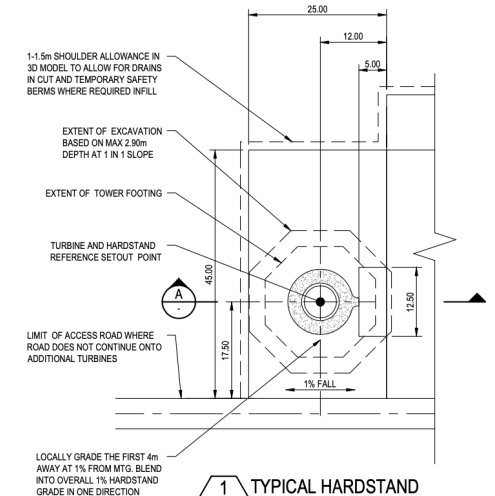


HARDSTAND GENERAL ARRANGEMENT LONGITUDINAL SECTION

SCALE 1:500

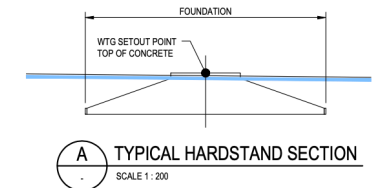
PAVEMENT LEGEND

- ROAD PAVEMENT (200KPa/20T AXLE ALLOWABLE BEARING PRESSURE)
- HARDST AND PAVEMENT (260KPa ALLOWABLE BEARING PRESSURE)
- BLADE TIP SUPPORT (150KPa ALLOWABLE BEARING PRESSURE)
- BLADE ROOT END SUPPORT (200KPa ALLOWABLE BEARING PRESSURE)
- LIGHT DUTY TRAFFICABLE PAVEMENT (100KPa) COMPONENT LAYDOWN ONLY
- AUXILIARY HARDSTAND - CRANE USE (200KPa ALLOWABLE BEARING PRESSURE)
- BLADE CUT AND LEVELLED INTO NATURAL TERRAIN IN CUT ONLY



1 TYPICAL HARDSTAND

SCALE 1:200



A TYPICAL HARDSTAND SECTION

SCALE 1:200

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A ISSUED FOR REVIEW			
Rev Description			
Author	M. PEREZ	Drafting Check	S. ZAMAR
Designer	S. FOGARTY	Design Check	T. DALY

NEOEN

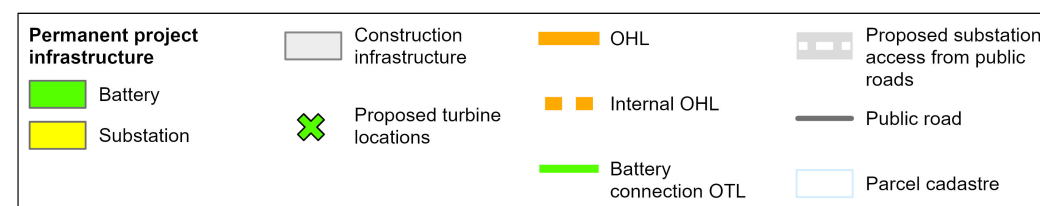
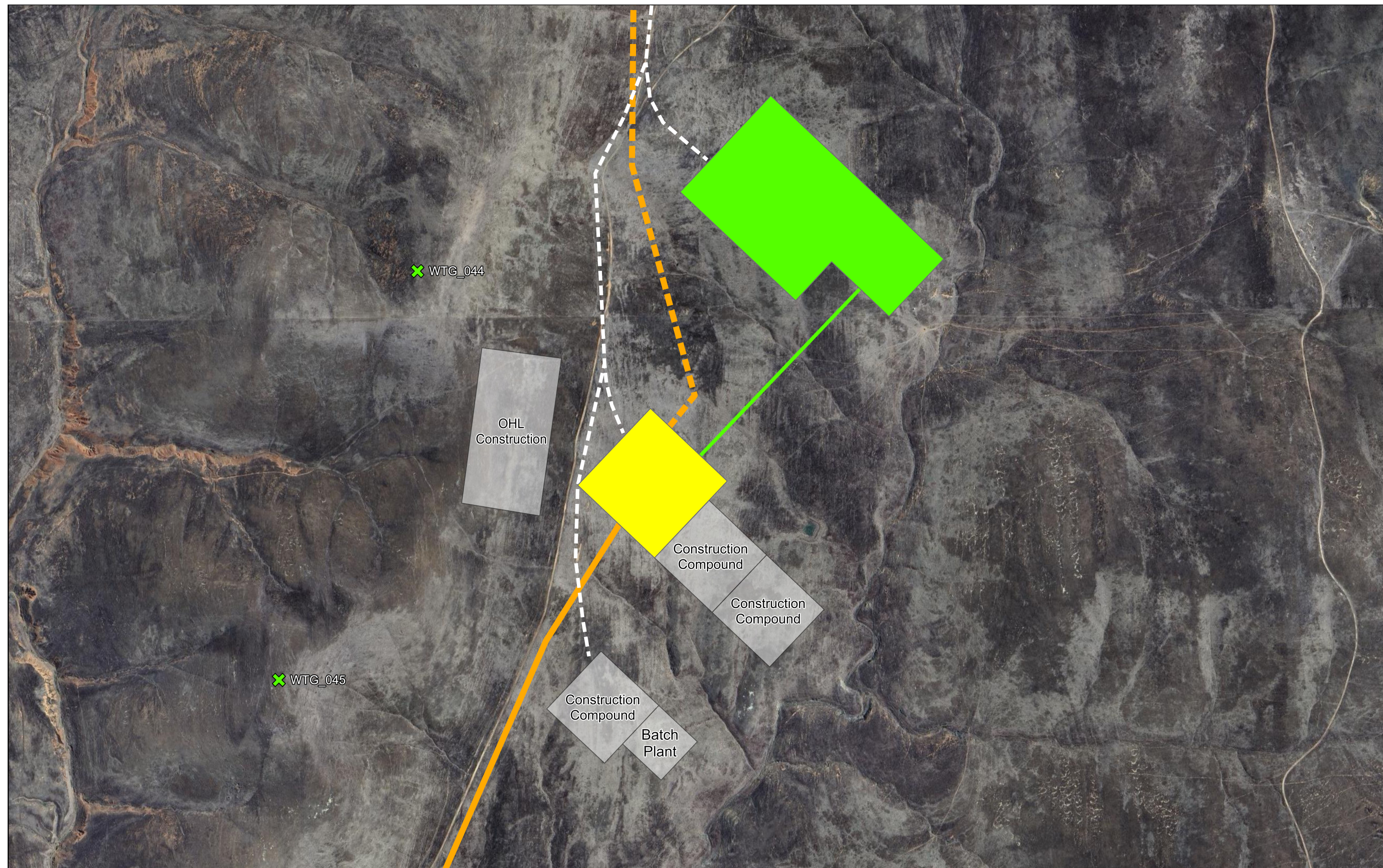
GOYDER NORTH
GOYDER RENEWABLES ZONE

GOYDER NORTH PROJECT

TYPICAL TURBINE LAYOUT &
HARDSTAND

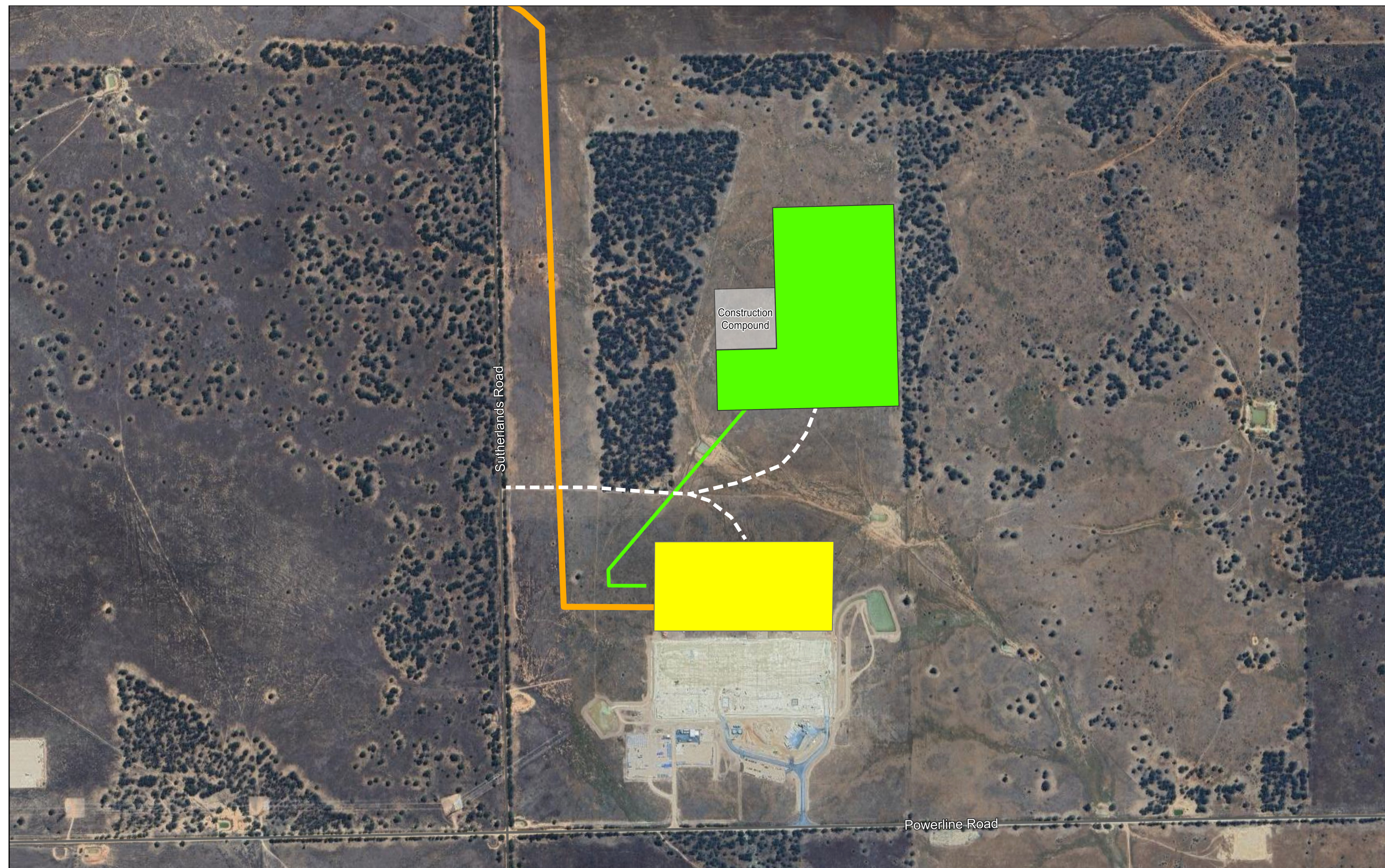
GNDA-003











Rev A



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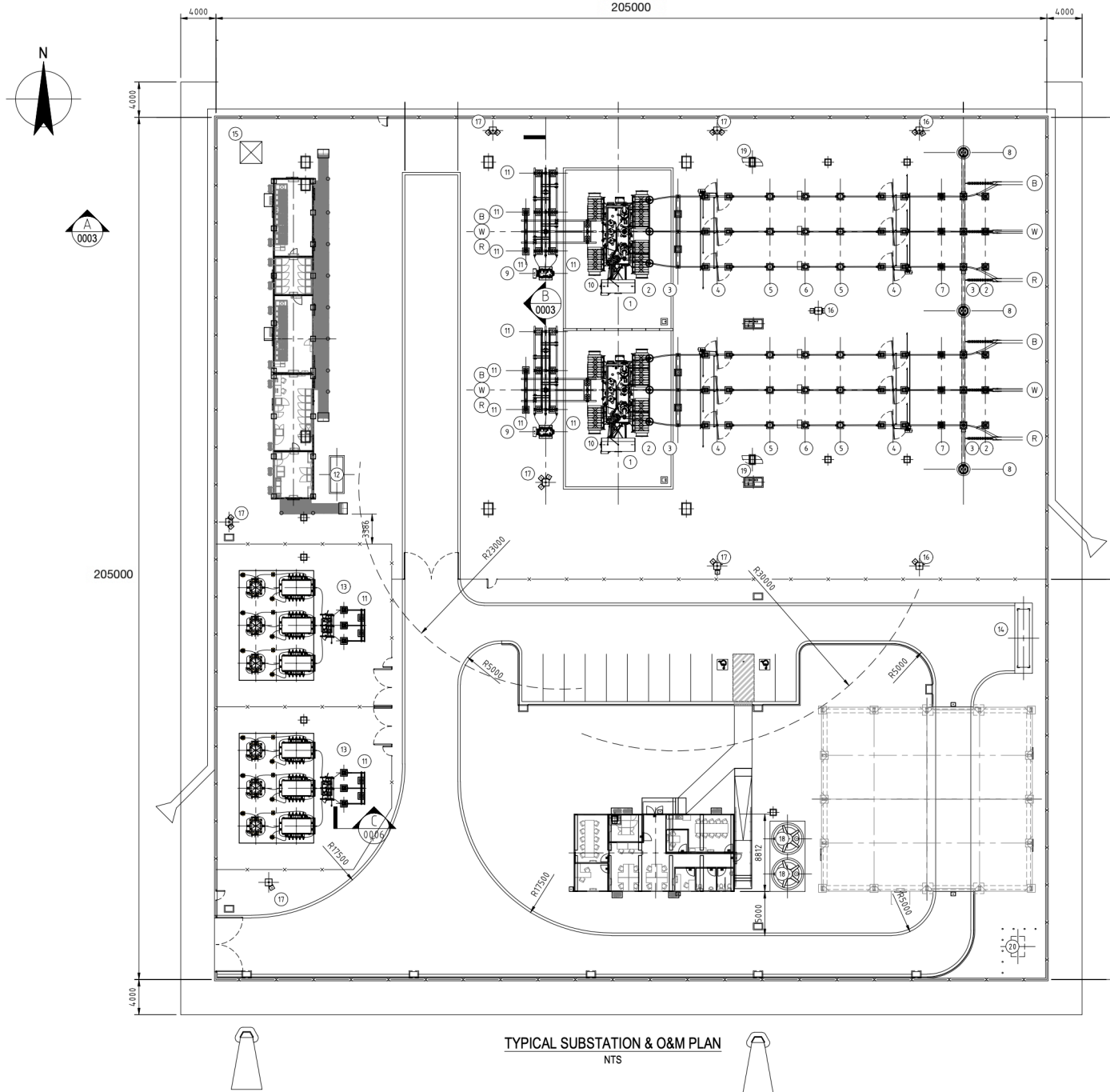
[illegible]



Permanent project infrastructure	 Construction infrastructure	 OTL	 Proposed substation access from public roads
 Battery	 Proposed turbine locations	 Internal OTL	 Public road
 Substation		 Battery connection OTL	 Parcel cadastre

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[illegible]



EQUIPMENT SCHEDULE	
ITEM No.	DESCRIPTION
1	275/33kV POWER TRANSFORMER
2	275kV SURGE ARRESTER
3	275kV POST INSULATOR
4	275kV DISCONNECTOR WITH EARTH SWITCH
5	275kV CURRENT TRANSFORMER
6	275kV CIRCUIT BREAKER
7	275kV CAPACITIVE VOLTAGE TRANSFORMER
8	275kV GANTRY
9	33/0.433kV STATION SERVICE TRANSFORMER / NEUTRAL EARTHING RESISTOR
10	33kV SURGE ARRESTER
11	33kV POST INSULATOR
12	DIESEL GENERATOR
13	HARMONIC FILTERS
14	HAZARDOUS MATERIAL CONTAINER
15	COMMUNICATION TOWER
16	7m LIGHTING MAST
17	20m LIGHTING/LIGHTNING MAST
18	WATER TANK
19	YARD MARSHALLING KIOSK
20	NON -TRAFFICABLE SEPTIC TANK

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Drawing Title GOYDER NORTH PROJECT

TYPICAL SUBSTATION & O&M PLAN

GNWF-007

Size
A1

Rev
A

NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title GOYDER NORTH PROJECT

TYPICAL SUBSTATION & O&M PLAN

GNWF-007

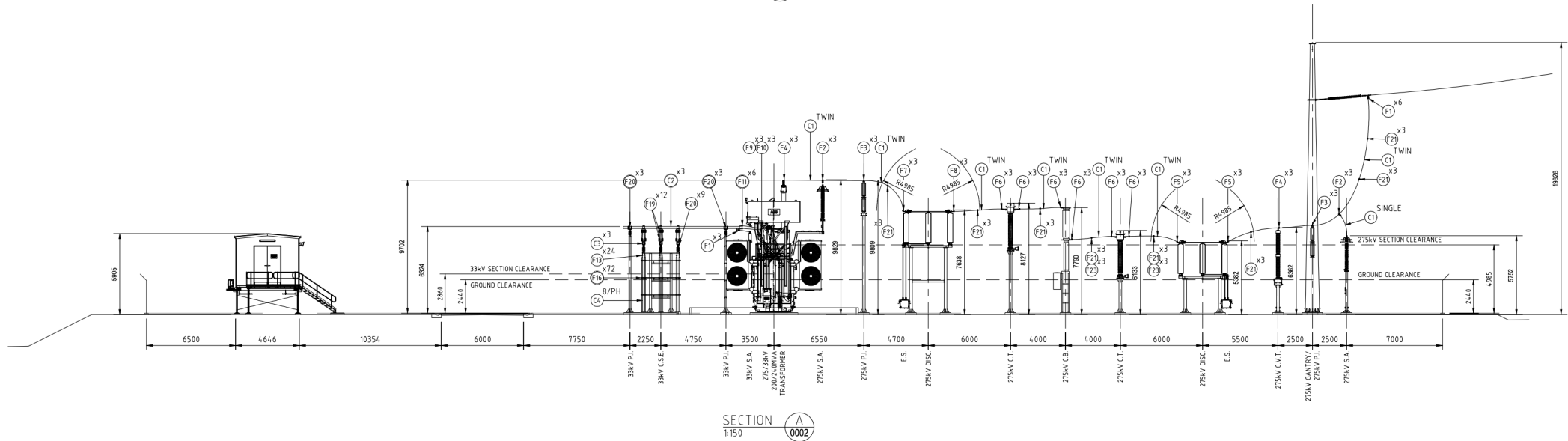
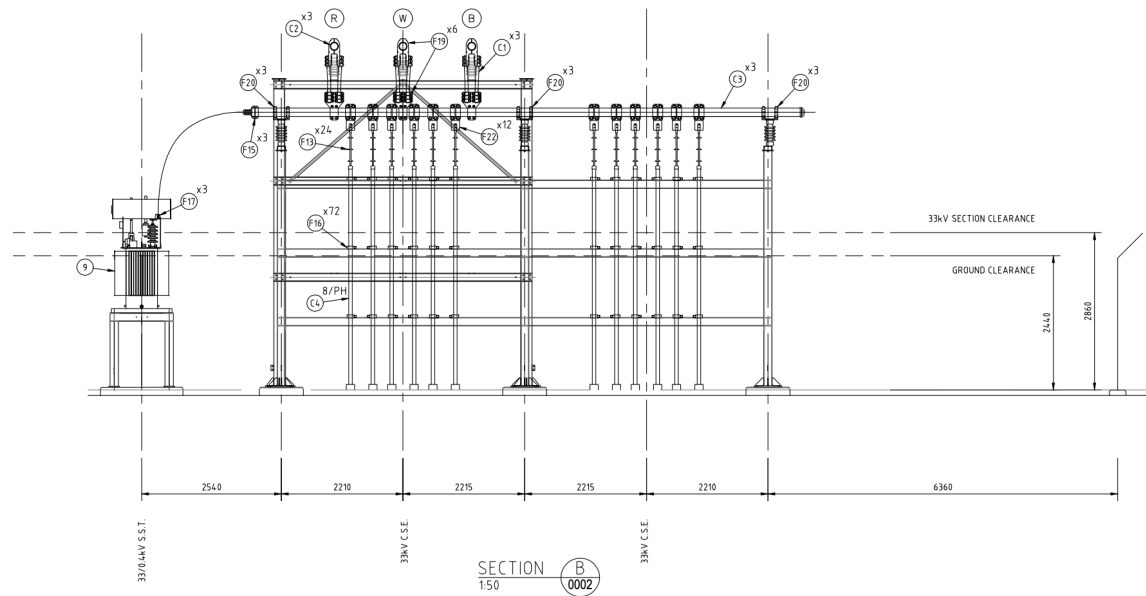
Size
A1

Rev
A

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Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

Plot Date: 20 October 2023 - 3:21 PM Plotted by: MJ Perez

File Name: C:\Users\mperez3\Documents\12623773\GNWF-DWG-0002.dwg



REFERENCE DRAWINGS	
DRG. NUMBER	DESCRIPTION
GNWF-DWG-0001	TYPICAL TURBINE HARDSTAND ARRANGEMENTS
GNWF-DWG-0002	TYPICAL SUBSTATION & O&M PLAN

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Designer	S. FOGARTY	Design Check	T. DALY	

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GOYDER NORTH
GOYDER RENEWABLES ZONE

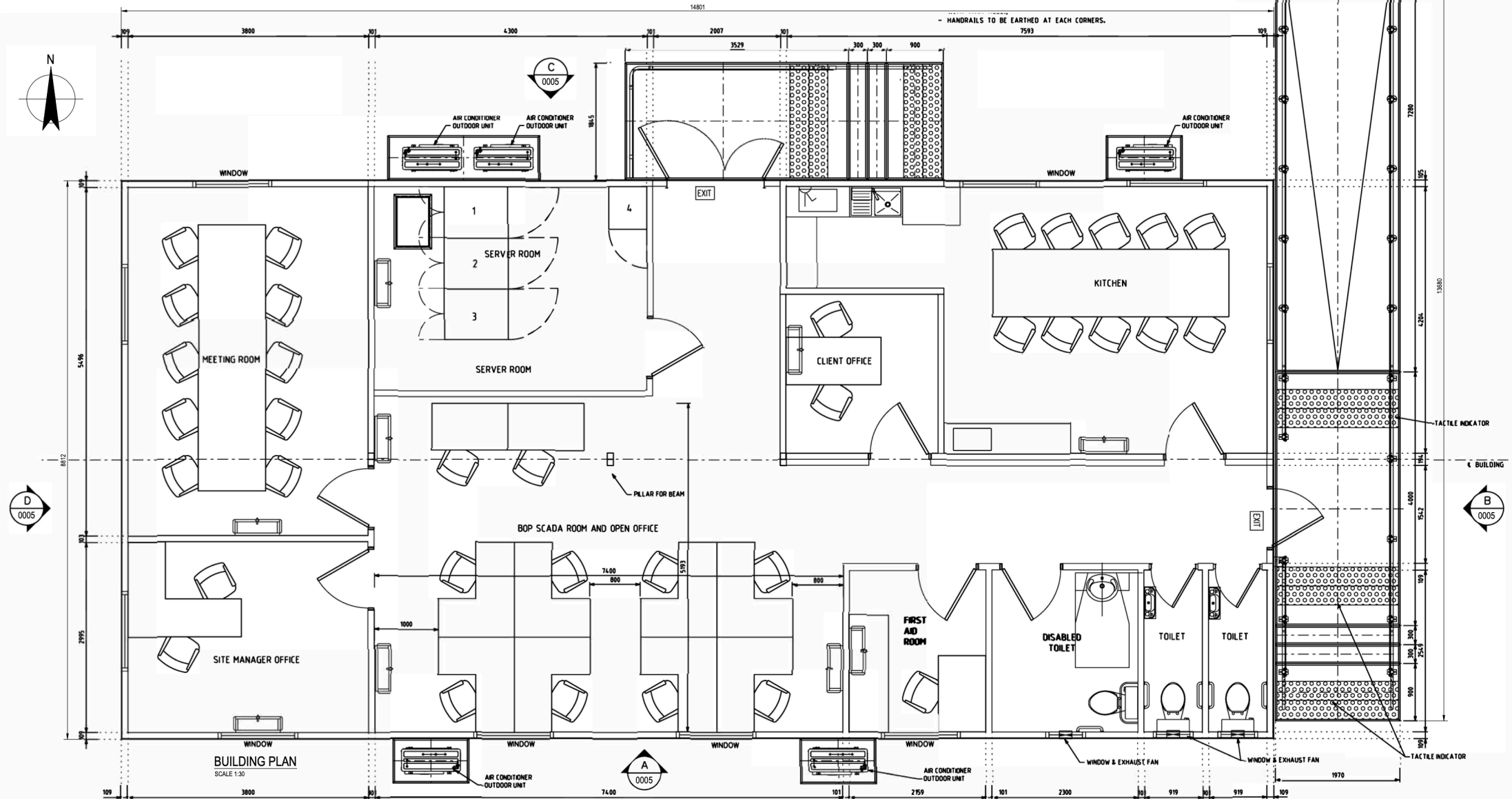
Drawing Title
GOYDER NORTH PROJECT
TYPICAL SUBSTATION ELEVATIONS

GND-008

Size
A1

Rev
A

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BUILDING PLAN
SCALE 1:30

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Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

NEOEN

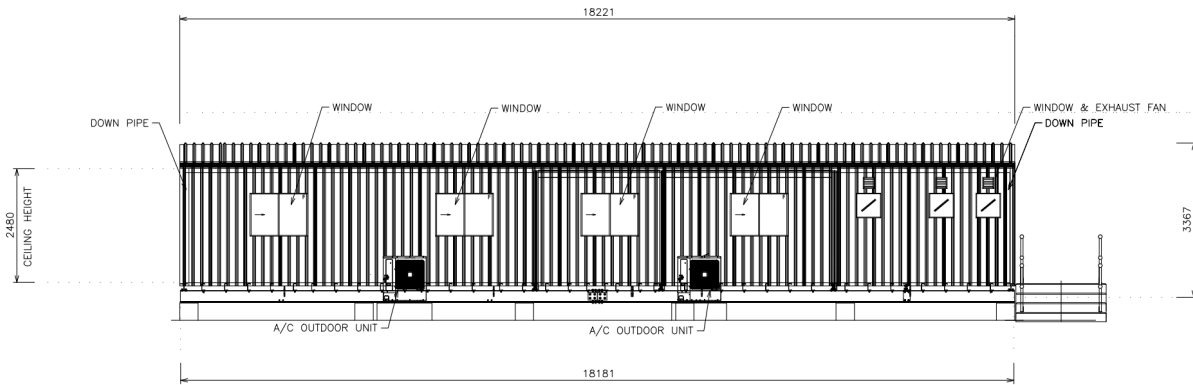
GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL O&M OFFICE PLAN

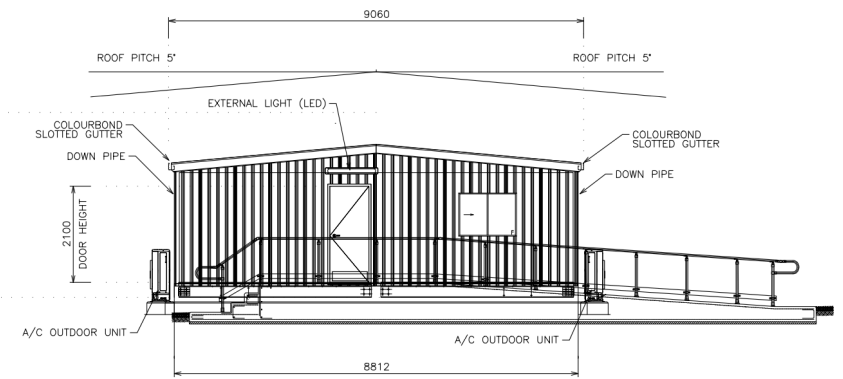
GND-006

Size
A1

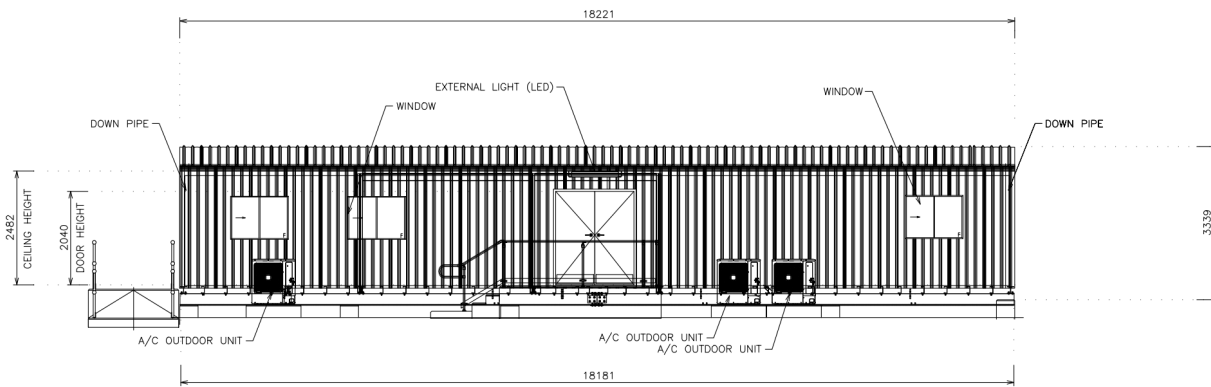
Rev
A



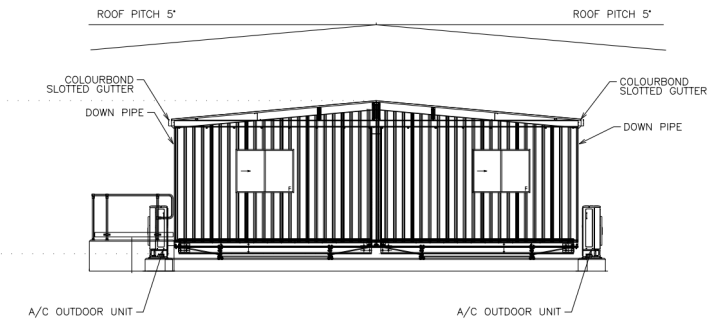
SECTION A
SCALE 1:60 0004



SECTION B
SCALE 1:60 0004



SECTION C
SCALE 1:60 0004



SECTION D
SCALE 1:60 0004

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Designer	S. FOGARTY	Design Check	T. DALY			

NEOEN

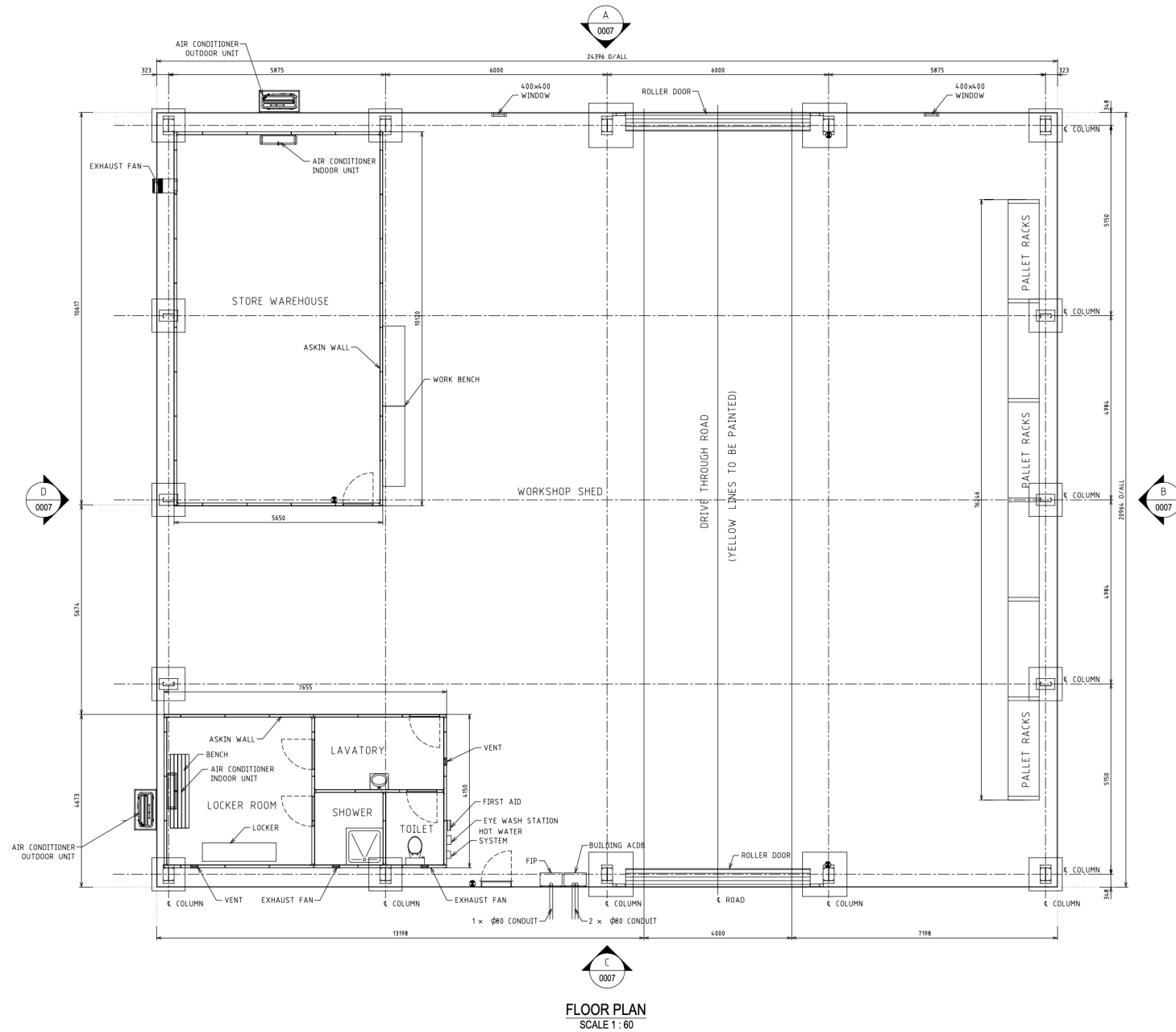
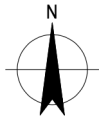
GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL O&M OFFICE
ELEVATION

GND-010

Size
A1

Rev
A



FLOOR PLAN
SCALE 1:60

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Designer	S. FOGARTY	Design Check	T. DALY			

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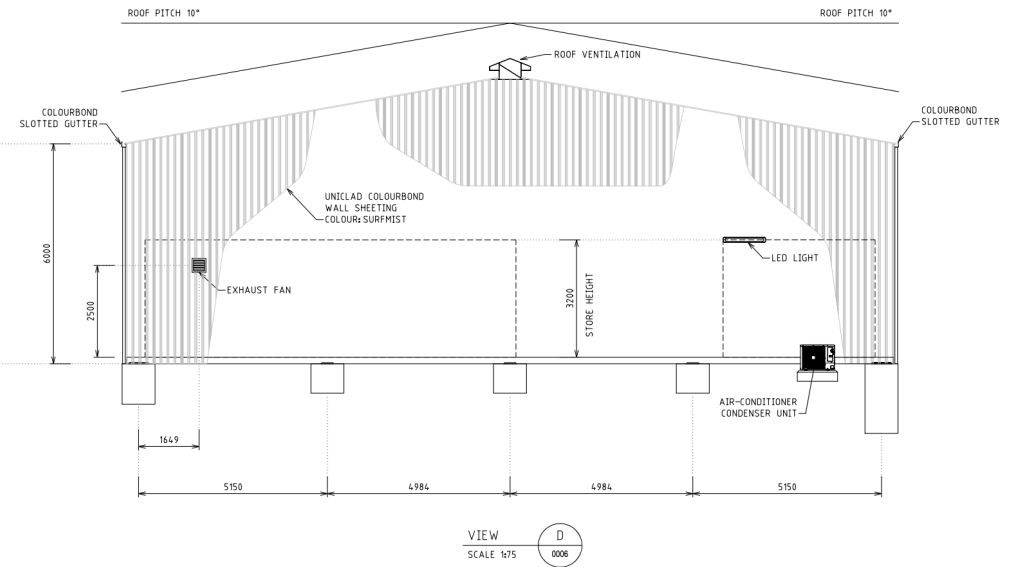
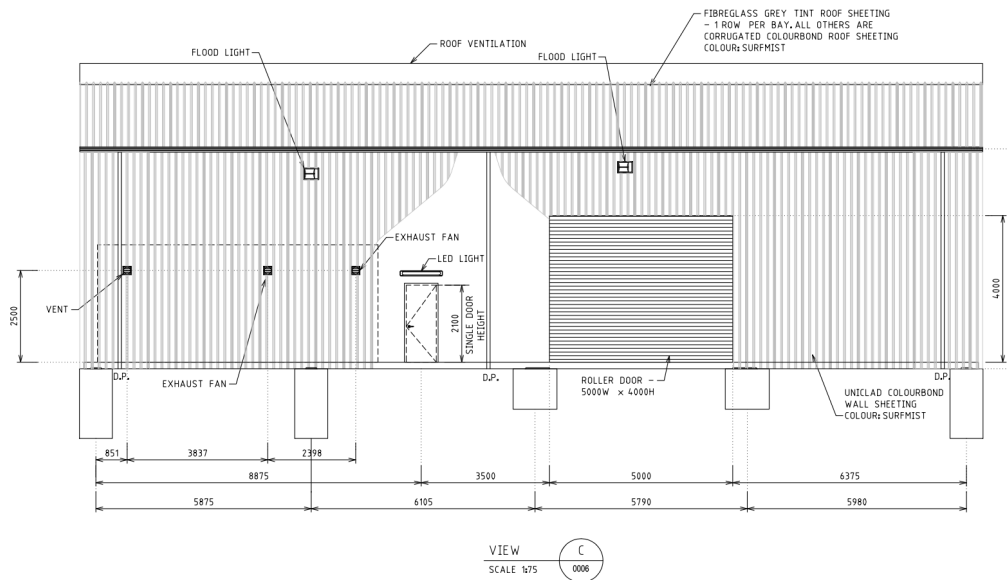
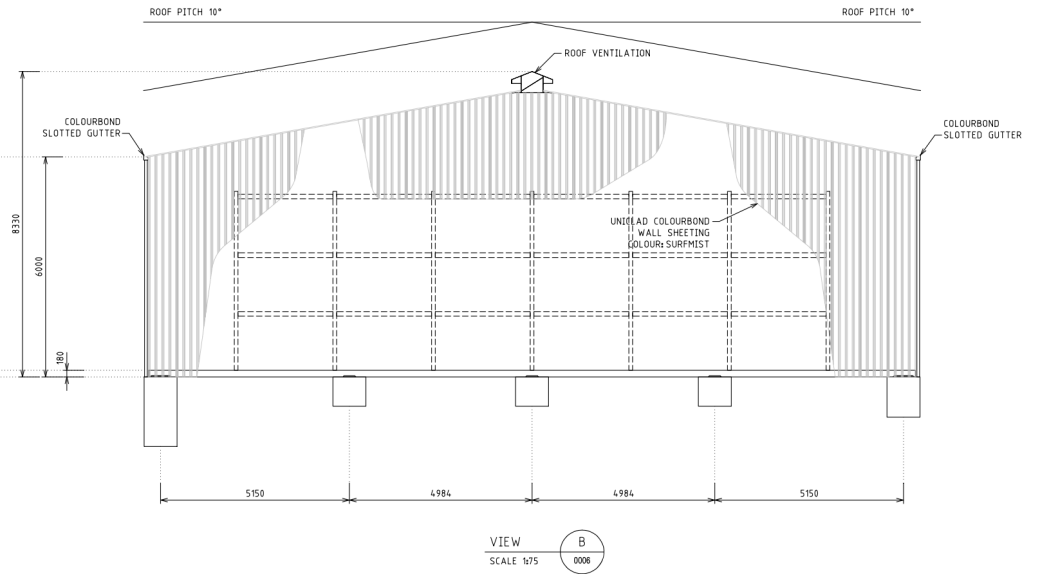
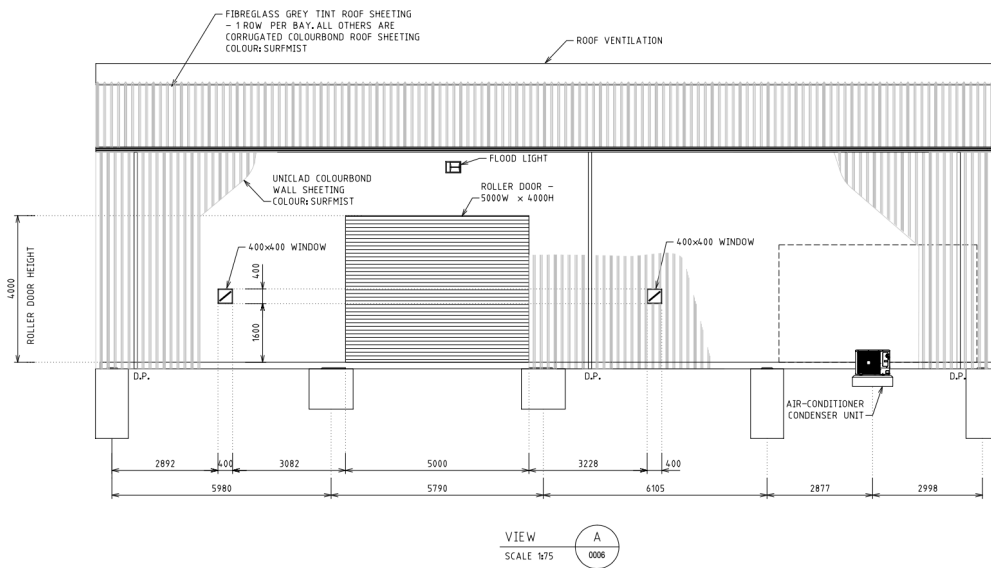
GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL WORKSHOP PLAN

GND-011

Size
A1

Rev
A



FOR INFORMATION
 NOT TO BE USED FOR CONSTRUCTION

Author	M. PEREZ	Drafting Check	S. ZAMAR
Designer	S. FOGARTY	Design Check	T. DALY

NEOEN

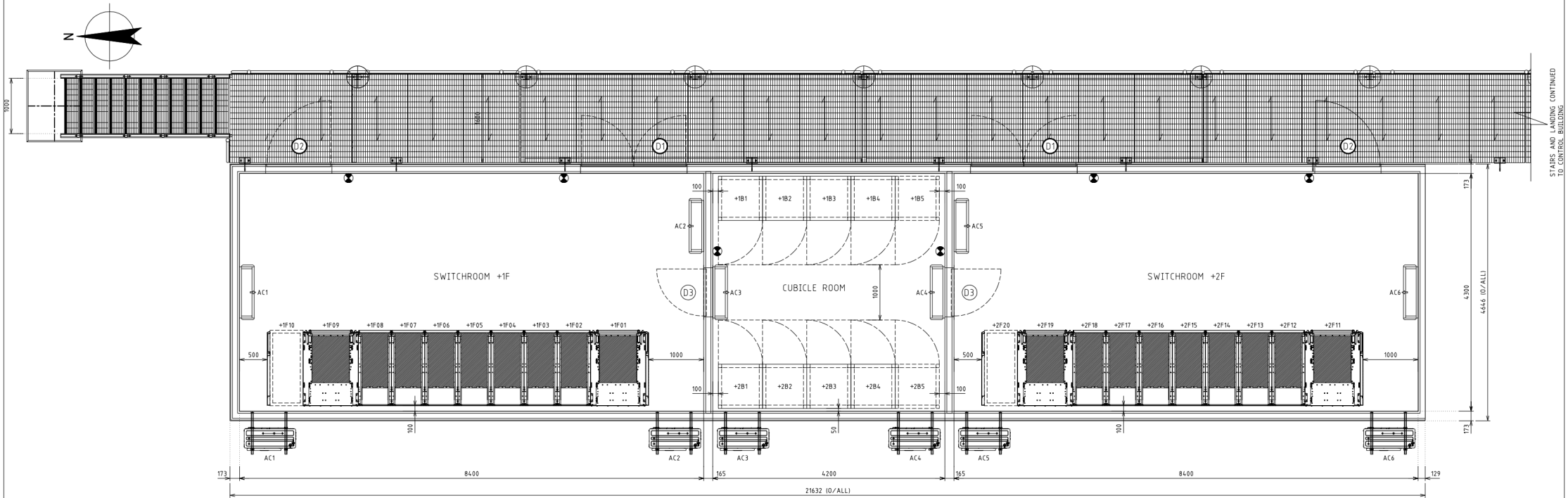
GOYDER NORTH
 GOYDER RENEWABLES ZONE

Drawing Title
 GOYDER NORTH PROJECT
 TYPICAL WORKSHOP ELEVATIONS

GND-012

Size
 A1

Rev
 A



SWITCHROOM BUILDING LAYOUT
SCALE 1 : 35

#	DESCRIPTION	WEIGHT
SWITCHGEAR		
+1F01	33kV TRANSFORMER 1 INCOMING N°1 (1050x1364x2418)	900 KG
+1F02	33kV FILTER 7MVAR (600x1364x2418)	900 KG
+1F03	33kV FEEDER COLLECTOR -FEEDER 01 (600x1364x2418)	900 KG
+1F04	33kV FEEDER COLLECTOR -FEEDER 02 (600x1364x2418)	900 KG
+1F05	33kV FEEDER COLLECTOR -FEEDER 03 (600x1364x2418)	900 KG
+1F06	33kV FEEDER COLLECTOR -FEEDER 04 (600x1364x2418)	900 KG
+1F07	33kV FEEDER COLLECTOR -FEEDER 05 (600x1364x2418)	900 KG
+1F08	33kV FEEDER COLLECTOR -FEEDER 06 (600x1364x2418)	900 KG
+1F09	33kV TRANSFORMER 1 INCOMING N°2 (1050x1364x2418)	900 KG
+1F10	SPARE PANEL (600x1364x2418)	-
+2F11	33kV TRANSFORMER 2 INCOMING N°1 (1050x1364x2418)	900 KG
+2F12	33kV FILTER 7MVAR (600x1364x2418)	900 KG
+2F13	33kV FEEDER COLLECTOR -FEEDER 07 (600x1364x2418)	900 KG
+2F14	33kV FEEDER COLLECTOR -FEEDER 08 (600x1364x2418)	900 KG
+2F15	33kV FEEDER COLLECTOR -FEEDER 09 (600x1364x2418)	900 KG
+2F16	33kV FEEDER COLLECTOR -FEEDER 10 (600x1364x2418)	900 KG
+2F17	33kV FEEDER COLLECTOR -FEEDER 11 (600x1364x2418)	900 KG
+2F18	33kV FEEDER COLLECTOR -FEEDER 12 (600x1364x2418)	900 KG
+2F19	33kV TRANSFORMER INCOMING N°2 (1050x1364x2418)	900 KG
+2F20	SPARE PANEL (600x1364x2418)	-
CONTROL CUBICLES AND SWITCHGEAR ROOM		
+1B1	FIELD MARSHALLING KIOSK (800x800x2200)	300 KG
+1B2	TRANSFORMER No.1 PROTECTION PANEL (800x800x2200)	300 KG
+1B3	LINE 1 PROTECTION PANEL (800x800x2200)	300 KG
+1B4	BUSBAR PANEL (800x800x2200)	300 KG
+1B5	SPARE PANEL (800x800x2200)	-
+2B1	FIELD MARSHALLING KIOSK (800x800x2200)	300 KG
+2B2	TRANSFORMER No.2 PROTECTION PANEL (800x800x2200)	300 KG
+2B3	LINE 2 PROTECTION PANEL (800x800x2200)	300 KG
+2B4	BUSBAR PANEL (800x800x2200)	300 KG
+2B5	SPARE PANEL (800x800x2200)	-

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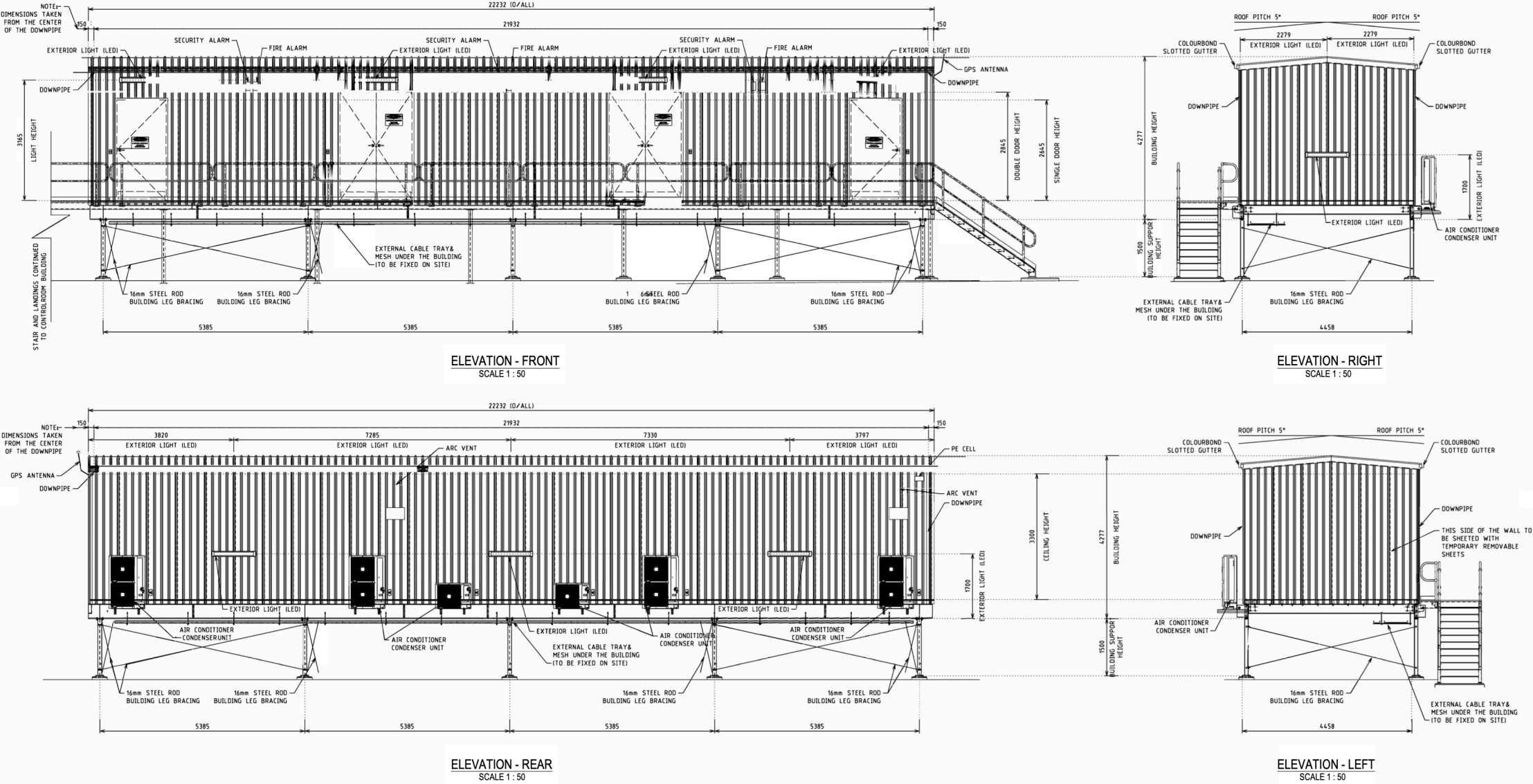
NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL SWITCHROOM PLAN

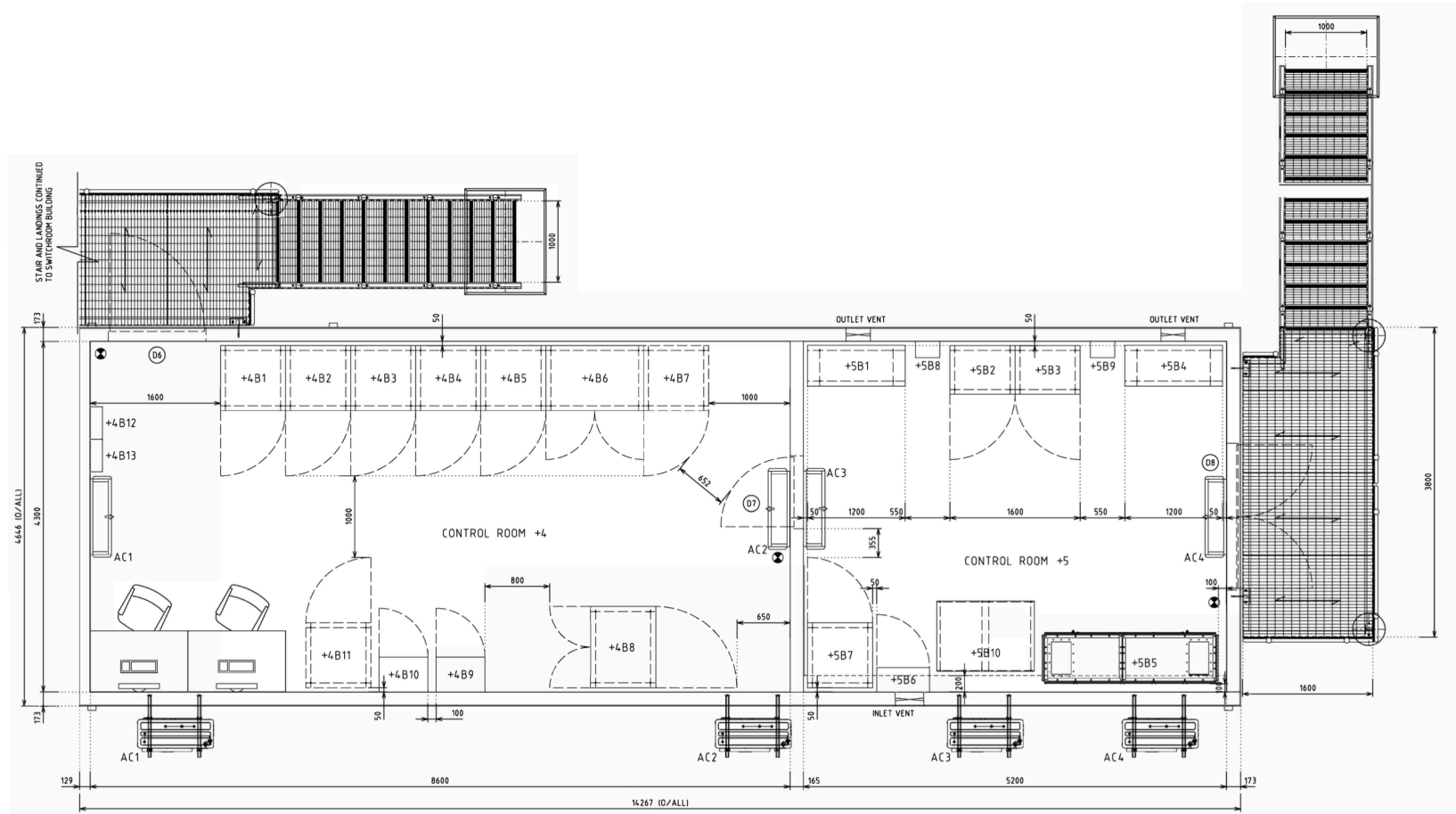
GND-013

Rev
A



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CONTROL BUILDING LAYOUT
SCALE 1 : 30

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NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

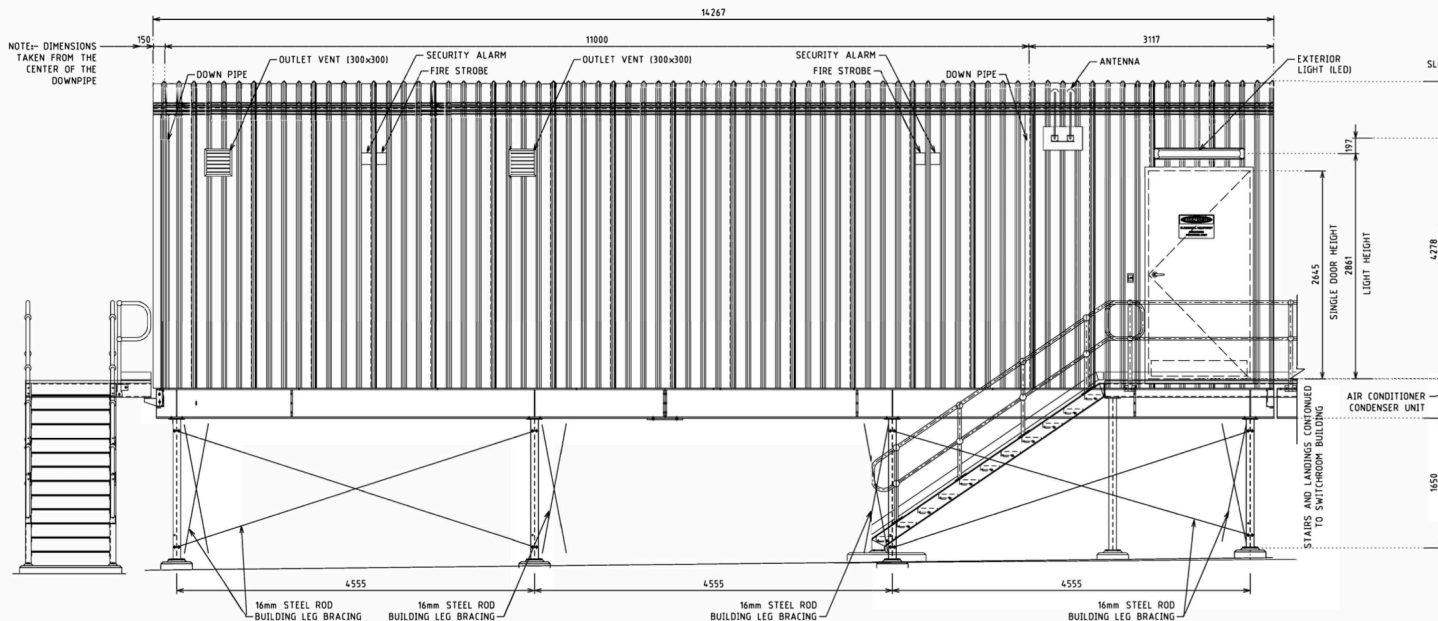
Drawing Title
GOYDER NORTH PROJECT
TYPICAL CONTROL ROOM PLAN

GND-015

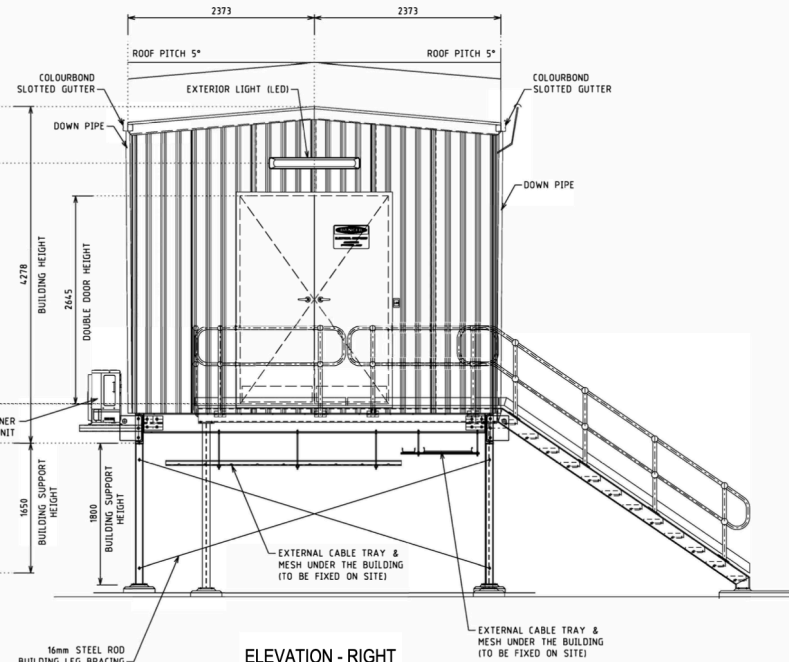
Size
A1

Rev
A

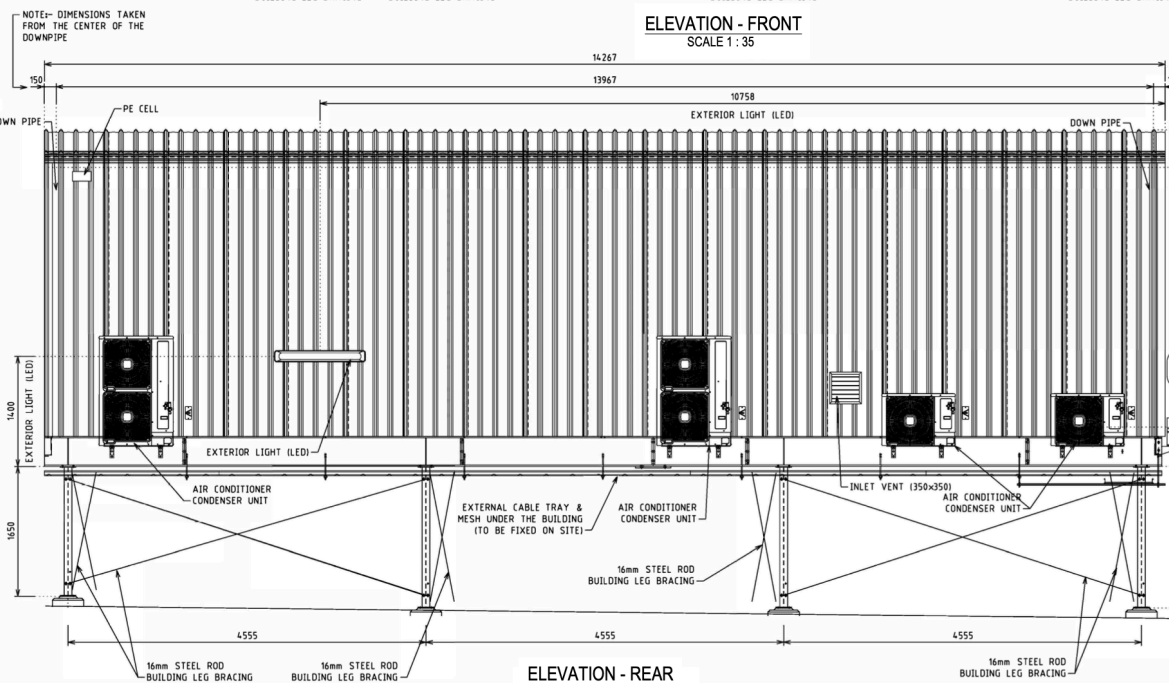
NOTE:- DIMENSIONS
TAKEN FROM THE
CENTER OF THE
DOWNPIPE



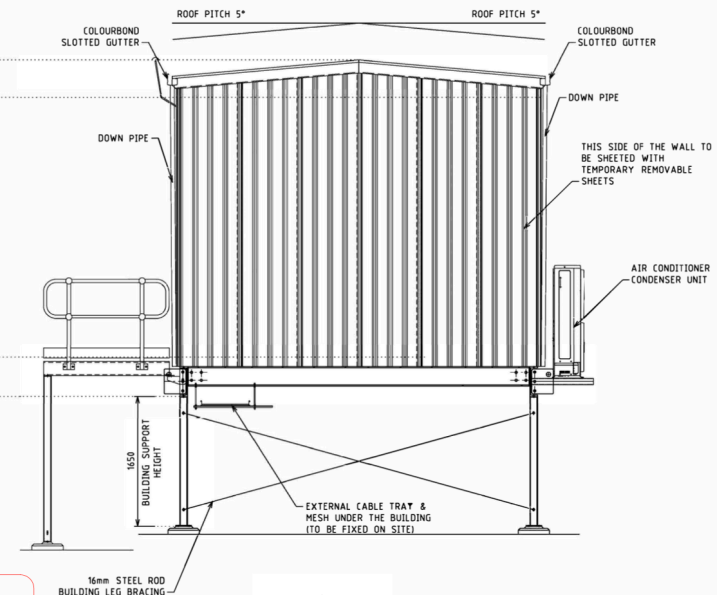
ELEVATION - FRONT
SCALE 1: 35



ELEVATION - RIGHT
SCALE 1: 35



ELEVATION - REAR
SCALE 1: 35



ELEVATION - LEFT
SCALE 1: 35

FOR INFORMATION
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Designer	S. FOGARTY	Design Check	T. DALY

NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

GOYDER NORTH PROJECT
TYPICAL CONTROL ROOM
ELEVATIONS

GND-016

Size
A1

Rev
A

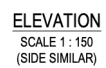
1. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.



GND A-017

GOYDER NORTH
GOYDER RENEWABLES ZONE

1. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.



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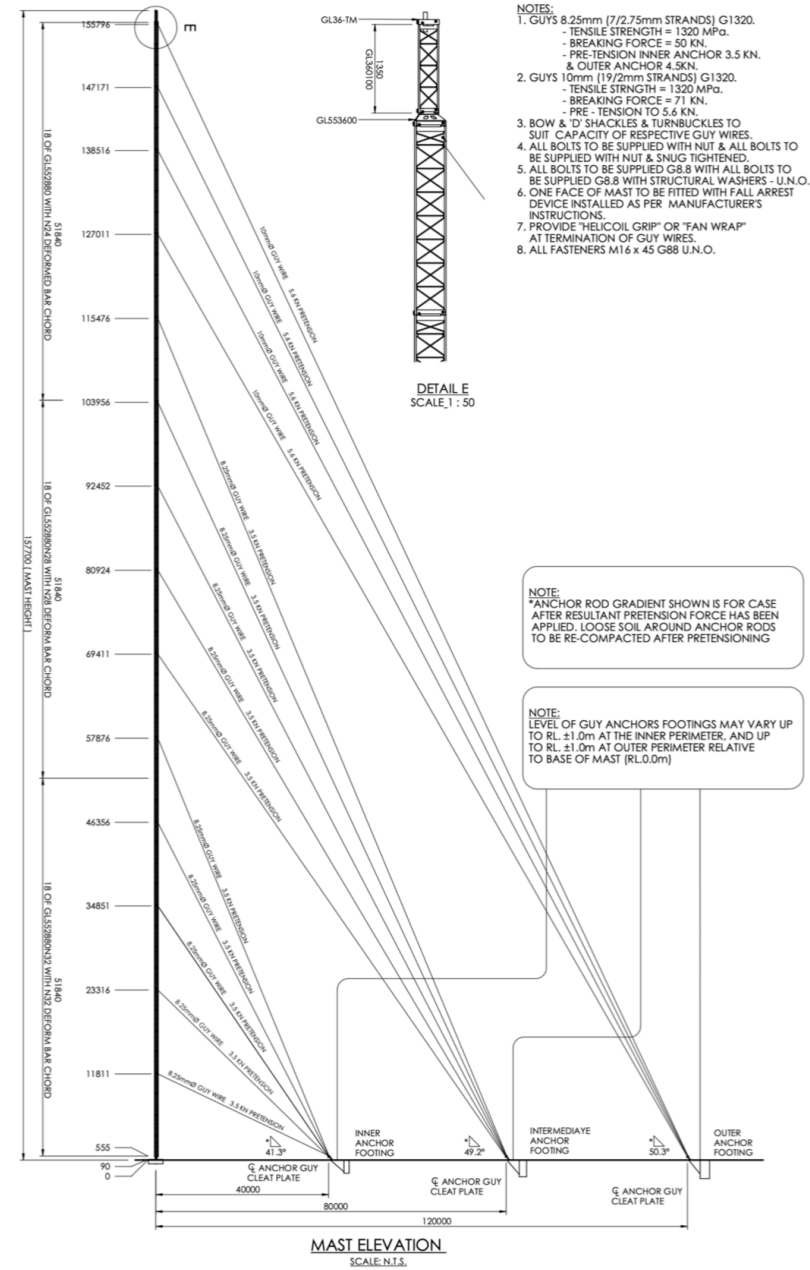
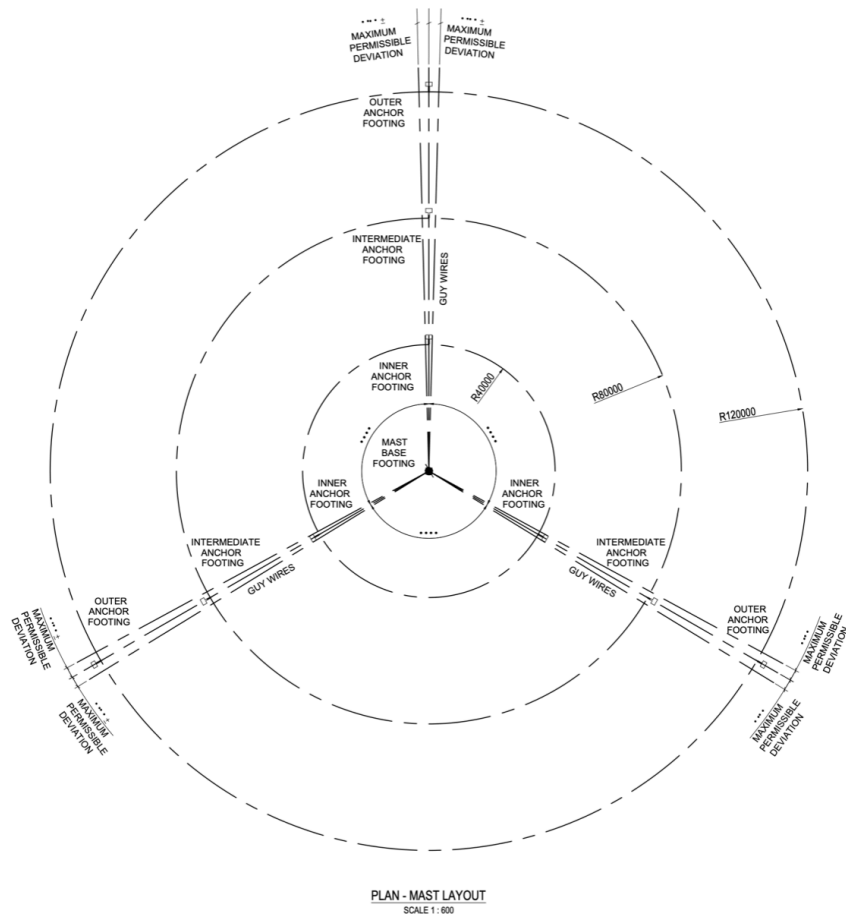
File Name: C:\Users\mperez3\Documents\12623773\GNWF-DWG-0019.dwg

GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title	GOYDER NORTH PROJECT TYPICAL OTL LATTICE TOWER AND FOOTPRINT
------------------	-----------------------------------------------------------------------

Size
A1

Rev
A



FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL MET MAST (160M)
PLAN AND ELEVATION

GNDA-0019

Size
A1

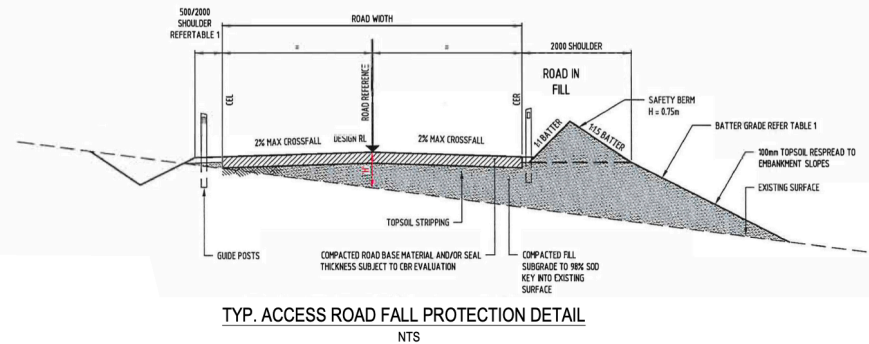
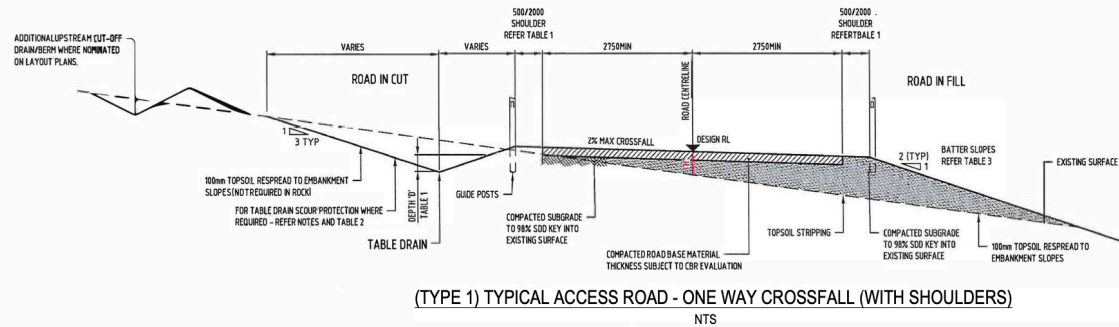
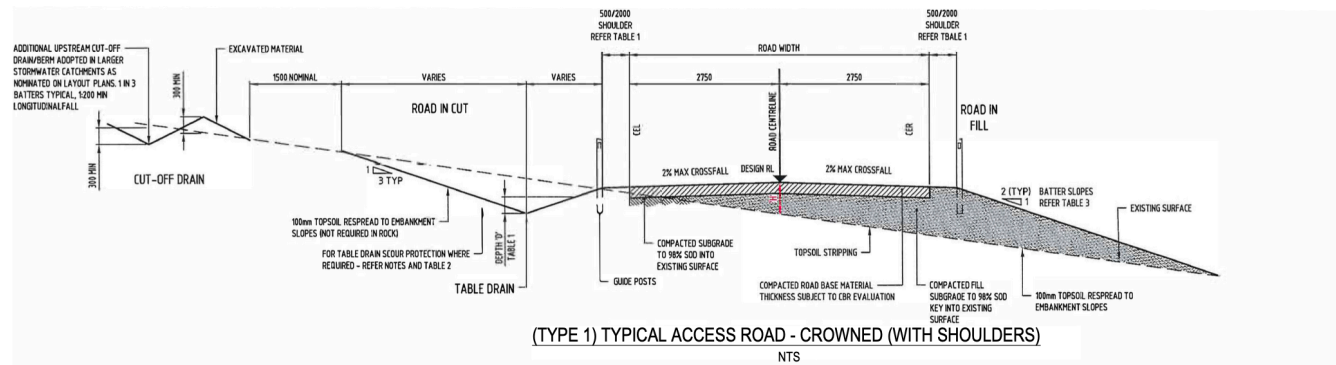
Rev
A

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Designer	S. FOGARTY	Design Check	T. DALY	

Plot Date: 20 October 2023 - 3:44 PM

Plotted by: MJ Perez

File Name: C:\Users\mperez\Documents\12623773\GNWF-DWG-0012.dwg



NOTE:
USE CONTRACTOR TO IMPLEMENT SHORT TERM CONSTRUCTION SAFETY BERMS OR
SIMILAR AS REQUIRED. LONG TERM SAFETY BERM LOCATIONS TO BE ASSESSED
ON SITE, WITH DESIGN ENGINEER IN CONFERRED LOCATIONS TO BE KEPT FOR THE
OPERATIONAL PHASE OF THE WIND FARM.

FOR INFORMATION
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Designer	S. FOGARTY	Design Check	T. DALY

NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL ACCESS TRACK DESIGN

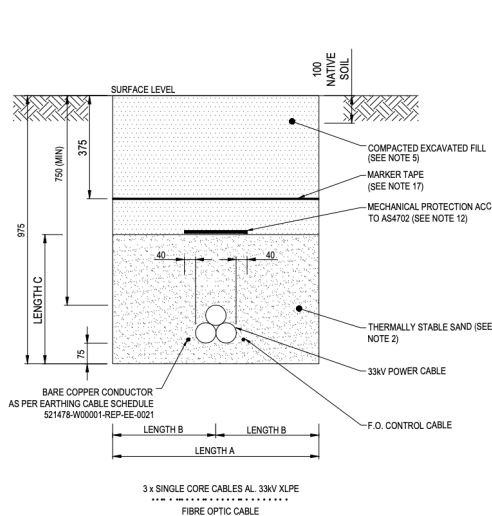
GND-020

Size
A1
Rev
A

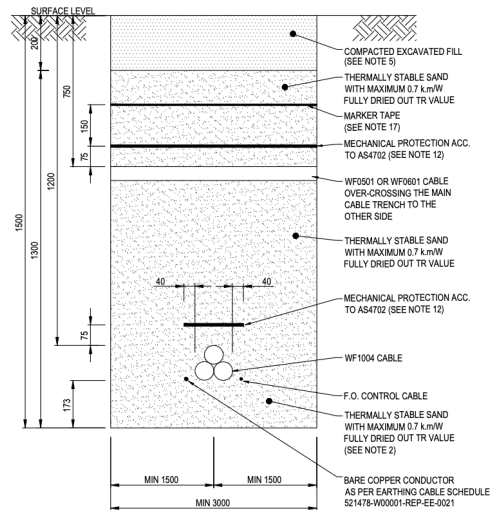
CABLE INSTALLATION AUSTRALIAN STANDARD FOR ASBUILT SURVEY AS5488.1

AS BUILT SURVEY TO BE COMPLETED ON INSTALLED CABLES, UNCOVERED CROSSING SERVICES, JUNCTION PITs AND CABLE JOINTS TO AS5488.1 QUALITY LEVEL A USING RTK GNSS SURVEY TECHNIQUE AND PROVIDED AS A 3D GEOSPATIAL DATA LAYER (CAD DRAWING FILE OR GIS DATA LAYER) WITH ATTRIBUTES:

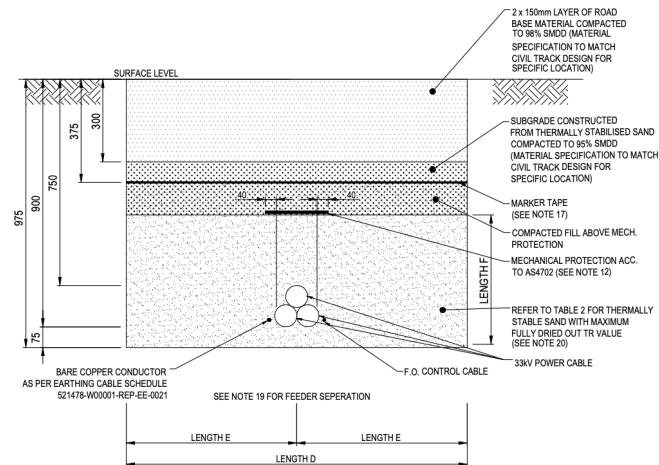
- GEOSPATIAL DATA ATTRIBUTE TABLE INFORMATION TO INCLUDE AS MINIMUM:
- ASSET TYPE (E.G. COMMS, ELECTRICITY, WATER PIPE.)
 - ASSET DESCRIPTION (E.G. VOLTAGE, COPPER, OPTIC FIBRE.)
 - ASSET SIZE RELATED INFORMATION (E.G. CONDUIT SIZE AND NUMBER OF CONDUIT IN BUNDLE IN SAME TRENCH)
 - AS5488 QUALITY CLASS (E.G. QL-A)
 - SURVEY METHOD (E.G. RTK GNSS)
 - NETWORKS, DIT, LOCAL COUNCIL



Z-1
TYPICAL WIND FARM CABLE TRENCH
CROSS SECTION
NTS
DIMENSION AS PER TABLE 1



Z-2
WF0501 AND WF0601 INTERSECT WF1004
ONE FEEDER CABLE OVER-CROSSING THE MAIN
CABLE TRENCH TO THE OTHER SIDE OF THE ROUTE
NTS



Z-3
TYPICAL WIND FARM CABLE TRENCH
INTERNAL ACCESS TRACK
CROSS SECTION
NTS
DIMENSION AS PER TABLE 2

TABLE 1 CABLE NUMBER		TRENCH BEDDING SOIL HEIGHT (C)
WF0101, WF0501	0.45m	0.30m
WF0801, WF1201	0.50m	0.85m
WF0701, WF0901, WF1101	0.35m	0.50m
WF0703, WF 0804, WF0903, WF1001	0.35m	0.50m
REST OF CABLES	0.35m	0.30m

LENGTH B = HALF LENGTH A

TABLE 1 CABLE NUMBER	TRENCH WIDTH (D)	TRENCH BEDDING SOIL HEIGHT (F)	BEDDING SOIL THERMAL RESISTIVITY
WF0101, WF0501	0.45m	0.300m	SEE NOTE 2
WF0801, WF1201	0.50m	0.675m	0.9m.K/W
WF0701, WF0901, WF1101	0.35m	0.500m	SEE NOTE 2
WF0703, WF 0804, WF0903, WF1001	0.35m	0.500m	SEE NOTE 2
REST OF CABLES	0.35m	0.300m	SEE NOTE 2

LENGTH E = HALF LENGTH D

FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

100 0 200 400mm
SCALE 1:10

NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

GOYDER NORTH PROJECT
TYPICAL MV CABLE
CROSS SECTIONS - SHEET 1

GND-021

Rev
A1

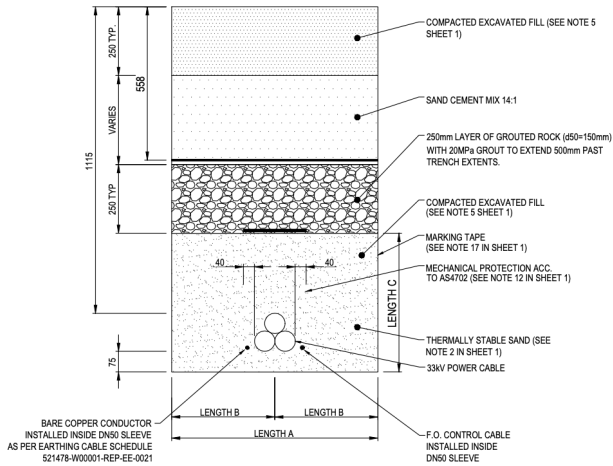
Rev
A

A	ISSUED FOR REVIEW	SF	TD	17/10/2023
Rev	Description	Checked	Approved	Date
Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

Plot Date: 20 October 2023 - 2:46 PM

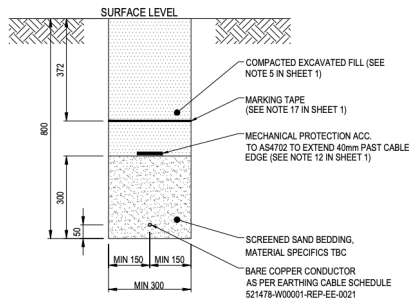
Plotted by: MJ Perez

File Name: C:\Users\mperez\Documents\12623773\GNWF-DWG-0015.dwg

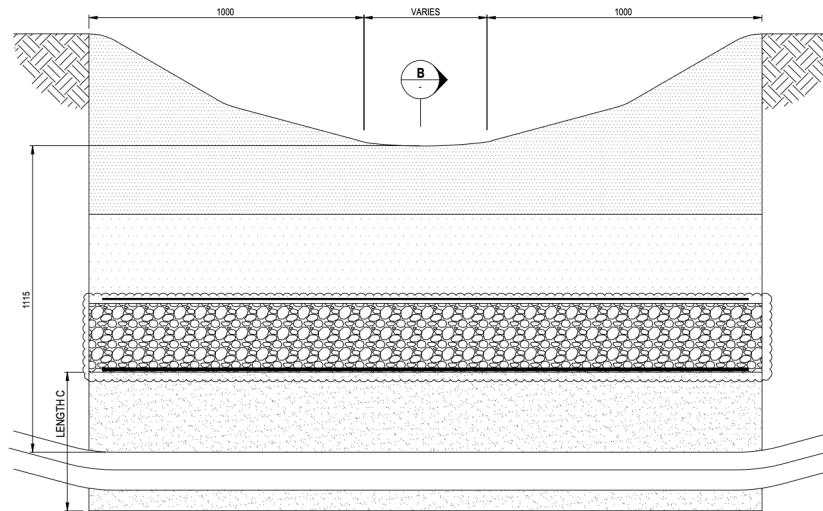


SECTION B
1:10

DIMENSIONS AS PER TABLE 1



Z-6
DIRECT BURIED EARTHING CABLE
CROSS SECTION
1:10

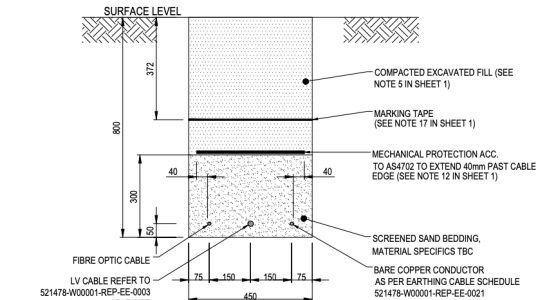


Z-4
TYPICAL WINDFARM MV CABLE
CREEK CROSSING
1:10

NOTES:
1. SEE NOTES ON DRG 521478-W00001-DRG-CV-0061-01.

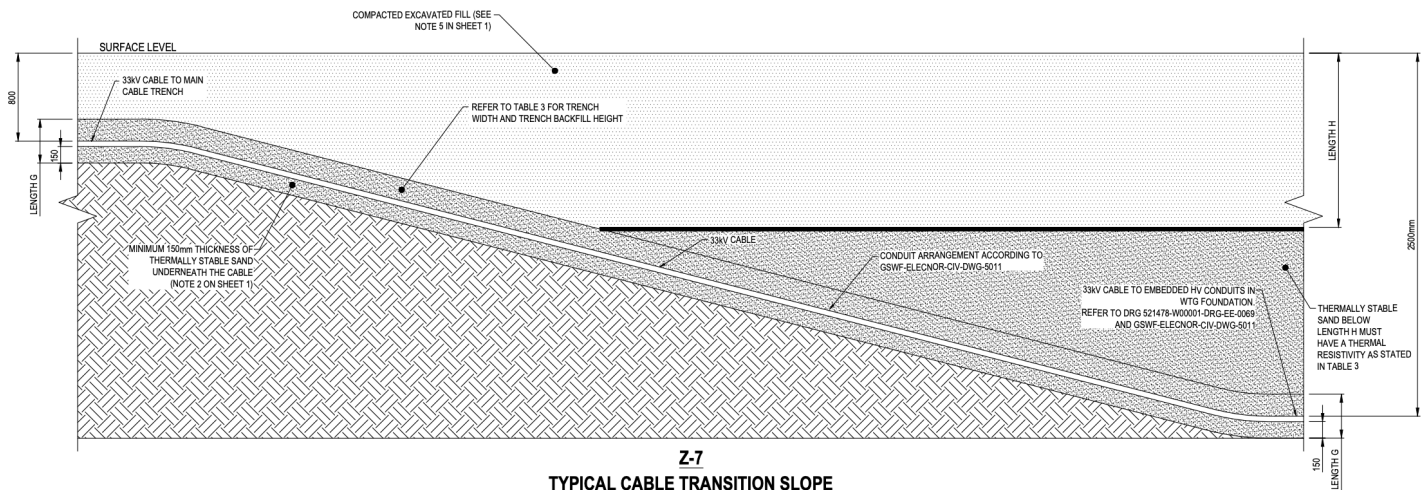
CABLE NUMBER	TRENCH WIDTH (A)	TRENCH BEDDING SOIL HEIGHT (C)
WF0101, WF0501	0.45m	0.30m
WF0801, WF1201	0.50m	0.85m
WF0701, WF0901, WF1101	0.35m	0.50m
WF0703, WF0804, WF0903, WF1001	0.35m	0.50m
REST OF CABLES	0.35m	0.30m

LENGTH B = HALF LENGTH A



Z-5
FIBRE OPTIC LV AND DIRECT BURIED EARTHING CABLE
CROSS SECTION
1:10

CABLE SIZE	TRENCH WIDTH	TRENCH BEDDING SOIL HEIGHT (G)	LENGTH (H)	BEDDING SOIL THERMAL RESISTIVITY
.....	0.75m	0.45m	0.200m	0.70 m.K/M
.....	0.75m	0.45m	0.225m	0.70 m.K/M
.....	0.45m	0.45m	0.775m	0.70 m.K/M
.....	0.75m	0.45m	0.225m	0.70 m.K/M
.....	0.45m	0.45m	1.275m	1.20 m.K/M
REST OF CABLES	0.45m	0.45m	NA	1.73 m.K/M



Z-7
TYPICAL CABLE TRANSITION SLOPE
FROM MAIN TRENCH TO WTG FOUNDATION
1:25
DIMENSIONS AS PER TABLE 3

FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

250 0 500 1000mm
SCALE 1:25
100 0 200 400mm
SCALE 1:10

Rev	Description	Checked	Approved	Date
A	ISSUED FOR REVIEW	SF	TD	17/10/2023
Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

Plot Date: 20 October 2023 - 3:07 PM Plotted by: MJ Perez

File Name: C:\Users\impenz3\Documents\12623773\GNWF-DWG-0016.dwg

NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL MV CABLE
CROSS SECTIONS SHEET 2

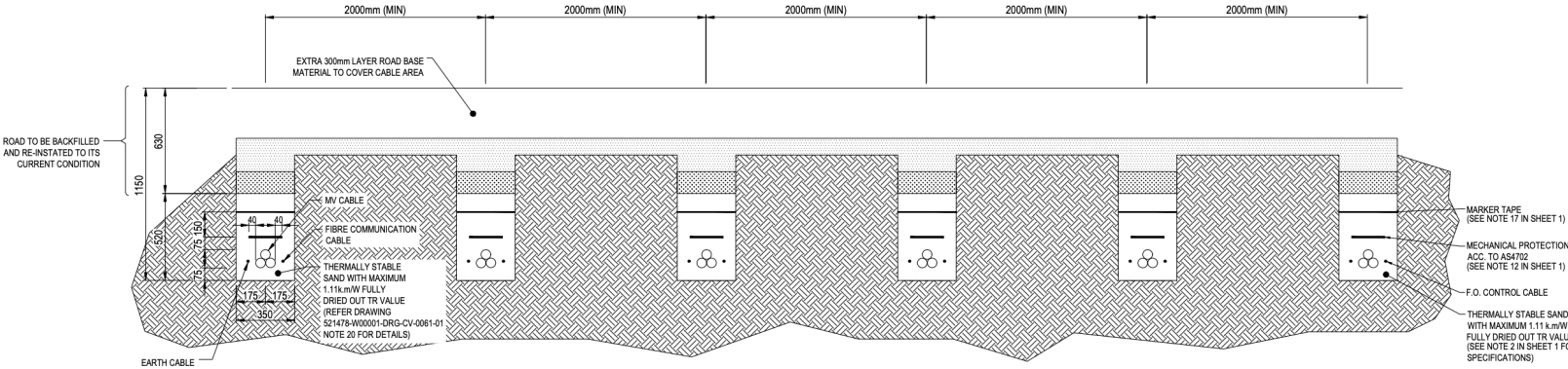
GNDA-022

Size
A1
Rev
A

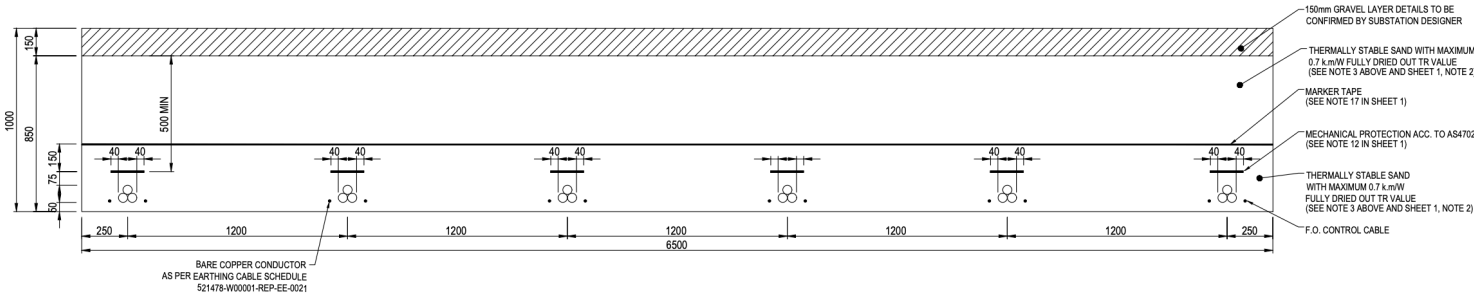
TABLE 1		
CABLE NUMBER	TRENCH WIDTH (A)	TRENCH BEDDING SOIL HEIGHT (C)
WF0101, WF0501	0.45m	0.30m
WF0801, WF1201	0.50m	0.85m
WF0701, WF0901, WF1101	0.35m	0.50m
WF0703, WF 0804, WF0903, WF1001	0.35m	0.50m
REST OF CABLES	0.35m	0.30m

LENGTH B = HALF LENGTH A

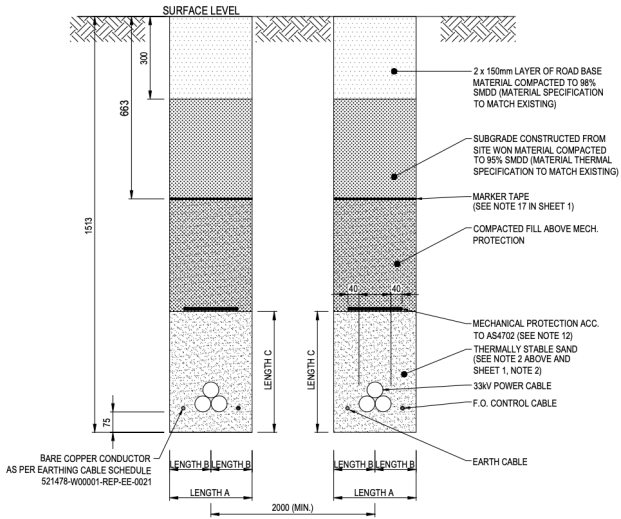
- NOTES:
- SEE NOTES ON DRG 521478-W0001-DRG-CV-0061-01.
 - WIND FARM COLLECTOR FEEDERS TO BE DIRECT BURIED UNDERGROUND INSIDE THE SUBSTATION. FOR ROUTE WITHIN THE SUBSTATION, REFER TO THE SUBSTATION GENERAL ARRANGEMENT DRAWING.
 - FOR MV CABLE TRENCH INSIDE THE SUBSTATION, THE THERMALLY STABLE SAND FOR TRENCH BEDDING AND BACKFILL SHALL HAVE A MAXIMUM FULLY DRIED OUT TR VALUE AS STATED ON THE DRAWING WHEN TESTED AT 95% SMDD. FINAL COMPACTION OF THE BEDDING MATERIAL SHALL BE NO LESS THAN 95% OF SMDD. THIS LOWER TR VALUE BEDDING SAND IS TO ENSURE MV CABLES WITHIN THE SUBSTATION ARE REMAIN WITHIN THE OPERATING TEMPERATURE, DUE TO SMALLER SPACING BETWEEN CABLES TO ALIGN WITH SWITCHGEAR PANEL LAYOUT.



Z-8
TYPICAL PUBLIC ROAD CROSSING
N.T.S.

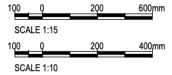


Z-9
MV CABLE TRENCH INSIDE SUBSTATION
1:15
(NOTE 2)



Z-10
TRENCH CONFIGURATION FOR
WATER PIPE UNDERCROSSING
1:10
DIMENSION AS PER TABLE 1

FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION



Rev	Description	Checked	Approved	Date
A	ISSUED FOR REVIEW	SF	TD	17/10/2023
Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

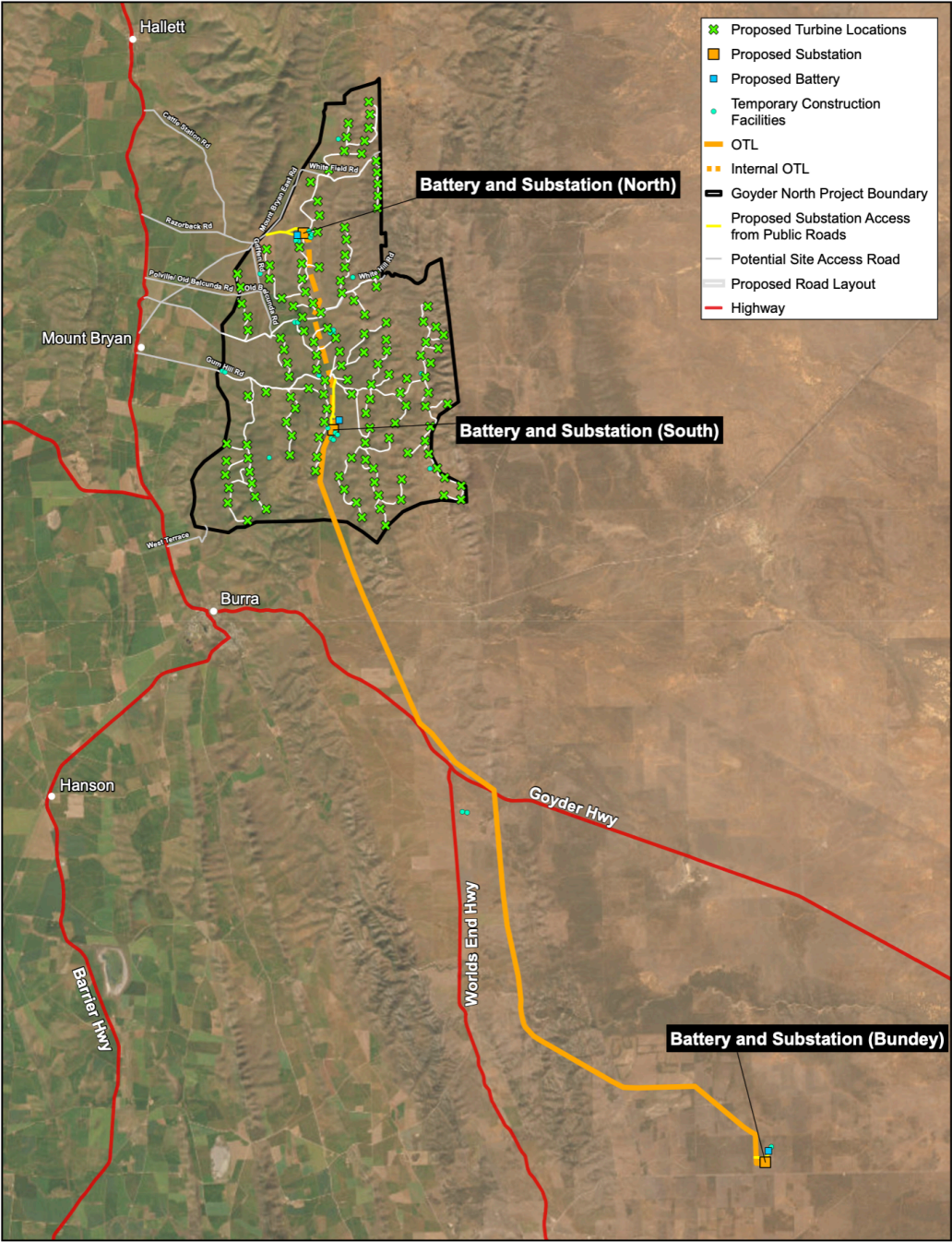
NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

GOYDER NORTH PROJECT
TYPICAL MV CABLE
CROSS SECTIONS - SHEET 3

GND-023

Size
A1
Rev
A



FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

A ISSUED FOR REVIEW				
Rev	Description	Checked	Approved	Date
Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

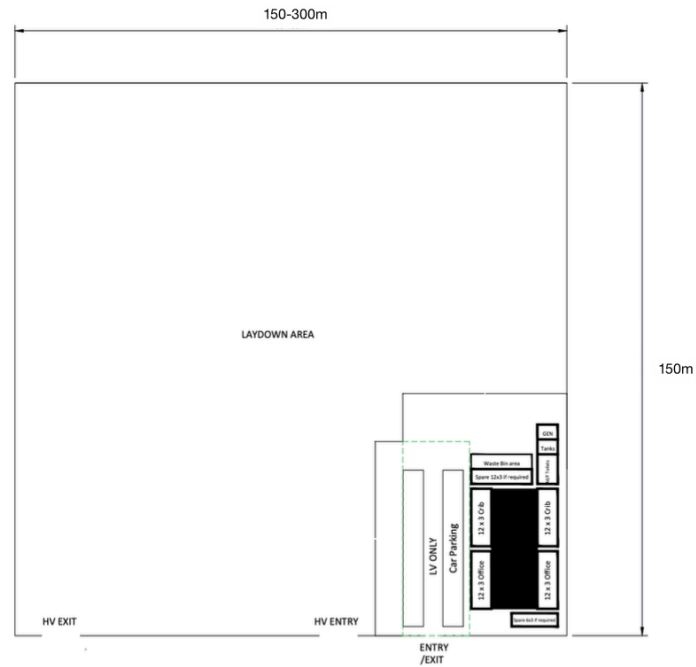
NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

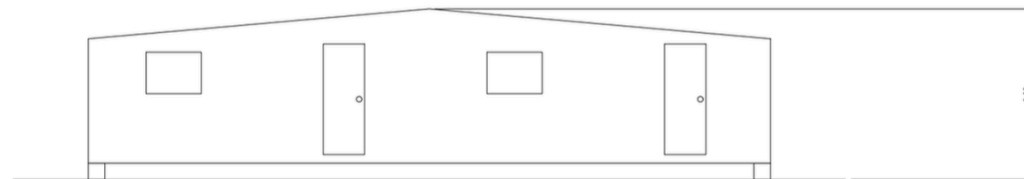
Drawing Title
GOYDER NORTH PROJECT
CONSTRUCTION FACILITIES
LAYOUT

GNDA-025

Size
A1
Rev
A



TYPICAL CONSTRUCTION COMPOUND - PLAN
NTS



TYPICAL TRANSPORTABLE BUILDING - ELEVATION
NTS

FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

A	ISSUED FOR REVIEW			17/10/2023
Rev	Description	SF	TD	Checked Approved Date
Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

NEOEN

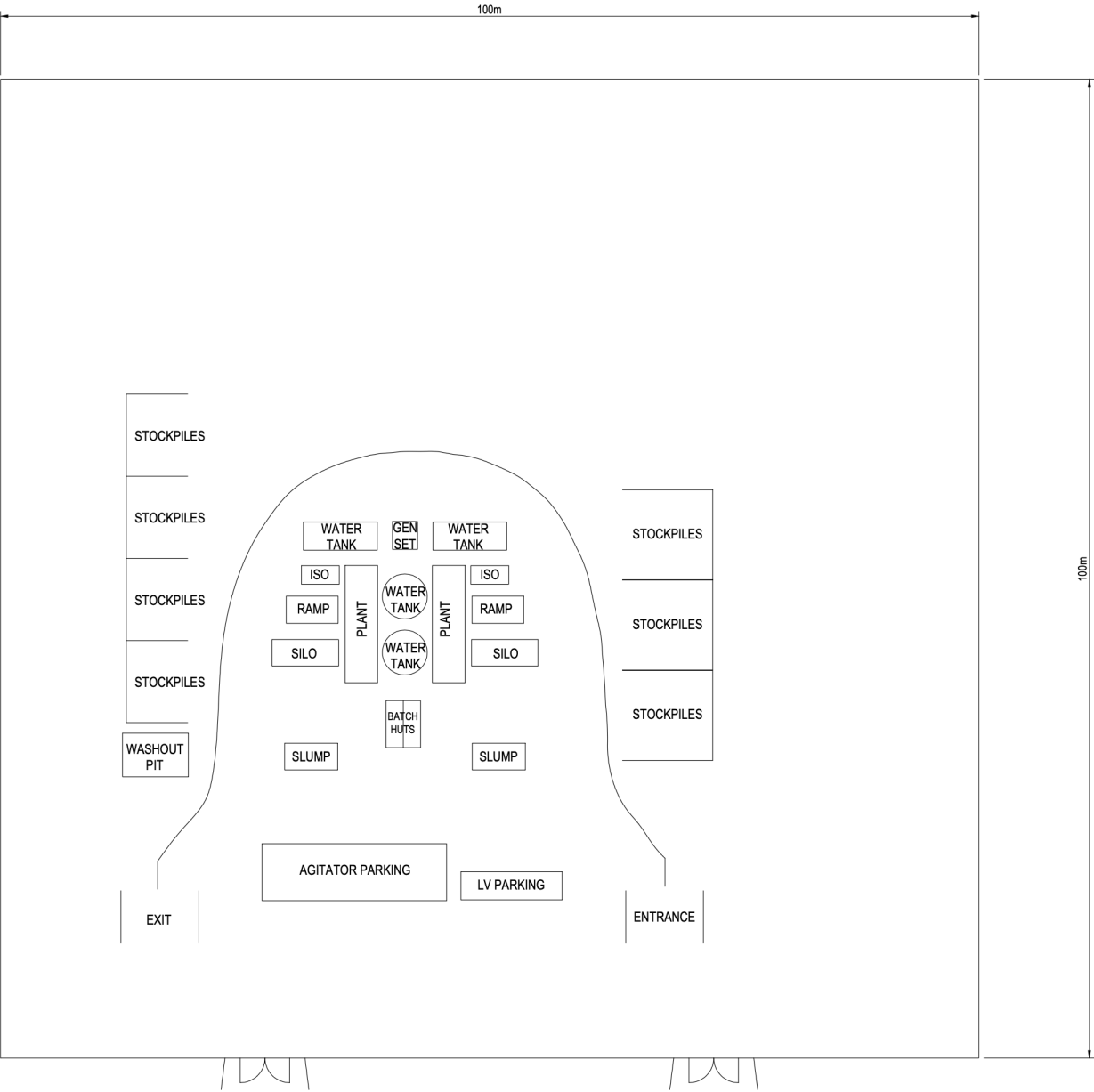
GOYDER NORTH
GOYDER RENEWABLES ZONE

Drawing Title
GOYDER NORTH PROJECT
TYPICAL CONSTRUCTION
COMPOUND/LAYDOWN

GNDA-026

Size
A1

Rev
A



TYPICAL BATCH PLANT LAYOUT
NTS

FOR INFORMATION
NOT TO BE USED FOR CONSTRUCTION

A ISSUED FOR REVIEW				
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Author	M. PEREZ	Drafting Check	S. ZAMAR	
Designer	S. FOGARTY	Design Check	T. DALY	

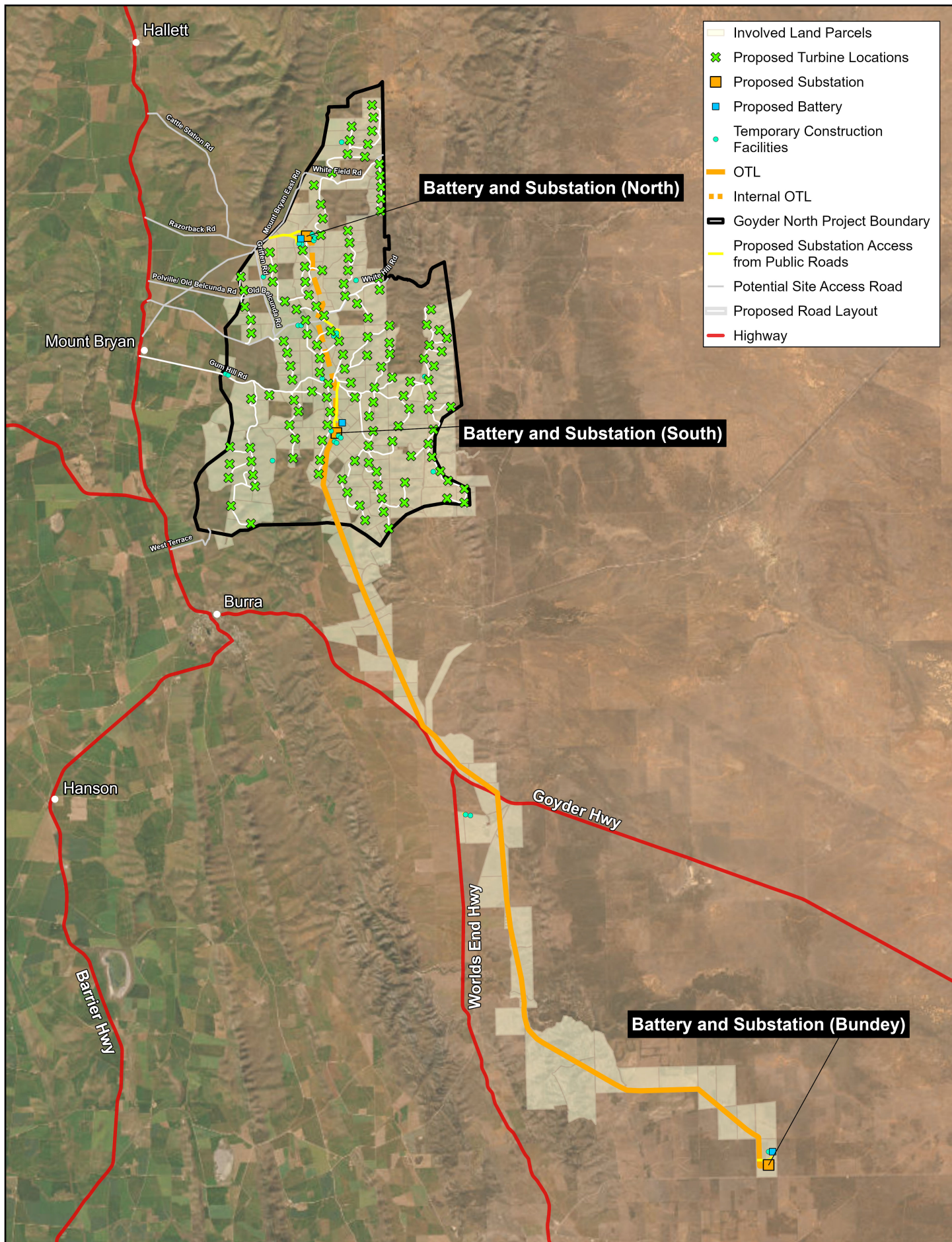
NEOEN

GOYDER NORTH
GOYDER RENEWABLES ZONE

GOYDER NORTH PROJECT
TYPICAL BATCH PLANT LAYOUT

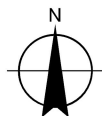
GND A-027

Appendix C Site Definition



Paper Size ISO A4
0 1.5 3 4.5 6
Kilometers

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 54



NEOEN AUSTRALIA PTY LTD
GOYDER NORTH WIND FARM

**GOYDER NORTH
INVOLVED LAND PARCELS**

Project No. 12590014
Revision No. C
Date 15/03/2024

FIGURE

WTG CO-ORDINATES

GOYDER NORTH
RENEWABLE ENERGY FACILITY

ID	Name	Easting	Northing	Projection	Long	Lat
1	WTG_001	308836	6280884	GDA2020 MGA Zone 54	138.939768	-33.596265
2	WTG_002	308819	6280027	GDA2020 MGA Zone 54	138.939491	-33.602394
3	WTG_003	308765	6279332	GDA2020 MGA Zone 54	138.938764	-33.608646
4	WTG_004	308942	6278674	GDA2020 MGA Zone 54	138.940524	-33.614607
5	WTG_005	308885	6277927	GDA2020 MGA Zone 54	138.939756	-33.621334
6	WTG_006	309885	6277047	GDA2020 MGA Zone 54	138.951806	-33.62906
7	WTG_007	309374	6289384	GDA2020 MGA Zone 54	138.947471	-33.518147
8	WTG_008	309530	6288716	GDA2020 MGA Zone 54	138.949003	-33.524198
9	WTG_009	309582	6287890	GDA2020 MGA Zone 54	138.949384	-33.531654
10	WTG_010	309882	6287238	GDA2020 MGA Zone 54	138.951277	-33.537597
11	WTG_011	309906	6286564	GDA2020 MGA Zone 54	138.952588	-33.543664
12	WTG_012	315944	6297979	GDA2020 MGA Zone 54	138.952641	-33.568054
13	WTG_013	309894	6283283	GDA2020 MGA Zone 54	138.951299	-33.574617
14	WTG_014	309847	6280837	GDA2020 MGA Zone 54	138.950734	-33.595274
15	WTG_015	309907	6280157	GDA2020 MGA Zone 54	138.951233	-33.60142
16	WTG_016	309982	6279481	GDA2020 MGA Zone 54	138.951905	-33.60752
17	WTG_017	310092	6278906	GDA2020 MGA Zone 54	138.95297	-33.613631
18	WTG_018	310258	6278240	GDA2020 MGA Zone 54	138.955573	-33.619445
19	WTG_019	310824	6277616	GDA2020 MGA Zone 54	138.960574	-33.624479
20	WTG_020	310807	6283465	GDA2020 MGA Zone 54	138.961633	-33.571754
21	WTG_021	311527	6286167	GDA2020 MGA Zone 54	138.970194	-33.546536
22	WTG_022	311701	6285591	GDA2020 MGA Zone 54	138.971709	-33.55275
23	WTG_023	311865	6284927	GDA2020 MGA Zone 54	138.973337	-33.558765
24	WTG_024	311960	6284242	GDA2020 MGA Zone 54	138.97421	-33.564956
25	WTG_025	312037	6283219	GDA2020 MGA Zone 54	138.974832	-33.574195
26	WTG_026	312268	6282658	GDA2020 MGA Zone 54	138.976769	-33.580089
27	WTG_027	311816	6281971	GDA2020 MGA Zone 54	138.97243	-33.586216
28	WTG_028	312091	6281291	GDA2020 MGA Zone 54	138.974305	-33.594112
29	WTG_029	312003	6280314	GDA2020 MGA Zone 54	138.97385	-33.600373
30	WTG_030	312945	6283657	GDA2020 MGA Zone 54	138.984693	-33.570405
31	WTG_031	310833	6290610	GDA2020 MGA Zone 54	138.96985	-33.506848
32	WTG_032	310987	6289808	GDA2020 MGA Zone 54	138.97129	-33.51292
33	WTG_033	310978	6289141	GDA2020 MGA Zone 54	138.971615	-33.519131
34	WTG_034	311584	6288157	GDA2020 MGA Zone 54	138.973615	-33.525252
35	WTG_035	312165	6287757	GDA2020 MGA Zone 54	138.977159	-33.533312
36	WTG_036	312620	6287219	GDA2020 MGA Zone 54	138.981662	-33.538476
37	WTG_037	312703	6286516	GDA2020 MGA Zone 54	138.982693	-33.544593
38	WTG_038	313193	6285974	GDA2020 MGA Zone 54	138.987854	-33.54956
39	WTG_039	313334	6285312	GDA2020 MGA Zone 54	138.989227	-33.555558
40	WTG_040	313330	6284613	GDA2020 MGA Zone 54	138.989037	-33.561856
41	WTG_041	313756	6284042	GDA2020 MGA Zone 54	138.994485	-33.5666
42	WTG_042	313680	6283356	GDA2020 MGA Zone 54	138.992995	-33.573663
43	WTG_043	313847	6282629	GDA2020 MGA Zone 54	138.994198	-33.579828
44	WTG_044	313716	6281976	GDA2020 MGA Zone 54	138.992008	-33.586239
45	WTG_045	313454	6281203	GDA2020 MGA Zone 54	138.989661	-33.592616
46	WTG_046	313342	6280226	GDA2020 MGA Zone 54	138.98825	-33.601399

WTG CO-ORDINATES

GOYDER NORTH
RENEWABLE ENERGY FACILITY

ID	Name	Easting	Northing	Projection	Long	Lat
47	WTG_047	313275	6279524	GDA2020 MGA Zone 54	138.987381	-33.607717
48	WTG_048	312474	6290713	GDA2020 MGA Zone 54	138.981511	-33.507645
49	WTG_049	312590	6289898	GDA2020 MGA Zone 54	138.982187	-33.514089
50	WTG_050	312608	6289134	GDA2020 MGA Zone 54	138.982478	-33.520473
51	WTG_051	312778	6288478	GDA2020 MGA Zone 54	138.983469	-33.526691
52	WTG_052	313155	6287915	GDA2020 MGA Zone 54	138.987847	-33.532058
53	WTG_053	313542	6287448	GDA2020 MGA Zone 54	138.992321	-33.537394
54	WTG_054	313877	6286668	GDA2020 MGA Zone 54	138.999843	-33.541374
55	WTG_055	314297	6286173	GDA2020 MGA Zone 54	138.999782	-33.54796
56	WTG_056	314493	6285493	GDA2020 MGA Zone 54	139.001748	-33.554127
57	WTG_057	314573	6284790	GDA2020 MGA Zone 54	139.00246	-33.560478
58	WTG_058	314888	6284086	GDA2020 MGA Zone 54	139.005708	-33.56688
59	WTG_059	315086	6283360	GDA2020 MGA Zone 54	139.007692	-33.573454
60	WTG_060	313035	6293970	GDA2020 MGA Zone 54	138.987821	-33.477459
61	WTG_061	313385	6293013	GDA2020 MGA Zone 54	138.991387	-33.486142
62	WTG_062	313478	6292304	GDA2020 MGA Zone 54	138.992242	-33.49255
63	WTG_063	313381	6291473	GDA2020 MGA Zone 54	138.992131	-33.503376
64	WTG_064	313454	6289710	GDA2020 MGA Zone 54	138.991021	-33.509776
65	WTG_065	313939	6294601	GDA2020 MGA Zone 54	138.997679	-33.471926
66	WTG_066	315944	6296681	GDA2020 MGA Zone 54	138.996455	-33.480132
67	WTG_067	314923	6296904	GDA2020 MGA Zone 54	139.008738	-33.451337
68	WTG_068	314828	6296217	GDA2020 MGA Zone 54	139.00873	-33.45759
69	WTG_069	314721	6295525	GDA2020 MGA Zone 54	139.007208	-33.463855
70	WTG_070	315587	6295389	GDA2020 MGA Zone 54	139.008414	-33.469786
71	WTG_071	316358	6294453	GDA2020 MGA Zone 54	139.010811	-33.478527
72	WTG_072	316011	6297355	GDA2020 MGA Zone 54	139.013312	-33.484223
73	WTG_073	314761	6290328	GDA2020 MGA Zone 54	139.011635	-33.490496
74	WTG_074	314738	6291699	GDA2020 MGA Zone 54	139.006369	-33.500603
75	WTG_075	314819	6291097	GDA2020 MGA Zone 54	139.007477	-33.506607
76	WTG_076	314748	6289707	GDA2020 MGA Zone 54	139.006093	-33.515162
77	WTG_077	314531	6289039	GDA2020 MGA Zone 54	139.002706	-33.521377
78	WTG_078	314604	6288421	GDA2020 MGA Zone 54	139.003506	-33.527608
79	WTG_079	315199	6288048	GDA2020 MGA Zone 54	139.006731	-33.533199
80	WTG_080	315747	6287339	GDA2020 MGA Zone 54	139.015628	-33.537705
81	WTG_081	315727	6286377	GDA2020 MGA Zone 54	139.015211	-33.546371
82	WTG_082	315701	6285459	GDA2020 MGA Zone 54	139.014747	-33.554645
83	WTG_083	316069	6283851	GDA2020 MGA Zone 54	139.018381	-33.569195
84	WTG_084	316009	6283119	GDA2020 MGA Zone 54	139.017579	-33.575784
85	WTG_085	315798	6282416	GDA2020 MGA Zone 54	139.015165	-33.582086
86	WTG_086	315999	6281672	GDA2020 MGA Zone 54	139.017239	-33.589609
87	WTG_087	315769	6280940	GDA2020 MGA Zone 54	139.012985	-33.595829
88	WTG_088	315083	6280182	GDA2020 MGA Zone 54	139.006994	-33.602099
89	WTG_089	314461	6279258	GDA2020 MGA Zone 54	139.00148	-33.609702
90	WTG_090	314712	6278602	GDA2020 MGA Zone 54	139.002172	-33.616025
91	WTG_091	315330	6277947	GDA2020 MGA Zone 54	139.009201	-33.622295
92	WTG_092	315603	6277208	GDA2020 MGA Zone 54	139.011981	-33.629003

WTG CO-ORDINATES

GOYDER NORTH
RENEWABLE ENERGY FACILITY

ID	Name	Easting	Northing	Projection	Long	Lat
93	WTG_093	315783	6280087	GDA2020 MGA Zone 54	139.017917	-33.600652
94	WTG_094	316174	6279655	GDA2020 MGA Zone 54	139.018643	-33.607042
95	WTG_095	316229	6278964	GDA2020 MGA Zone 54	139.019092	-33.613276
96	WTG_096	316435	6278309	GDA2020 MGA Zone 54	139.021171	-33.619222
97	WTG_097	316527	6277631	GDA2020 MGA Zone 54	139.022033	-33.625346
98	WTG_098	316788	6276799	GDA2020 MGA Zone 54	139.024669	-33.632887
99	WTG_099	315737	6296023	GDA2020 MGA Zone 54	139.01837	-33.459824
100	WTG_100	316319	6295029	GDA2020 MGA Zone 54	139.025278	-33.468316
101	WTG_101	316397	6293881	GDA2020 MGA Zone 54	139.024691	-33.474967
102	WTG_102	316400	6293287	GDA2020 MGA Zone 54	139.023995	-33.480891
103	WTG_103	316376	6292670	GDA2020 MGA Zone 54	139.02341	-33.487195
104	WTG_104	316273	6289330	GDA2020 MGA Zone 54	139.021698	-33.51985
105	WTG_105	316330	6288741	GDA2020 MGA Zone 54	139.021775	-33.526121
106	WTG_106	316825	6286946	GDA2020 MGA Zone 54	139.025804	-33.541673
107	WTG_107	316815	6286085	GDA2020 MGA Zone 54	139.030416	-33.548087
108	WTG_108	316843	6285534	GDA2020 MGA Zone 54	139.028899	-33.554483
109	WTG_109	316401	6284880	GDA2020 MGA Zone 54	139.02216	-33.559984
110	WTG_110	316956	6284351	GDA2020 MGA Zone 54	139.028028	-33.564844
111	WTG_111	317858	6284146	GDA2020 MGA Zone 54	139.037698	-33.566844
112	WTG_112	317525	6283434	GDA2020 MGA Zone 54	139.033974	-33.573205
113	WTG_113	317813	6282796	GDA2020 MGA Zone 54	139.036935	-33.579016
114	WTG_114	317266	6281915	GDA2020 MGA Zone 54	139.026546	-33.584399
115	WTG_115	316962	6281164	GDA2020 MGA Zone 54	139.027495	-33.592791
116	WTG_116	317899	6280423	GDA2020 MGA Zone 54	139.037379	-33.600417
117	WTG_117	317593	6279100	GDA2020 MGA Zone 54	139.03156	-33.61209
118	WTG_118	317563	6278094	GDA2020 MGA Zone 54	139.033285	-33.62135
119	WTG_119	318681	6286989	GDA2020 MGA Zone 54	139.043396	-33.544397
120	WTG_120	318808	6285971	GDA2020 MGA Zone 54	139.045621	-33.55016
121	WTG_121	318542	6285292	GDA2020 MGA Zone 54	139.042269	-33.55675
122	WTG_122	318905	6287754	GDA2020 MGA Zone 54	139.049622	-33.534342
123	WTG_123	319312	6286727	GDA2020 MGA Zone 54	139.053953	-33.541458
124	WTG_124	319693	6286325	GDA2020 MGA Zone 54	139.05727	-33.547212
125	WTG_125	319434	6285653	GDA2020 MGA Zone 54	139.054977	-33.553531
126	WTG_126	319043	6284925	GDA2020 MGA Zone 54	139.051094	-33.559721
127	WTG_127	318776	6284228	GDA2020 MGA Zone 54	139.048902	-33.566547
128	WTG_128	318939	6283441	GDA2020 MGA Zone 54	139.049211	-33.573109
129	WTG_129	318782	6282765	GDA2020 MGA Zone 54	139.047367	-33.579457
130	WTG_130	319025	6281751	GDA2020 MGA Zone 54	139.049776	-33.588638
131	WTG_131	318765	6281031	GDA2020 MGA Zone 54	139.046831	-33.595078
132	WTG_132	318948	6280379	GDA2020 MGA Zone 54	139.048671	-33.600994
133	WTG_133	319369	6279662	GDA2020 MGA Zone 54	139.052179	-33.60688
134	WTG_134	319751	6279191	GDA2020 MGA Zone 54	139.057083	-33.611839
135	WTG_135	319706	6278304	GDA2020 MGA Zone 54	139.056416	-33.619826
136	WTG_136	319893	6282881	GDA2020 MGA Zone 54	139.058127	-33.577726
137	WTG_137	320572	6278784	GDA2020 MGA Zone 54	139.065845	-33.615646
138	WTG_138	320565	6278092	GDA2020 MGA Zone 54	139.065627	-33.62188

INVOLVED LAND PARCELS

GOYDER NORTH
RENEWABLE ENERGY FACILITY

Title	Volume	Folio	Parcel_ID	Infrastructure
CT	6201	785	D117144 A50	Turbine, Subcontractor compound, Proposed road
CT	6201	786	D117144 A51	Turbine, Proposed road
CT	6270	131	D128813 A621	Battery, Construction compound, Substation access from public roads, OTL
CT	6270	132	D128813 A622	Substation, Substation access from public roads, OTL
CT	5442	112	D46214 A370	OTL
CT	5914	152	D46437 A372	OTL
CT	5642	393	D51013 A41	Subcontractor compound
CT	6029	774	D79814 A1	Turbine, Proposed road
CT	6049	595	D81484 A1	Turbine, Construction compound, Batch plant, Proposed road
CT	6049	596	D81484 A2	Proposed road, Internal OTL
CT	6049	596	D81484 A3	Construction area, Proposed road, Internal OTL
CT	6049	596	D81484 A4	Turbine, Proposed road, Internal OTL
CT	6049	596	D81484 A5	Turbine, Proposed road, Internal OTL
CT	6089	359	D87140 Q3	OTL
CT	5174	725	F106517 A3	Turbine, Proposed road
CT	5283	8	F156068 A1	Turbine, Proposed road
CT	5283	8	F156068 A4	Turbine, Proposed road
CT	5283	8	F156068 A5	Turbine, Proposed road
CT	5317	88	F170041 A102	OTL
CT	5317	88	F170041 A104	OTL
CT	5317	88	F170041 A96	Turbine, Proposed road
CT	5317	88	F170041 A97	OTL
CT	5317	88	F170041 A98	OTL
CT	5317	77	F170042 A106	OTL
CT	5317	77	F170042 A107	OTL
CT	5317	85	F170045 A111	OTL
CT	5317	79	F170049 A115	OTL
CT	5334	899	F170817 Q92	Turbine, Construction area, Proposed road
CT	5331	655	F170818 Q93	Turbine, Proposed road

INVOLVED LAND PARCELS

GOYDER NORTH
RENEWABLE ENERGY FACILITY

CT	5558	611	F186706 A194	Turbine, Proposed road
CT	5823	468	F186712 A200	Turbine, Construction area, Proposed road
CT	5359	907	F186713 A201	Turbine, Substation access from public roads, Proposed road
CT	5760	246	F186716 A204	Substation access from public roads
CT	5452	243	F187004 A492	Turbine, Proposed road
CT	5410	475	F206353 A100	Proposed road, OTL
CT	5410	475	F206353 A101	Construction compound, Batch plant, OTL
CT	5410	475	F206353 A102	Construction compound, Substation, Substation access from public roads, Internal OTL, OTL
CT	5410	475	F206353 A103	Battery, Substation access from public roads, Internal OTL
CT	5410	475	F206353 A105	Proposed road
CT	5410	475	F206353 A106	Turbine, Proposed road
CT	5410	475	F206353 A107	Substation access from public roads, Proposed road
CT	5410	475	F206353 A108	Substation access from public roads
CT	5410	475	F206353 A109	Substation access from public roads
CT	5410	475	F206353 A91	Proposed road
CT	5410	475	F206353 A92	Turbine, Proposed road
CT	5410	475	F206353 A93	Proposed road
CT	5410	475	F206353 A94	Turbine, Proposed road
CT	5410	475	F206353 A95	Turbine, Proposed road
CT	5410	475	F206353 A97	Proposed road
CT	5613	244	F213234 A110	Proposed road
CT	5613	244	F213234 A111	Turbine, Proposed road
CT	5613	244	F213234 A114	Turbine, Proposed road
CT	5613	244	F213234 A115	Turbine, Proposed road
CT	5613	244	F213234 A119	Turbine, Proposed road
CT	5613	244	F213234 A120	Proposed road
CT	5613	244	F213234 A121	Turbine, Proposed road
CT	5614	335	F214551 A92	Turbine, OTL construction, Proposed road
CT	5614	335	F214551 A93	Proposed road
CT	5614	335	F214551 A95	Proposed road
CT	5614	335	F214551 A96	Turbine, Proposed road

INVOLVED LAND PARCELS

GOYDER NORTH
RENEWABLE ENERGY FACILITY

CT	5614	335	F214551 Q104	Proposed road
CT	5614	335	F214551 Q105	Turbine, Proposed road
CT	5624	171	F216494 A116	Turbine, Substation access from public roads, Proposed road, Internal OTL
CT	5624	171	F216494 A111	Turbine, Proposed road
CT	5624	171	F216494 A112	Proposed road
CT	5624	171	F216494 A113	Turbine, Substation access from public roads, Proposed road, Internal OTL
CT	5624	171	F216494 A115	Proposed road
CT	5624	171	F216494 A117	Proposed road
CT	5624	171	F216494 A118	Turbine, Substation access from public roads, Proposed road, Internal OTL
CT	5638	46	F216512 A189	Proposed road
CT	5638	46	F216512 A190	Turbine, Proposed road
CT	5638	46	F216512 A191	Turbine, Proposed road
CT	5638	46	F216512 A192	Proposed road
CT	5638	46	F216512 A193	Turbine, Proposed road
CT	5638	46	F216512 A194	Turbine, Proposed road
CT	5638	46	F216512 A195	Turbine, Proposed road
CT	5638	46	F216512 A196	Turbine, Proposed road
CT	5620	630	F216589 A95	Turbine, Proposed road
CT	5620	630	F216589 A96	Turbine, Proposed road
CT	5620	630	F216589 A97	Proposed road
CT	5620	630	F216589 Q100	Turbine, Proposed road
CT	5620	630	F216589 Q99	Turbine, Proposed road
CT	5334	897	F27700 A100	Turbine, Proposed road
CT	6064	94	H200200 S100	OTL
CT	6064	88	H200200 S104	OTL
CT	5235	626	H200200 S105W	OTL
CT	5914	152	H200200 S17	Batch plant, OTL construction, OTL
CR	6266	765	H200200 S275	OTL
CR	6266	765	H200200 S276	OTL
CT	5235	626	H200200 S43E	OTL
CT	5442	112	H200200 S49	OTL

INVOLVED LAND PARCELS

GOYDER NORTH
RENEWABLE ENERGY FACILITY

CT	5726	491	H200200 S5	OTL
CT	5937	554	H200200 S6	OTL
CT	6064	91	H200200 S68	OTL
CT	6064	92	H200200 S71	OTL
CT	6098	650	H200300 S104	OTL
CT	6098	650	H200300 S105	OTL
CT	5670	385	H200300 S188	OTL
CT	5670	385	H200300 S189	OTL
CT	5360	17	H200300 S190	OTL
CT	5360	17	H200300 S200	OTL
CT	5984	418	H200300 S230	OTL
CT	5913	912	H200300 S218	OTL
CT	5913	911	H200300 S219	OTL
CR	5745	722	H200300 S222	OTL
CR	5745	723	H200300 S223	OTL
CT	6171	275	H200300 S240	OTL
CT	5987	805	H200300 S242	OTL
CT	5979	28	H200300 S258	OTL
CT	6098	650	H200300 S40	OTL
CT	6270	131	H200400 S106	OTL
CT	6270	131	H200400 S107	OTL
CT	6270	131	H200400 S67	OTL
CT	6270	131	H200400 S68	OTL
CT	5915	155	H200400 S69	OTL
CT	5644	206	H200500 S614	Turbine, Proposed road
CT	5716	207	H200500 S605	Turbine, Proposed road
CT	5833	331	H200500 S606	Proposed road
CT	5839	219	H200500 S608	Turbine, Proposed road
CT	5466	675	H200500 S612	Turbine, Proposed road
CT	5644	206	H200500 S613	Turbine, Proposed road
CT	5359	909	H200500 S615	Turbine, Construction area, Proposed road

INVOLVED LAND PARCELS

GOYDER NORTH
RENEWABLE ENERGY FACILITY

CT	5359	909	H200500 S620	Turbine, Proposed road
CT	5644	206	H200500 S621	Proposed road
CT	5644	206	H200500 S622	Turbine, Proposed road
CT	5644	206	H200500 S623	Turbine, Proposed road
CT	5262	916	H200700 S16	Turbine, Proposed road
CR	5642	391	H200700 S165	Proposed road
CT	5262	916	H200700 S17	Turbine, Proposed road
CR	5758	811	H200700 S299	Substation access from public roads
CT	5317	78	H200700 S309	Turbine, Proposed road
CT	5317	78	H200700 S313	Proposed road, OTL
CT	5410	791	H200700 S316	Turbine, Proposed road
CT	5410	791	H200700 S317	Turbine, Proposed road, OTL
CT	5410	791	H200700 S318	OTL
CT	5327	549	H200700 S355	Turbine, Substation access from public roads, Proposed road
CT	5327	549	H200700 S356	Turbine, Proposed road
CT	5327	549	H200700 S357	Turbine, Proposed road
CT	5327	549	H200700 S359	Turbine, Proposed road
CT	6049	595	H200700 S360	Turbine, Proposed road
CT	5327	558	H200700 S361	Turbine, Proposed road
CT	6049	595	H200700 S364	Turbine, Proposed road
CT	5327	549	H200700 S365	Turbine, Proposed road
CT	6049	595	H200700 S368	Proposed road, Internal OTL
CT	6049	596	H200700 S373	Turbine, Construction area, Proposed road
CT	6049	596	H200700 S374	Proposed road
CT	6049	596	H200700 S375	Turbine, Proposed road
CT	6049	596	H200700 S376	Turbine, Proposed road
CT	6049	596	H200700 S377	Turbine, Proposed road
CT	6049	596	H200700 S378	Turbine, Proposed road
CT	5525	90	H200700 S380	Proposed road
CT	5315	854	H200700 S382	Turbine, Proposed road
CT	5315	855	H200700 S383	Proposed road

INVOLVED LAND PARCELS

GOYDER NORTH
RENEWABLE ENERGY FACILITY

CT	5315	856	H200700 S387	Turbine, Proposed road
CT	5234	753	H200700 S392	Turbine, Proposed road
CT	5327	556	H200700 S393	Proposed road
CT	5873	355	H200700 S396	Turbine, Proposed road
CT	5873	355	H200700 S399	Proposed road, Internal OTL
CT	5839	562	H200700 S400	Turbine, Proposed road, Internal OTL
CT	5839	563	H200700 S401	Internal OTL
CT	5873	355	H200700 S402	Turbine, Proposed road
CT	5894	43	H200700 S403	Turbine, Proposed road, Internal OTL
CT	5873	355	H200700 S404	Internal OTL
CT	5894	43	H200700 S405	Turbine, Proposed road
CT	5894	43	H200700 S406	Turbine, Proposed road
CT	5894	43	H200700 S408	Construction area, Proposed road
CT	5894	43	H200700 S409	Turbine, Proposed road
CT	5894	43	H200700 S410	Turbine, Proposed road
CT	5894	43	H200700 S411	Turbine, Proposed road
CT	5894	43	H200700 S422	Turbine, Proposed road
CT	5894	43	H200700 S425	Proposed road
CT	5894	43	H200700 S426	Turbine, Proposed road
CT	5894	43	H200700 S428	Turbine, Proposed road, Internal OTL
CT	5894	43	H200700 S429	Turbine, Proposed road
CT	5894	43	H200700 S430	Turbine, Proposed road
CT	5327	572	H200700 S431	Proposed road, Internal OTL
CT	5894	43	H200700 S432	Battery, Construction compound, Batch plant, Substation, Substation access , Proposed road, Internal OTL
CT	5894	43	H200700 S433	Turbine, Construction compound, Proposed road, Internal OTL
CT	5642	779	H200700 S435	Turbine, Proposed road
CT	5642	779	H200700 S437	Proposed road
CT	5894	43	H200700 S442	Substation access from public roads
CT	5346	9	H200700 S449	Turbine, Proposed road
CT	5487	335	H200800 S126	Turbine, Proposed road
CT	5454	419	H200800 S163	Turbine, Proposed road

INVOLVED LAND PARCELS

GOYDER NORTH
RENEWABLE ENERGY FACILITY

CT	5427	992	H200800 S191	OTL
CT	5427	992	H200800 S196	OTL
CT	5427	992	H200800 S197	OTL
CT	5671	64	H200800 S228	OTL
CT	5732	971	H200800 S230	OTL
CT	5737	125	H201100 S1	Proposed road
CT	5491	340	H201100 S18S	Proposed road
CT	5491	340	H201100 S19	Turbine, Construction area, Proposed road
CT	5491	340	H201100 S2	Turbine, Proposed road
CT	5491	340	H201100 S20	Turbine, Proposed road
CT	5491	340	H201100 S21	Turbine, Proposed road
CT	5491	340	H201100 S22	Turbine, Proposed road
CT	5491	340	H201100 S3	Turbine, Proposed road
CT	5835	437	H201100 S37S	Turbine, Proposed road
CT	5491	340	H201100 S38	Turbine, Proposed road
CT	5813	410	H201100 S39S	Turbine, Proposed road
CT	5813	410	H201100 S40	Proposed road
CT	5814	137	H201100 S41SW	Turbine, Construction area, Proposed road
CT	5491	340	H201100 S4NW	Turbine, Proposed road
CT	5491	340	H201100 S4SW	Turbine, Proposed road
CT	5327	569	H201100 S57S	Turbine, Proposed road
CT	5328	34	H201100 S76	Turbine, Proposed road
CT	5730	716	R1879 AA	Proposed road

Appendix D Draft Construction Environment Management Plan



Goyder North Renewable Energy Facility

DRAFT

Construction Environment Management Plan

28 March 2024

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Appendices

Appendix A - Site Discovery Procedure

Introduction

This Construction Environmental Management Plan (CEMP) has been prepared to accompany a Planning Consent application for the proposed Goyder North Renewable Energy Facility.

The project area is located in a region identified as the Northern Ranges portion of the SA Murray-Darling Basin Natural Resources Management area.

As such, it is acknowledged that the protection of the quality of water resources is important in this area, particularly surface water that feeds into the Burra Creek system. It is noted that the project is not located within a prescribed water resources area.

Purpose of this CEMP

This CEMP seeks to provide high level guidance to avoid and/or minimise potential environmental impacts associated with the construction phase of the development. It seeks to identify risk issues and the potential mitigation measures and strategies that should be adopted.

Additional Plans relating to detailed elements will be prepared by the respective construction contractors for review and acceptance prior to works commencing on site. Detailed site-specific mitigation measures will be developed and included in any final Plans to be prepared by the construction contractors.

A CEMP is a dynamic document and is to be updated by the contractor(s) as required to reflect detailed methodology, changes to site conditions, or scheduled works. The construction contractor(s) will take responsibility for reviewing and managing the outcomes identified in the CEMP.

The purpose of the CEMP is to:

- Provide for concrete batching plant works to be carried out in accordance with the environmental conditions outlined in the Planning and Building Consents and EPA License requirements;
- Provide for works to be carried out in accordance with the applicable environmental legislation and standards;
- Outline how the environmental features of the site are to be protected during construction;
- Ensure all potential environmental risks associated with construction are identified and assessed;
- Protect environmental features and sensitive receptors;
- Outline measures to monitor and control potential environmental impacts associated with the works that are implemented effectively;
- Provide government, community and other stakeholders with assurance that environmental issues associated with the works are managed appropriately;
- Allocate clear responsibilities for the environmental management at all levels;
- Optimise construction methods; and
- Provide guidance for site closure and rehabilitation.

Information Sources

The following reports and data sources have been reviewed during the preparation of this draft CEMP:

- Goyder North Wind Farm and Overhead Transmission Line Ecological Risk Assessment Summary (EBS Ecology, 17 November 2023);
- Goyder North Renewable Energy Facility, Flora and Fauna Assessment (EBS Ecology, 21 February 2024);
- Goyder North Wind Farm Environmental Noise Assessment (Echo, 14 November 2023);
- Goyder North Renewable Energy Facility – BESS, Environmental Noise Assessment (Echo, 14 March 2024);
- Goyder North Wind Farm & Overhead Line Transmission Route, Heritage Desktop Assessment (IHC, January 2024);
- Preliminary Environmental Site Assessment: Goyder North, Goyder Renewables Zone, (Agon Environmental, 7 July 2023);
- Goyder North Wind Farm Aeronautical Impact Assessment (Chiron Aviation Consultants 20 December 2023);
- Goyder North Renewable Energy Facility, Traffic Impact Assessment (Jacobs, 9 February 2024);
- SA EPA Air & Water Quality Guideline – Concrete batching (EPA 427/16 March 2016)
- NatureMaps – online database (naturemaps.sa.gov.au)
- Biological Database of South Australia (managed by DEW)
- 2021-2026 Regional Landscape Plan (Murraylands and Riverland Landscape Board)

These references, any conditions of planning or building approval and any other finalised investigations post-production of this draft document, will need to be reviewed by the contractor prior to completion of the final CEMP.

Project Information

Site Location

The proposed Goyder North development will be located northeast of Burra, east of Mount Bryan and extending northerly to south of Hallet, in the Goyder Regional Council area. This area is located in the eastern portion of the northern Mount Lofty Ranges and wholly located within the Goyder Regional Council area.

Burra is the key service centre within the region and is identified as an important centre for aged services, affordable housing and temporary housing for short term residents. Originally strategically located as a service centre for the surrounding agricultural and mining activities, this town further developed in response to the need for a supply depot and the supply of water (Morgan-Whyalla pipeline).

The Burra region is typical of the dryer areas of the mid north. This region can experience cool to cold winters and warm to hot summers. This area is on the edge of Goyder's line and, after a few better rainfall years, it expecting to face dryer conditions in the coming season.

This region has a relatively low population density, with most residential premises being located in a number of towns, Burra being the largest. The land use is predominantly agricultural, mostly grazing and some cropping.

The area is known to have a rich Indigenous and European history and there is strong evidence to suggest that much of this history is undocumented. Therefore, there is a high risk that the project may encounter heritage/archaeological features of potential significance.

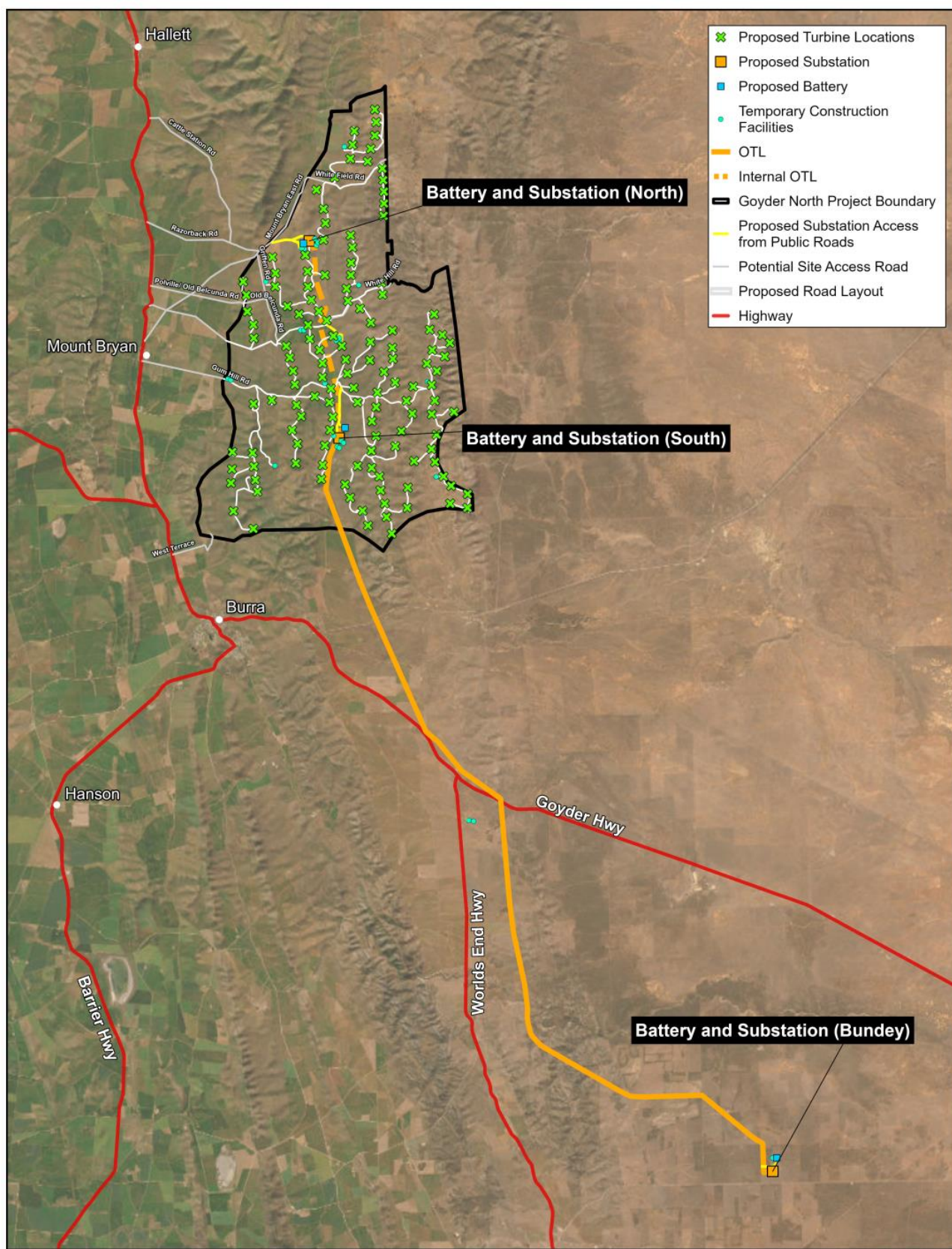
There are two main Highways providing access to the project area: the Barrier Highway running roughly north-south and the Goyder Highway which runs roughly north-west/south-east of Burra.

Description of works

The Goyder North Renewable Energy Facility comprises:

- A wind farm of up to 135 turbines with a capacity of up to 1,000MW;
- Three energy storage facilities (lithium-ion battery), two with a capacity of up to 225MW/900MWh (4 hours), one with a capacity of up to 450/1,800MWh (4 hours);
- Three substations including operation and maintenance facilities at each battery site;
- Associated infrastructure for connection to the electricity grid including access tracks, underground connection cabling and transmission lines;
- Temporary construction compounds (including batching plant sites) for wind, battery and OTL components; and
- A number of meteorological masts (in addition to those already on the site).

The layout of the project is summarised in the following Figure. This layout will be subject to a micro-siting process prior to the preparation of detail design and layout plans.



Paper Size ISO A4
0 1.5 3 4.5 6
Kilometers

Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 54



NEOEN AUSTRALIA PTY LTD
GOYDER NORTH WIND FARM

**GOYDER NORTH TEMPORARY
CONSTRUCTION ELEMENTS**

Project No. 12590014
Revision No. E
Date 15/03/2024

FIGURE

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Print date: 15 Mar 2024 - 13:31

Data source: World Imagery: Earthstar Geographics. Created by Jiggins

Temporary Batching Plants

Temporary Batching Plants have been identified in the Planning Consent Application at three locations which are identified in the following plans:

- Substation North - CT5894/43 (H200700S432)
- Substation South - CT5410/475 (F206353A101)
- Central - CT6049/595 (D81484A1)
- Transmission Line (Worlds End)- CT5914/152(F214551AL92)

These sites were select to ensure at least a 50m separation from water courses.

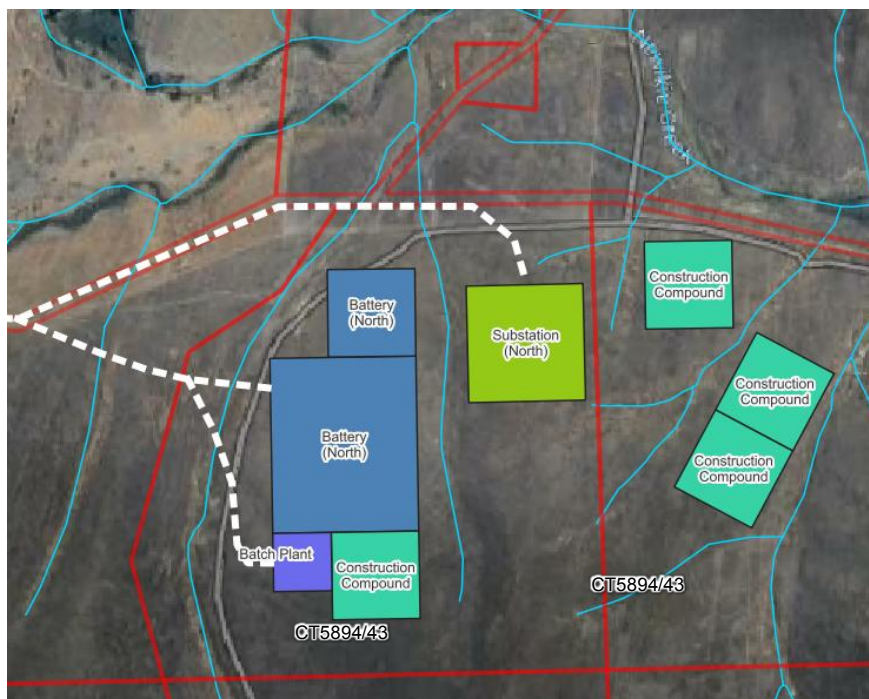
It is noted that a final decision as to whether the temporary batching plant sites will be used will be taken closer to the time of the actual construction phase. It is likely that, should they be established, each site will operate for approximately one year correlating with the turbine foundation preparation phase of the relevant project stage.

Should the batching plants be required, the contractor will prepare the following:

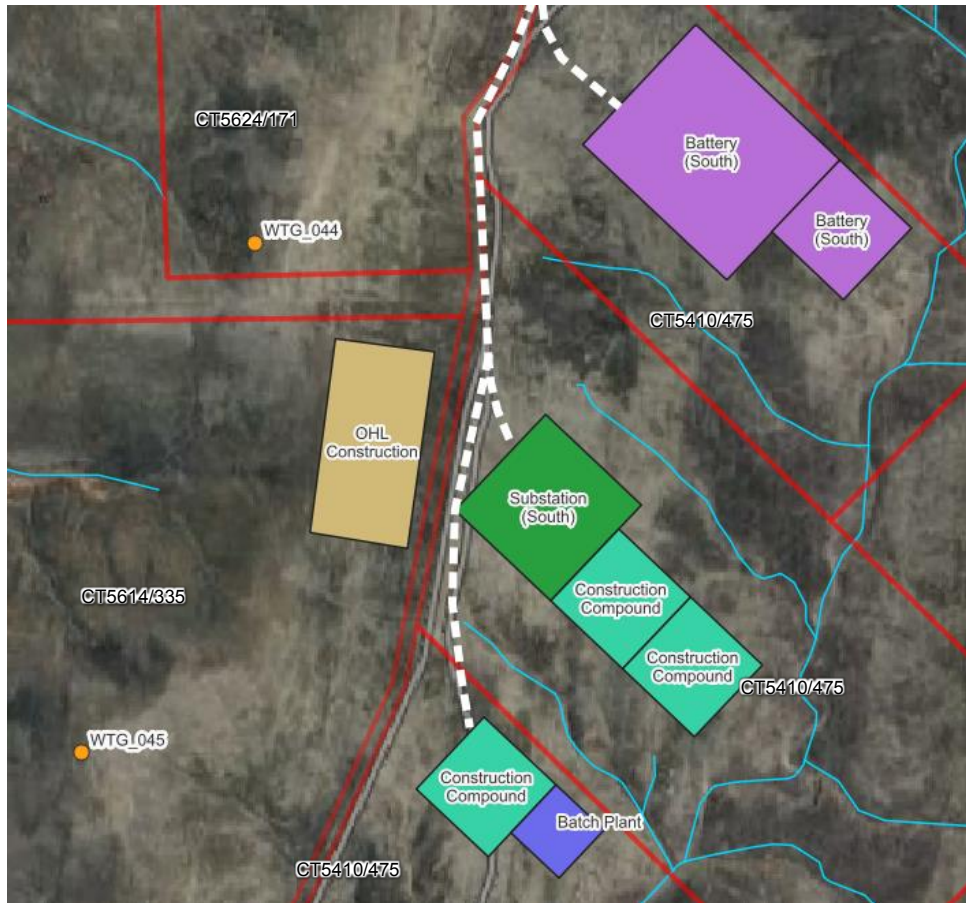
- A detailed layout plan that specifies the plant and equipment to be used on the site;
- A site-specific stormwater management approach that contains potentially contaminated water on site and diverts, clean stormwater runoff to natural drainage lines; and
- A Construction Environment Management Plan (CEMP).

This CEMP includes a Concrete Batching Plan sub- management plan as a guide to ensure that the specific actions required for these activities are fully addressed. By including this in the overall CEMP document, the proponent can be certain that the ‘handover’ to the contactors will include these requirements.

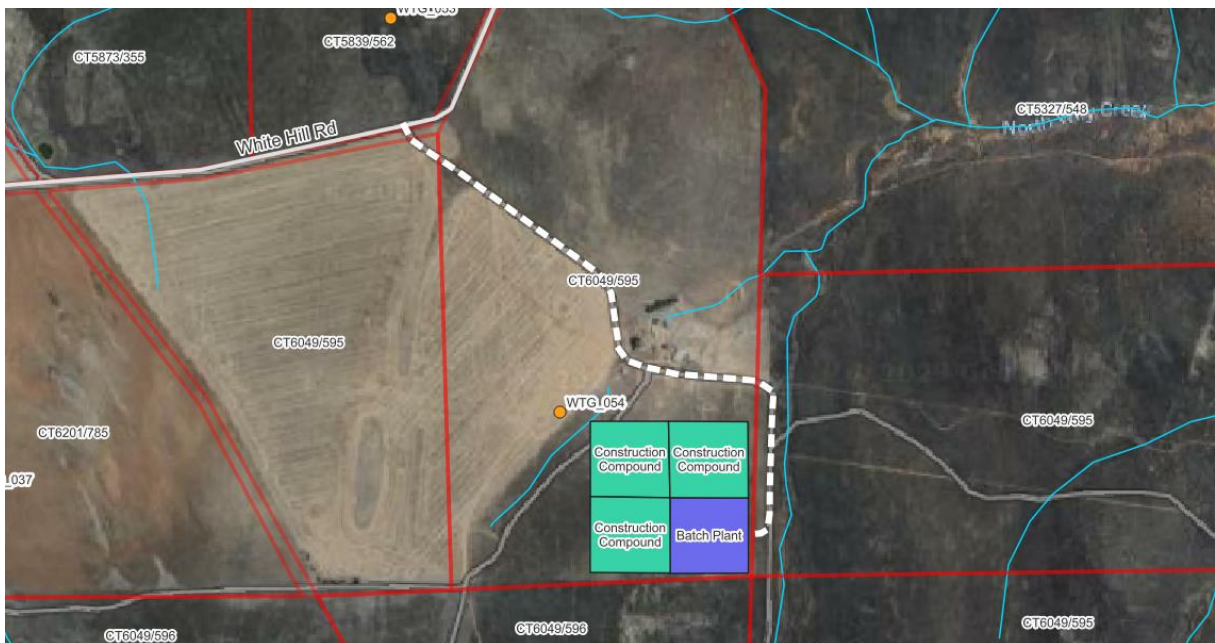
Substation North: Location of Wind Construction Compound and Batching Plant Site



Substation South: Location of Wind Construction Compound and Batching Plant Site



Central Wind Construction Compound: Location of Wind Construction Compound and Batching Plant Site



Overhead Line Construction Compound: Location of Overhead Line Construction Compound and Batching Plant Site



Sensitive Receptors

This section summarises the environmental features which have been identified as potential sensitive receptors for this project. The potential construction impacts upon these receptors are considered in Section 3.

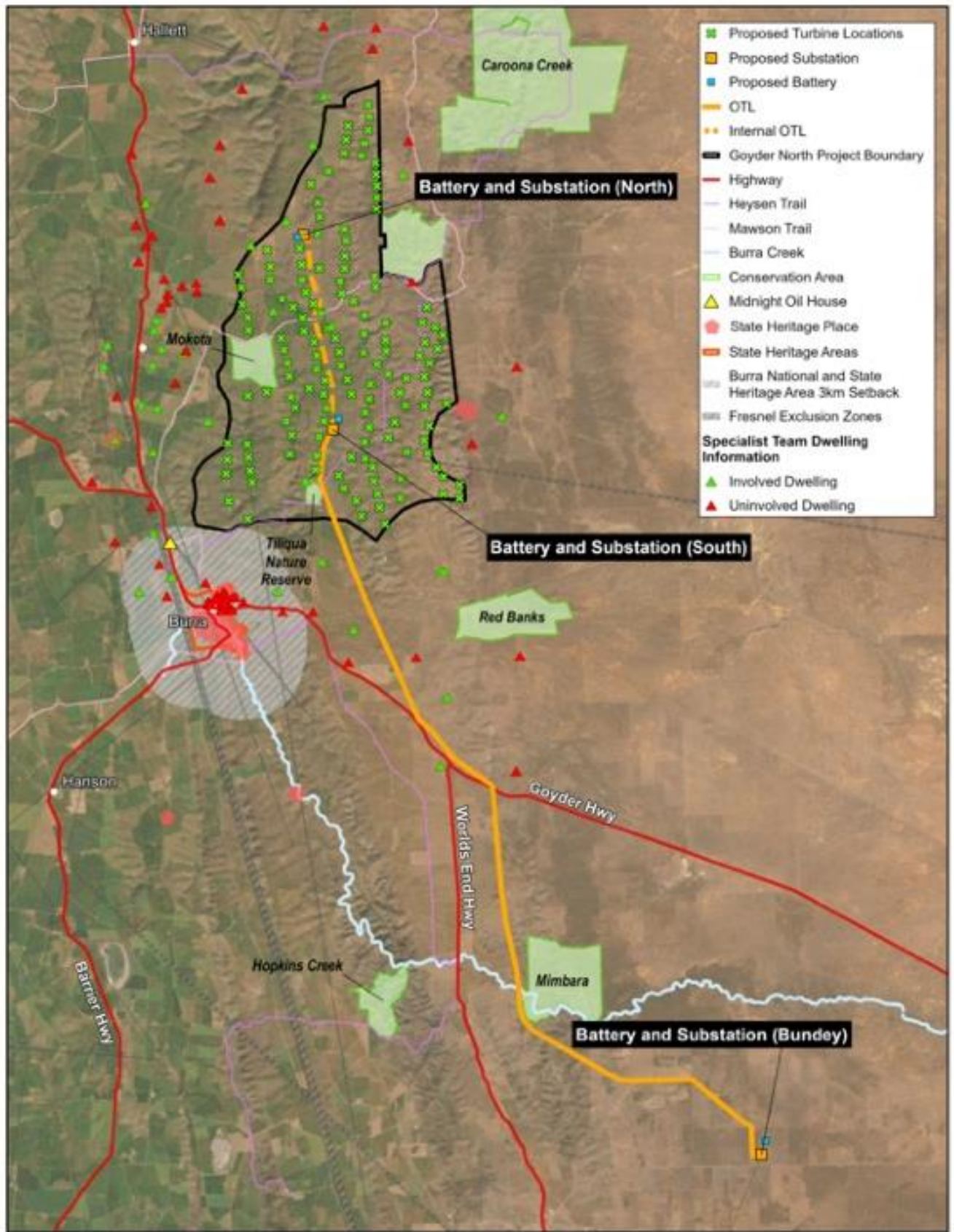
Table 1 Sensitive Receptors

Standard	Management Criteria
Community	<p>The majority of the project area is on land that the Ngadjuri Nation identified as their traditional lands and a small portion (associated with the Project EnergyConnect) may extend to lands of the First Peoples of the Murray Mallee.</p> <p>There are three main towns (Burra, Mt Bryan and Hallett) in the vicinity of the development but none of these are within the project boundary. Burra is the regional centre in this area. The project will be located on a number of private properties primarily used for farming which will involve approximately 30 landowners.</p> <p>The majority of these communities are serviced by unsealed gravel roads with sealed roads generally limited to the highways and located around the towns. The existing traffic volumes along these roads are low and the roads are generally only used by local farmers for access to their properties and transportation of farming equipment and materials.</p> <p>However, it should be noted that there are two recreational trails that have routes through and around the main wind farm project area. Tourist traffic should be expected on these routes: pedestrians (Heysen Trail) and cyclists (Mawson Trail).</p>
Ecology	<p>The region is typical of the dryer areas of the mid-north. This region can experience cool to cold winters and warm to hot summers. This area is on the edge of Goyder's Line. In more recent years, this region has experienced mild conditions; in contrast to the region recently experienced three years of drought. While conditions are expected to return to a warmer, dryer pattern in 2023-24, there is a possible risk of increasing, unseasonal storm events.</p> <p>Much of the area was cleared of vegetation during the mining period and possibly managed by the Ngadjuri Nation prior to this. The land has been predominantly grazed since. Remnant native vegetation tends to exist in the steeper areas of the ranges and in patches along drainage lines and within a number of conservations and protected areas. Larger areas of remnant vegetation are more common toward the southern end of the OTL project area. The Project area falls within the Flinders Lofty Block IBRA bioregion and Broughton and Olary Spur subregions.</p> <p>An ecological assessment has been undertaken and has identified the presence of threatened flora and fauna species. A number of protected areas (conservation parks and vegetation heritage areas) are located in and near the project area. The project does not have permission to enter these areas.</p> <p>Further detailed micro-siting will be required for all project elements to further minimise impacts on ecology.</p>

Standard	Management Criteria
Water Resources	<p>The area surrounding Burra reaches relatively hot maximum temperatures in summer, with mean maximum temperatures highest in January (29.4 degrees) and February (29.1 degrees). The wettest months are August (55.6 millimetres (mm)), June (51.8 mm) and July (51.2 mm) (Commonwealth of Australia 2019).</p> <p>The project is located in the South Australian Murray-Darling Basin NRM Region. Impacts on water quality are a priority concern in this region.</p> <p>While the region has experienced milder conditions in recent years, dryer and warmer conditions are expected in 2023-24 and therefore all water resources are important and valuable. There are a number of creeks that are located in the most significant water course in the area is the Burra Creek system.</p> <p>Neoen are currently investigating water supply for the project as water supply in the area is limited. There is a potential for bore water to be used (subject to NRM and water licencing conditions (if relevant)), or alternatively water will need to be transported into the project via water tanks.</p>
Soils and Geology	<p>The topography of the Project Area comprises undulating hills of the eastern Mount Lofty Ranges, with steep escarpments present along geological fault zones, particularly at the eastern extent of the ranges. Steep sided valleys occur where watercourses cross the escarpments.</p> <p>The soils of the eastern slopes of the Mount Lofty Ranges generally have a high to very high erosion potential by water and are likely to be subject to soil erosion by water, and potentially wind, if ground is disturbed.</p> <p>The site is in an area bounded by known fault lines that are seismically active. The likelihood of a major earthquake occurring is not known, however no significant (>4 magnitude) earthquakes have been recorded in the area.</p>
Cultural Heritage	<p>There are a number of State Heritage places and areas in the vicinity of the project. Burra is a nationally listed heritage place.</p> <p>This area has a long history of occupation by both the traditional people and Europeans associated with mining. As such the project area may contain both Aboriginal and European archaeology which is protected by law (refer procedure in Appendix A). It should be noted that the location of Aboriginal heritage and cultural sites are generally kept confidential to protect the sites and to respect any cultural sensitivities.</p> <p>Building ruins and dry-stone walls are noticeable features in the landscape and they are to be protected in accordance with the results of detailed heritage assessment during the micro-siting process.</p> <p>This history of mining (and possible historical defence activities) increases the risk of unexploded ordinance (UXO). To address this an “unexpected finds procedure” will be developed.</p>

The following Figure provides a summary of some of the key sensitivities.

It should be noted that the location of Aboriginal heritage and cultural sites are generally kept confidential to protect the sites and to respect any cultural sensitivities. The location of known sites will be provided on a “need to know” basis.



Environmental Management System

Managing environmental issues and promoting environmental awareness during the site works is an essential component of responsible project management. It requires the active consideration of environmental issues and health and safety as a prerequisite to all construction operations. This section identifies the key management measures which will be required to avoid or minimise these likely impacts. The contractor Environmental Management System (EMS) is expected to comprise an environmental policy and the basic elements indicated in Section 3 of this report.

Where required, detailed Management Plans for specific issues will need to be prepared and added to this CEMP prior to the construction and operation of the batching plants.

Implementation Responsibility

The roles and responsibilities of the following key participants in the construction works for the project are outlined below:

- Neoen Principal
- Contractor Design Engineer
- Contractor Superintendent
- Contractor Environmental Manager
- Contractor and Staff

The Neoen Principal will engage a construction company ("the Contractor") who will be responsible for ensuring the CEMP is developed and implemented by all staff and their subcontractors involved with the construction works.

The Principal should ensure that all contractual documents specifically quote a CEMP in terms of responsibility for addressing and implementing relevant environmental requirements for the temporary batching plants. The contractual documents should also indicate that the Contractor is responsible for ensuring legislative and CEMP compliance controls are maintained on site.

The Contractor is responsible for obtaining all relevant approvals/permits/licences prior to works commencing. The Contractor will appoint an Environmental Manager who is responsible for developing environmental impact mitigation measures compliant with all approvals, permits, licences and management measures and incorporating this (in the form of detailed Management Plans) into the CEMP for construction, operation and decommissioning works. The Contractor will use a Design engineer, Environmental Manager and a superintendent to ensure that the design, construction, operation and decommissioning of the batching plants meet all relevant environmental requirements.

Successful implementation relies upon support for, and compliance with, the CEMP's requirements from all involved parties. Responsibilities are detailed below:

Neoen Principal (the "Principal")

- Key contact and representative of Neoen.
- Ensure contractual documents include environmental responsibilities, adequate training and preparation of detailed Management Plans to accompany the CEMP prior to construction of the batching plants commencing.
- Overall responsibility for ensuring the project meets its compliance obligations and environmental requirements are implemented.
- Agree procedures for emergency response.
- Agree frequency and method of auditing, monitoring and other matters which are to be reported to Neoen.

Design Engineer (appointed by the Contractor)

- Responsible for the detailed design and layout of the batching plants, water and wastewater management systems, ponds and washout pits, storage and stockpile areas and batching plant emission/materials management equipment.
- Checks on-site implementation of the above design requirements.

Environmental Manager (assigned by the Contractor)

- Responsible for managing environmental aspects during the construction and site closure phases and that the Superintendent has the information required to implement site controls successfully.
- Checks that all environmental requirements, licences and procedures are implemented.
- Advises staff of special requirements.
- Conducts or commissions a consultant to undertake environmental audits/monitoring during all stages to ensure implementation of requirements.
- Determines and/or ensures environmental controls and procedures are in place and maintained during all phases of the project.
- Determines the training/instructions required for staff to be able to meet their environmental obligations.
- Reports environmental incidents during construction.
- Responsible for the emergency response procedure for environmental incidents.

Superintendent (assigned by the Contractor)

- Supervises and implements environmental controls on site during the construction works.
- Ensures training/instructions required by staff to be able to meet their environmental obligations, are undertaken and recorded.
- Reporting of environmental incidents to the Environmental Manager.
- Responsible for informing the Environmental Manager and activating the response procedure during an emergency situation.

Contractor(s) and Staff

- Implement environmental controls as directed.
- Report environmental incidents to the superintendent.

Error! Reference source not found. summarises the responsibilities relevant to implementation of a CEMP.

Table 2 Project Role Description and Responsibility

Planning and Design (pre-construction)	Principal	Oversees planning and Tender phase. Responsible for ensuring environmental compliance during the design phase and CEMP preparation.
	Design Engineer	Responsible for preparation of a CEMP to guide development of a project-specific CEMP and outline legislative requirements. Responsible for design of the temporary batching plant facilities (if required).
	Environmental Manager	Responsible for review of the CEMP and preparation of detailed Management Plans for inclusion in the CEMP prior to construction of the batching plants commencing.

Construction, Operation and Decommissioning Works	Principal	Responsible for environmental compliance.
	Superintendent	Oversees construction phase and enforces environmental controls on site.
	Environmental Manager	Ensures Contractor complies with environmental requirements.

Site Establishment

Each site shall be established in accordance with the final approved plans. The plans are preliminary concept plans that have been developed with the advice of civil engineers and based on topography surveys to ensure appropriate management of site access and site stormwater.

Each site will be reviewed as part of the micro-siting process to ensure that the siting is optimal from an environmental protection and safety perspective. The sites will then be designed in detail to accommodate the required infrastructure and environmental management systems (such as stormwater management, waste management, vehicle access, washdown areas etc.).

CEMP Review, Reporting and Monitoring

The CEMP will only be effective if it is appropriately managed and utilised. Although the detailed Management Plans will be developed and included in the EMP prior to the commencement of construction works by the Contractor with the intention of covering the detailed methodology, circumstances may differ from those anticipated. Consequently, it is important that the CEMP be regularly reviewed and updated. This will ensure that the measures, responsibilities, criteria and corrective actions remain achievable, effective and suitable to the project, whilst maintaining compliance with relevant legislation and policy.

An important principle that is embodied in this CEMP is that of “continuous improvement”. To facilitate this process, it is critical that an appropriate monitoring, reporting, and review process be developed and adopted.

Review of CEMP

The CEMP is to be reviewed throughout the construction and operation phase of the batching plants monthly (or at a frequency determined by the Contractor). The review is to examine the following as a minimum:

- The implemented environmental management activities;
- The incident reporting and preventative action procedures;
- The complaints handling procedures; and
- The emergency response procedures for environmental incidents.

Monitoring Records

The results of any monitoring required by any approvals, licences or Conditions of Consent granted for the construction phase of the development must be:

- In a legible form;
- Kept for at least 4 years after the monitoring or event to which they relate/took place; and
- Be available upon request to any authorised person.

The following minimum records will be kept in regards to any monitoring / sampling activity:

- The date(s) on which the monitoring was taken;
- The time(s) at which the monitoring was collected;
- The point at which the monitoring was taken; and
- The name of the person who conducted the sample.

Sampling Quality Control Plan

Where practicable NATA accredited laboratories will be used for any testing of samples taken in association with approvals, licences or consent conditions. Laboratory detection limits must be below the adopted assessment criteria.

Quality Assurance / Control measures such as collection and testing of duplicates and blind duplicates will be used to ensure the accuracy and quality of the required monitoring.

Follow Up Action

Where adherence to the requirements in this document are found to be unsatisfactory in achieving broader environmental and site management goals, action will be taken to investigate the cause and make amendments to the CEMP as required.

Reporting

The Contractor shall provide a fortnightly report to the Principal to cover the following circumstances:

- Include a report on any monitoring undertaken in accordance with licences, approvals or conditions of consent;
- Provide a summary of complaints received during the construction phase of this project; and
- Report of compliance with the CEMP.

Training and Site Induction

The Contractor will oversee that all employees, sub-contractors and visitors receive environmental instruction in relation to the CEMP and legislative requirements. Each person will be made aware of and have an understanding of their obligations and duties detailed in this CEMP. Everyone involved with the project should be familiar with the CEMP components that are relevant to their role.

The Principal is responsible for overseeing that the contractual agreement with the Contractor specifies the necessity of providing adequate training to the construction teams. This responsibility is to be assigned to the Superintendent who can liaise with the Principal and other agencies, if required. During construction works, the Contractor must ensure that each operative is trained to use the machinery and materials on site efficiently to avoid environmental nuisance, including noise, air pollution, impacts on water quality, spread of waste material and land contamination.

It is important to note that legislative requirements have changed in relation to the management of archaeology. All archaeology, both Aboriginal and European is protected by law. All employees must be made aware of these new requirements.

In addition, Local Government is now responsible for responding to community complaints about noise, smoke, dust and odour (Local Nuisance and Litter Control Act, 2016). All employees shall be briefed on the effect of this legislation.

Emergency Response and Incident Management

The CEMP should detail emergency response procedures, with clear lines of responsibility to enable effective response with minimal environmental harm or disruption. The following sections provide an outline of procedures and protocols that should be included in the CEMP.

Environmental and Cultural Heritage Incidents (Notification of Environmental Harm)

The type of incidents that may require notification in accordance with legislation depends on the extent of harm or the potential damage to the environment. To ensure that Neoen has a consistent approach to incident reporting, the Principal must be contacted immediately after the site has been made safe. The Contractor's Environmental Manager and Superintendent will be responsible for:

- An immediate assessment of the potential onsite and offsite impacts of the incident
- Consulting (if necessary) with emergency services
- Instigating appropriate steps to mitigate the impacts
- Advising regulatory authorities, where these authorities can provide assistance with mitigation of impacts.

Failure to report an incident may result in enforcement action on all involved.

The Principal will provide written details of the notification to the appropriate authorities within 7 days of the dates on which the incident occurred.

The Principal will liaise with the appropriate authorities to provide suitable details within the time specified.

Unexpected Finds Protocol

The Principle and Contractor will agree on an approach to addressing unexpected finds, particularly in relation to finds associated with historical mining and possible historical defence activities. This is likely to include:

- Having regard to the "Preliminary Environmental Site Assessment", Agon Environmental, 7 July 2023;
- Development of a protocol, integrated with the emergency response plan (below); and
- Incorporating the protocol into site inductions.

Emergency Response Plan

Emergencies that may occur during the construction phase of the project include:

- Fire
- Chemical spill
- Flooding
- Explosion
- Wildlife Injury
- Damage to power or services cables
- Personnel injury
- Seismic activity

Prior to the commencement of the construction phase, the Principal and the Contractor are to agree on procedures for emergency response. It is the responsibility of the Contractor to develop, implement and train staff in the emergency response procedures.

To ensure emergencies are managed in an appropriate manner the Contractor is to follow the general procedures outlined in Table 3.

Table 3 **General Emergency Response Plan**

Standard	Management Criteria
Policy	To minimise the risk of an environmental accident or emergency during construction phase of the Project.
Performance Objective	Ensure that an Emergency Response Plan is kept in place to respond to any accidents or incidents that may impact on the environment and that all personnel are inducted in its application.
Implementation Strategy/ Mitigation Measures	Material Safety Data Sheets for all materials used or stored on site relevant to the concrete batching plant, regardless of quantity, for the construction works shall be kept on site by the Contractor.
	Spill Response Kits, fire extinguishers and other emergency response equipment should be fully maintained and readily available.
	In the event of an emergency the Contractor's Superintendent is to immediately notify the Principal.
	The Superintendent will also notify the relevant emergency services.
Monitoring	Following an emergency, the affected areas shall be monitored as required. In the event of a spill, it should be ensured that all contaminated material, including soil, has been removed and properly disposed of by a suitably qualified contractor.
	Follow up action is to be undertaken to ensure adequate provisions are implemented to minimise or eliminate the risk of reoccurrence of the emergency.
Reporting	<p>Once immediate mitigation steps have been undertaken and the incident contained. All incidents/emergencies will be reported to the Principal. The Contractor is to record emergency information on an Incident/Complaints Form and will include the following:</p> <ul style="list-style-type: none"> • Location of the emergency or incident • Name and telephone number of the designated contact person • Time of the emergency/incident • The environmental harm or nuisance caused, threatened, or to be caused by the emergency/incident • Any remediation work undertaken • Actions to be taken to prevent further incidents/emergencies and mitigate any environmental harm and/or nuisance caused by the incident/emergency.
Corrective Action	Non-conformance with this plan shall be documented by the Principal and corrective action undertaken to ensure future conformance. All non-conformances shall be documented and passed onto the Contractor.

Incident and Corrective Action Records

All environmental incidents need to be documented, recorded and followed up with identified corrective action(s). Incident Reporting documentation needs to be completed by those personnel involved along with the Contractor's Environment Manager; approval should be sought from the Principal. Corrective actions should be identified and documented in Corrective Action documentation and approved by the Principal's Representative. While identifying corrective actions to be taken, personnel responsible for implementing the corrective action need to be identified and informed of their responsibilities. Corrective Action documentation should be updated throughout the course of the construction works and/or until the identified actions have been fully completed.

Incident/Emergency Response Plan Contact Register

In the event of an incident or emergency occurring at the site, contact will be made with the key emergency services as identified in Table 4.

Table 4 Incident/Emergency Contact Register

Organisation	Title	Telephone Number
Principal (Neoen)	TBC	TBC
Neoen Representative	TBC	TBC
Contractor Environmental Manager	TBC	TBC
Contractor nominated Superintendent	TBC	TBC
EPA	Pollution and Environmental Incident reporting (24 hour)	(08) 8204 2004
Fire Brigade Police Ambulance	Emergency	000
Regional Council of Goyder	Incidents/Community Complaints	08 8892 0100

Community information and grievance procedure

A programme will be established of public information provision to residents or other nearby sensitive receptors which may be impacted by the construction works, including the concrete batching plants and haul traffic. A grievance procedure will be included in the final CEMP and implemented during the construction phase. A complaints register including details of the complaint and how the complaint was actioned / resolved should be maintained and retained throughout the construction period.

Fire prevention

Fires can eventuate from work activities or during operation. The dry grass may ignite causing damage to the grazing paddocks and adjacent dwellings. Fire may spread causing damage to the ancillary services and structures and smoke may disrupt traffic on adjacent roads.

Liaison with the CFS will be required prior to construction commencing, with regards to requirements during the "Fire Danger Period". In consultation with CFS, the appropriate firefighting measure and equipment required on site during construction will be determined.

A Fire Prevention Management Plan should be developed as part of the final CEMP.

Table 5 Fire prevention outline plan

Objective	Minimise the risk of fire resulting from the construction of the project.
Legislation / Policy	<i>Electricity Act 1996</i> <i>Fire and Emergency Services Act 2005</i> <i>Electricity Regulations 2012- General</i> <i>Electricity Regulations 2010 – Principles of Vegetation Clearance</i> <i>Australian Standard 1851(2012) – Portable Fire Extinguishers</i> <i>Australian Standard 1940(2004) – The storage and handling of flammable and combustible liquids.</i>
Potential Impacts	Fires can eventuate from work activities or during operation. The dry grass may ignite causing damage to the grazing paddocks and adjacent dwellings.

	<p>Fire may spread causing damage to the wind turbines and ancillary services and structures.</p> <p>Smoke may disrupt traffic on adjacent roads.</p>
Mitigation	<p>Liaise with CFS during the pre-construction stage with regards to requirements surrounding compound areas, during the “Fire Danger Period”</p> <p>Determine, in consultation with CFS, the appropriate firefighting measure and equipment required on site during construction.</p> <p>Provide CFS and SES information regarding the location of the equipment and measures implemented during the construction stage.</p> <p>During construction, the area surrounding each turbine to a distance of 30m will be maintained as follows:</p> <ul style="list-style-type: none"> • Grass must be no more than 200mm in height; • Maintenance works such as mowing and tree pruning to be done before entering the Fire Danger Season or under CFS supervision. • Leaf litter must be less than 20mm deep; • No fires would be lit at any time, for any purpose, including burning waste materials; • Spark-arrestors to be installed on all vehicle and machinery powered by internal combustion engines; • Vehicles may only be operated on approved roads and tracks for that class of vehicle. Only diesel-powered vehicles may operate “off road” at any time. • Welding to be undertaken under controlled manner; • Minimise on-site storage of flammable materials; and • All vehicles to be equipped with compliant fire extinguishers. <p>When conducting work using or generating intensive heat:</p> <ul style="list-style-type: none"> • Use a fire-resistant shield to prevent sparks or hot material from leaving the work area; • Provide a fireproof container for off-cuts; • The work area around active grinding equipment (10m) and hot work source (1.5m) is to be kept clear of flammable material or will be kept wet; and • Fire extinguishers and water tap are to be made available in close proximity of the hot works area. <p>During periods of High Fire Danger:</p> <ul style="list-style-type: none"> • All hot work will be banned and no permits will be issued (including explosives)
Strategy	<p>A Fire Prevention Management Plan will be provided as part of the final CEMP.</p>

Environmental Sub-management Plans

The following sections outlines potential mitigation strategies to avoid and/or minimise potential impacts to various environmental aspects associated with the concrete batching plants. Key legislative considerations and potential approvals/permits are highlighted. This will need reviewing against the construction methodology, once finalised.

The Contractor's Environmental Manager will need to determine the Inspection / Criteria/ Target / Evidence required to determine compliance with each element of the CEMP. The mitigation measures provided represent the minimum requirements that should be adopted prior to commencement of construction. Where indicated, Management Plans should be prepared and added to this CEMP prior to the construction of the batching plants.

The following outline sub-management plans provided here are:

- Flora and Fauna Protection
- Weed, Pest and Disease Control
- Water Quality Protection
- Erosion and Sediment Control
- Construction Noise and Vibration Control
- Air Quality Control
- Materials, Fuels and Waste Management
- Protection of Sites of Cultural and Natural Heritage Significance
- Decommissioning and Rehabilitation
- Temporary Concrete Batching Plants

Flora and Fauna and Rehabilitation

Table 6 Flora and Fauna Protection

Objective	Minimise impacts to flora and fauna including vegetation clearance and manage the works so as to avoid damage to retained vegetation and fauna.
Legislation / Policy	<i>Native Vegetation Act 1991</i> <i>Native Vegetation Regulations 2003</i> <i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Landscape South Australia Act 2019</i> <i>National Parks and Wildlife Act 1972</i>
Permits/Approvals	Submission of an EPBC referral. Consent to clear Native Vegetation under Native Vegetation Act 1991.

Table 7 Flora and Fauna Protection Mitigation and Controls

Key Construction Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Site establishment and set up, Topsoil stripping and vegetation removal, Aggregate storage and stockpiles, Temporary storage of chemicals, spoil and equipment, Concrete mixing	Potential disturbance to fauna located in areas to be cleared. Potential disturbance to fauna residing in habitats adjacent works area. Native vegetation located within the works area could be impacted. Vegetation within the footprint of the proposal may require clearance.	A Flora and Fauna Management Plan will be provided as an addition to this CEMP. Locate project elements in order to minimise the construction area footprint and avoid, where possible, disturbance to preferred habitat of conservation significant species predicted as likely to occur at the site and those recorded during the Flora and Fauna surveys (EBS Ecology). Vegetation exclusion zones should be clearly identified and communicated to site personnel. Place site depots, equipment compounds and stockpile areas on previously cleared areas away from trees, bushes and native grasses, where possible. Avoid work/storage within the drip-line of trees to prevent damage to the tree roots and soil compaction.	TBC	Environmental Manager Superintendent

Key Construction Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
		<p>If there is any removal of native vegetation required during construction, it will be conducted in accordance with the requirements of and approvals under Native Vegetation Act 1991. Any direction provided by the NVC must be adhered to.</p> <p>Do not burn off cleared vegetation. Reuse cleared vegetation, where possible.</p>		
Construction traffic movement	Increased potential for wildlife vehicle strike on haul roads to and from site.	<p>Use existing access tracks where possible to minimise additional disturbance</p> <p>Speed limits on haulage traffic may be required to be imposed to prevent increased occurrence of wildlife strike.</p>	TBC	Environmental Manager Superintendent
Tidy and make good work areas	Minimise permanent impacts to flora and fauna.	<p>Reinstatement of any areas of vegetation, including road verges, which have been impacted during the construction phase in accordance with Native Vegetation Council Approval requirements, conditions and directives.</p> <p>In areas of native vegetation return topsoil and mulched vegetation to approximately the same area of the roadside it came from.</p>	TBC	Environmental Manager Superintendent

Weed, Pest and Disease Control

Table 8 Weed, Pest and Disease Control

Objective	Prevent the movement or increase in weeds, pests or diseases.
Legislation / Policy	<i>Native Vegetation Act 1991</i> <i>Native Vegetation Regulations 2003</i> <i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Landscape South Australia Act 2019</i> <i>National Parks and Wildlife Act 1972</i>
Permits/Approvals	Permit to move pest plants or animals (Natural Resources Management Act 2004)

Table 9 Weed, Pest and Disease Mitigation and Controls

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Site establishment and set up, Topsoil stripping and vegetation removal, Aggregate storage and stockpiles, Tidy and make good work areas	Potential spreading of weeds, pests and diseases. Potential increase in prevalence of pest animals.	A Vegetation and Fauna Management Plan will be provided as part of the final CEMP, and this will need to cover the issue of Weed, Pest and Disease Management. Control weeds on site during construction and monitor the site for any outbreaks. Ensure that raw materials, such as rubble, gravel, sand and water brought into the construction site are free of weeds, pests and disease. Check rock prior to transportation and clean/spray as appropriate. Vegetation from weed species should be disposed of separately at a licensed waste depot.	TBC	Environmental Manager Superintendent
Construction traffic movement	Potential spreading of weeds and pests. Potential increase in prevalence of pest animals.	Follow weed or disease hygiene procedures ensuring vehicles and equipment are cleaned as required.	TBC	Superintendent

Water Quality Protection

Table 10 Water Quality Protection

Objective	Minimise impact to surface and ground water quality within works area and haul routes.
Legislation / Policy	<i>Environment Protection Act 1993</i> <i>Environment Protection Regulations 2009</i> <i>Environment Protection (Water Quality) Policy 2003</i> <i>Landscape South Australia Act 2019</i> <i>Stormwater Pollution Prevention, Code of Practice for the Building and Construction Industry</i> <i>EPA Guidelines (EPA 396/10) - Water Quality, Dredging and Earthworks Drainage.</i> <i>Guidelines for separation distances (EPA) 2007</i> Air & Water Quality Guideline – Concrete batching (EPA 427/16 March 2016)
Permits/Approvals	Earthworks drainage authorisation (section 7(6) of Schedule 1 of the Environment Protection Act 1993). Approvals may be required for actions/activities that have an impact on water resources such as up-grades of watercourse crossings, water extraction, water degradation (Natural Resource Management Act, 2004). EPA licensing (e.g. a concrete batching plant).

Table 11 Water Quality Mitigation and Controls

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Site establishment and set up, Topsoil stripping and vegetation removal, Water provision and management, Aggregate storage and stockpiles,	Impact to the natural movement of surface and groundwater affecting availability to flora and fauna and local communities and landowners. Impacts to water quality can affect aquatic fauna, decreases the aesthetic value of a watercourse or water body and can damage transport infrastructure.	A Water Management Plan will be prepared prior to construction and operation of the concrete batching plant. Ensure any conditions/obligations relating to a Permit for surface or groundwater extraction is complied with. Chemical testing of any identified water source should be carried out to determine the suitability of water for use in mixing concrete, or for dust suppression.	TBC	Environmental Manager Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Temporary storage of chemicals, spoil and equipment, Concrete mixing, Construction traffic movement		<p>Consideration to stormwater drainage control will be given when establishing the construction site. The following objectives will be considered:</p> <ul style="list-style-type: none"> • Limit site access to designated routes and controlled area; • Locate and secure all stockpiles areas away from watercourses and concentrated water flow paths; • Ensure that all the stormwater drainage is in place before site clearing works begin; • Assess the impact of the proposed stormwater drainage systems on the adjacent properties; • Consideration to existing underground services will be given when establishing the access tracks and construction site, and protection will be provided where required; • Construction of access road networks may alter surface drainage paths. Drainage should be installed to mitigate potential effects, taking into consideration ephemeral watercourses; • Minimise areas of vegetation loss to areas identified for clearance as part of the scheme. <p>Control surface run-off entering and leaving the work area:</p> <ul style="list-style-type: none"> • Existing natural drainage paths and stormwater facilities must not be blocked or restricted. • Runoff from unsealed areas at the construction site must not enter stormwater drains or natural drainage lines. • Stormwater should be diverted around stockpiles. 		
Waste Water Management	Reduction in quality of water resources.	The site must incorporate a wastewater management system; and effectively operate the system in respect of	TBC	Design Engineer, Environmental Manager

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
		<p>any wastewater generated at the site. Regular inspection and maintenance of the system is necessary.</p> <p>Waste water generated at the premises must not be discharged into any waters; or onto land in a place from which it is reasonably likely to enter any waters (including by processes such as seepage or infiltration or carriage by wind, rain, or by the rising of the water table).</p> <p>Settling ponds should be lined with an impervious liner capable of containing all contaminants found within the water they are designed to collect.</p> <p>Concrete agitator bowls and chutes must not be washed out to the stormwater system or roadways. A wastewater collection and recycling system should be designed to collect contaminated water from:</p> <ul style="list-style-type: none"> • agitator washout • truck washing • yard washdown • contaminated stormwater • concrete batching area • slump stand • any other wastewater from the batching plant operation. 		Superintendent
Tidy and make good work areas	Long term effects arising from the development of the project.	Cleared areas to be stabilised / rehabilitated promptly and where possible enhance the natural value of these areas.	TBC	Superintendent

Soil Management, Erosion and Sediment Control

Table 12 Erosion and Sediment Control

Objective	Minimise erosion within works area and haul routes and minimise sediment laden stormwater leaving the site.
Legislation / Policy	<i>Environment Protection Act 1993</i> <i>Environment Protection Regulations 2009</i> <i>Environment Protection (Water Quality) Policy 2003</i> <i>Landscape South Australia Act 2019</i> <i>Stormwater Pollution Prevention, Code of Practice for the Building and Construction Industry</i> Air & Water Quality Guideline – Concrete batching (EPA 427/16 March 2016)
Permits/Approvals	Earthworks drainage authorisation (section 7(6) of Schedule 1 of the Environment Protection Act 1993.) EPA licensing (concrete batching plant)

Table 13 Erosion and Sediment Mitigation and Controls

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Erosion Control	Release of unsuitable substances to the terrestrial or water environment.	Preparation of plans detailing Soil, Erosion and Sedimentation techniques to be applied for the construction, operation and decommissioning phases of the project elements.	Prior to construction	Superintendent
Site establishment and set up	The soil characteristics are likely to be subject to soil erosion by water and potentially wind if ground is disturbed.	Soil erosion and generation should be minimised during construction. Preparation of a Soil, Erosion and Sedimentation Management Plan. Erosion and sedimentation control devices installed prior to commencement of construction/works.	TBC	Environmental Manager Superintendent
Topsoil stripping and vegetation removal	Damage to topsoil and subsoil.	A Management Plan should be developed that includes the following: <ul style="list-style-type: none"> Maps showing the areas to be stripped and left in-situ. 	TBC	Environmental Manager Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
		<ul style="list-style-type: none"> Reduction of areas of vegetation loss to areas identified for clearance as part of the scheme. The appropriate method for stripping, stockpiling, resspreading and ameliorating the soils. The location of soil stockpiles and content (e.g. Topsoil type A subsoil type B). Schedules of volumes for each material. Expected after-use for each soil whether topsoil to be used on site, used or sold off site, or subsoil to be retained for landscape areas, used as structural fill or for topsoil manufacture. Identification of person responsible for supervising soil management. <p>Soil should be handled in the right conditions of weather and soil moisture and using suitable machinery in an appropriate way. Soil that is wet or very moist (wetter than the plastic limit) should ideally be allowed to dry further.</p> <p>Use tracked equipment wherever possible to reduce compaction.</p> <p>Confine movement of trucks or dumpers to designated temporary haul routes. Multiple handling of soil materials increases the risk of damage to soil structure so should be minimised.</p> <p>Avoid stripping topsoil for reuse too deeply so that subsoil becomes incorporated, thereby reducing fertility.</p> <p>Do not remove topsoil from below the spread of trees to be retained.</p>		

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Water provision and management, Aggregate storage and stockpiles, Concrete mixing	Soil erosion can contaminate watercourses, lead to loss of vegetation, impact on aquatic fauna, decrease the aesthetic value of a watercourse, reduce the agricultural capacity of land and can damage transport infrastructure.	<p>Implement controls to prevent and minimise the risk of any sediment from earthworks entering the stormwater system. Ensure that areas of exposed soil, including stockpiles, are protected from erosion, or that suitable control measures are in place to prevent any mobilised soil being transported off site.</p> <p>Locate stockpiles away from watercourses and not in drainage lines.</p> <p>Stormwater diverted around stockpiles.</p> <p>Any dewatering on site to be undertaken in a manner which prevents sediment entering stormwater drains and water course.</p> <p>Use of sediment curtains, cofferdams or similar to prevent suspended sediment movement during construction within water or areas likely to be inundated.</p> <p>Maintain the sediment control and stormwater drainage devices at all times.</p>	TBC	Design Engineer, Environmental Manager Superintendent
Tidy and make good work areas	Long term effects arising from the development of the project.	<p>All stockpiles resulting from the concrete batching works will be removed from site.</p> <p>The access tracks width will be reduced to approximately 7 metres. Topsoil will be spread over exposed batters and vegetation will be reinstated.</p> <p>The reinstatement works will be undertaken as soon as practical after the completion of earthworks.</p> <p>Cleared/excavated areas to be stabilised/rehabilitated promptly and where possible enhance the natural value of these areas.</p> <p>Temporary or permanent measures will be implemented either to help with the revegetation process or to provide additional protection against erosion. On steep slopes erosion control matting will</p>	TBC	Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
		be used to provide interim protection until the vegetation cover is fully established.		
Decommissioning and reinstatement of site	Long term impacts from degraded soil and vegetation conditions leading to exacerbated erosion and cycle of deterioration	A site decommissioning plan to be prepared to ensure all sites are remediated and rehabilitated to original condition (or better) post-removal of project elements.	Within 6 months of commencement of operation	Environmental Manager Superintendent

Construction Noise and Vibration

Table 14 Construction Noise and Vibration

Objective	Avoid and/or minimise noise and vibration emissions.
Legislation / Policy	<i>Environmental Protection Act 1993</i> <i>Environment Protection Regulations 2009</i> <i>Environment Protection (Commercial and Industrial Noise) Policy 2023</i> <i>AS2436 – 1981 “Guide to Noise Control on Construction, Maintenance and Demolition Sites”</i> <i>“Air & Water Quality Guideline – Concrete batching” (EPA 427/16 March 2016)</i> <i>Australian Standard AS 1055–1997 Acoustics – Description and measurement of environmental noise</i> <i>Guidelines for separation distances (EPA) 2007</i> <i>Local Nuisance and Litter Control Act, 2016</i>
Permits/Approvals	EPA licensing (concrete batching plant)

Table 15 Construction Noise and Vibration Mitigation and Controls

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Site establishment and set up, Topsoil stripping and vegetation removal, Operation, Tidy and make good work areas	Noise and vibration from construction activities may impact on nearby sensitive receptors including residential dwellings and/or wildlife.	<p>A Construction Noise and Vibration Management Plan will be prepared prior to construction commencing.</p> <p>The finalisation of site locations shall accord with EPA separation distances and any Conditions of Approval in relation to any sensitive receptors, including nearby wildlife.</p> <p>Site perimeter fencing may need to be established for the work area and include a noise and vibration barrier.</p> <p>Throughout construction activities the Contractor will be required to observe all obligations under the Environment Protection Act 1993 and Section 6 of AS2436 – 1981 “Guide to Noise Control on Construction, Maintenance and Demolition Sites”.</p>	TBC	Environmental Manager Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
		<p>Activities to be undertaken must be compliant with requirements of Environment Protection (Commercial and Industrial Noise) Policy 2023.</p> <p>Plant and equipment used are to be properly maintained and have noise limitation equipment installed as per manufacturer's specification.</p> <p>Plant and equipment used on site to be stood down when not required.</p> <p>Construction to occur only during the hours specified in the Development Approval.</p> <p>Works carried out outside of the hours will only entail:</p> <ul style="list-style-type: none"> • works that do not cause noise emissions which exceed the noise limits of the Policy at any nearby dwelling not associated with the project; or • the delivery of materials as requested by Police or other authorities for safety reasons; or • emergency work to avoid the loss of lives, property, and/or to prevent environmental harm; or • works with the prior consent of the Environment Protection Authority (EPA) (an example might be occasional concrete pours on hot days). <p>Nearby residents/stakeholders will be notified of construction activities.</p> <p>Noise monitoring/inspections to be undertaken as prescribed in the Construction Noise and Vibration Management Plan.</p> <p>Noise monitoring undertaken if required upon receipt of a complaint.</p> <p>To monitor potential vibration impacts from construction works on nearby structures, dilapidation surveys may be required.</p>		

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Construction traffic movement	Haul traffic may cause noise and vibration nuisance or damage to residential and sensitive receptors traveling to and from the site	<p>A Construction Traffic Management Plan will be established prior to construction commencing.</p> <p>Appropriate routes for light and heavy construction vehicles selected to minimise disturbance prior to commencement of construction works.</p> <p>Construction traffic must use agreed haul roads to travel to and from site. Approved areas for parking will be identified.</p> <p>All vehicles and equipment will be operated and maintained to comply with regulatory standards in order to control noise emissions.</p> <p>Best practice in regard to construction traffic in residential areas.</p>	TBC	Environmental Manager Superintendent

Air Quality Control

Table 16 Air Quality Control

Objective	Avoid and/or minimise air quality impacts during construction works.
Legislation / Policy	<p>Environmental Protection Act 1993</p> <p>Environment Protection Regulations 2009</p> <p>Environment Protection (Air Quality) Policy 1994</p> <p>Guidelines for separation distances (EPA) 2007</p> <p>"Air & Water Quality Guideline – Concrete batching" (EPA 427/16 March 2016)</p> <p>Local Nuisance and Litter Control Act, 2016</p>
Permits/Approvals	EPA licensing (e.g. a concrete batching plant)

Table 17 Air Quality Mitigation and Controls

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
<p>Site establishment and set up,</p> <p>Topsoil stripping and vegetation removal,</p> <p>Water provision and management,</p> <p>Aggregate storage and stockpiles,</p> <p>Temporary storage of chemicals, spoil and equipment,</p> <p>Concrete mixing,</p> <p>Tidy and make good work areas</p>	<p>Dust from construction impacting surrounding environment including residential areas, water bodies and wildlife.</p> <p>Odour from construction works impacting amenity of surrounding area.</p>	<p>An Air Quality Management Plan will be provided as a supplement to the CEMP. This will demonstrate that all reasonable and practicable measures to minimise air quality impacts from the operations have been made.</p> <p>The selection of site locations should as a minimum, accord with EPA separation distances to any sensitive receptors including nearby wildlife.</p> <p>The design of sites should consider provision of natural or artificial wind barriers such as trees, fences and landforms. Prevailing wind direction should be considered to minimise the effects of wind erosion.</p> <p>Dust controls to be implemented during construction including management of stockpiles (height, orientation etc.) and the use of suppressants including water spraying as required.</p>	TBC	<p>Environmental Manager</p> <p>Superintendent</p>

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
		<p>Aggregate stored on site in stockpiles should be contained within three-sided storage bunkers with windshields that project 0.5 metre above the bunker wall. Drive-over in-ground aggregate storage bins should be shielded on at least two sides. Concrete batching sides to 0.5 metre high for the full length and width of the bin. Where overhead aggregate storage bins are not totally enclosed, aggregate should not be loaded within 0.5 metre of the top of the walls.</p> <p>If conveyors are used, they must be designed and constructed to prevent fugitive dust emissions e.g. covering the conveyor, installing side protection, equipping them with spill trays, including belt cleaning devices.</p> <p>Mixer loading areas, weigh bins and hoppers (if used) should be designed to reduce fugitive dust.</p> <p>Sweeping of floors, as necessary and after spills, should be considered to prevent dust build-up.</p> <p>Water should not be used in the process of cleaning up spills except where the area drains to a wastewater collection point, where washing down would be preferable to generating dust by sweeping.</p> <p>Works that are likely to generate dust will cease when dry or windy conditions are conducive to the release of dust should dust suppression strategies be rendered ineffective.</p> <p>Air Quality monitoring undertaken if required upon receipt of a complaint.</p> <p>Stockpiles covered or watered down.</p> <p>Develop and follow a fire prevention plan.</p>		

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Construction traffic movement	<p>Exhaust fumes from construction and haulage to and from site impacting surrounding environment including residential areas and wildlife.</p> <p>Fugitive dust from transported loads or haul routes.</p>	<p>A Construction Traffic Management Plan will be prepared prior to construction commencing which will identify the haul route.</p> <p>Travel impacts within the site should be reduced by appropriate site layout and design.</p> <p>Hard-surface where necessary roadways and any other areas where there is a regular movement of vehicles. Where roads are temporary consider:</p> <ul style="list-style-type: none"> • armouring (a thin layer of high-quality pavement material is placed on the pavement surface) • chemical suppressant products • regular light watering. <p>All vehicles and equipment will be operated and maintained to comply with regulatory standards for exhaust emissions.</p> <p>Construction site roads watered down.</p> <p>Spray with water and/or cover pavement materials and aggregates before transporting.</p> <p>Any loads of dust generating or odorous materials entering or leaving site to be covered.</p>	TBC	Superintendent
Storage of raw materials	Release of unsuitable substances to the air	<p>Bunkers shall be established on site prior to operation. The prevailing wind direction to be taken into account to ensure bunkers are orientated to minimise the effects of the wind.</p> <p>All stockpiles of raw materials to be located within storage bunkers/bays. Materials stored to a height less than two thirds of the height of the bunker wall.</p>	Detailed design phase	Design Engineer Superintendent
Handling of raw materials	Release of unsuitable substances to the air	Batching plant hopper to be fitted with a 3-sided, roofed cover to minimise generation of windborne material.	Detailed design phase	Design Engineer Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Storage of raw materials	Release of unsuitable substances to the air	All storage silos to be fitted with an appropriately sized fabric filter incorporating an effective fabric-cleaning device to prevent emissions from the displacement of air whilst filling.	Detailed design phase	Design Engineer Superintendent
Designate storage areas	Materials stored in inappropriate locations leading to contamination of stormwater	Designate temporary storage areas within approved layout plans.	Prior to construction	Superintendent
Control of Dust	Release of unsuitable substances to the air	Dust mitigation measures (including management of vehicle traffic areas, fitting of sprinklers, use of tarpaulins, use of fabric filters at cement storage silo).	During design, construction, operation and decommissioning	Superintendent
Control of Dust	Release of unsuitable substances to the air	Sprinklers to be installed on storage bunkers/bays and utilised as required to keep material damp to avoid wind erosion and dispersion.	During design, construction and operation	Superintendent
Control of Dust	Release of unsuitable substances to the air and the environment	All storage silos to be fitted with a high level visible and audible alarm, completes with a test circuit, to guard against overfilling and fitted with an automatic delivery shutdown.	During design, construction and operation	Superintendent

Materials, Fuels and Waste Management

Table 18 Materials, Fuels and Waste Management

Objective	Avoid and/or minimise impacts associated with the release of hazardous substances or materials. Avoid and/or minimise waste generation during the construction works and concrete batching plant operation.
Legislation / Policy	<i>Environment Protection Act 1993</i> <i>Environment Protection Regulations 2009</i> <i>Dangerous Substances Act 1979</i> <i>Dangerous Substances Regulations 2002.</i> <i>Controlled Substances Act, 1984</i> <i>Landscape South Australia Act 2019</i> <i>Environment Protection (Waste to Resources) Policy 2010</i> <i>EPA Guidelines for Stockpile Management – Waste and Waste Derived Fill</i> <i>EPA Guidelines for Bunding and Spill Management</i> <i>EPA Current criteria for the classification of waste - including Industrial and Commercial Waste (Listed) and Waste Soil</i> <i>“Air & Water Quality Guideline – Concrete batching” (EPA 427/16 March 2016)</i> <i>Local Nuisance and Litter Control Act, 2016</i>
Permits/Approvals	Waste Transporter’s licence (Environment Protection Act 1993 and Environment Protection Regulations 2009.) EPA licensing (e.g. a concrete batching plant)

Table 19 Materials, Fuels and Waste Management Mitigation and Control

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Management of waste	Release of unsuitable substances to the terrestrial environment	Prior to construction commencing, a Waste and Wastewater Management plan will be prepared as a supplement to the CEMP. Each site shall have a clear system/process to collect, treat and re-use wastewater (including contaminated stormwater) and to suitably manage used materials (e.g. bad batches, putrescible, packaging etc.). This system/process must address how waste and wastewater not suitable for re-use or treatment will be handled and/or its disposal off-site.	During design, construction and operation.	Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Define containment details of all ponds and pits	Release of unsuitable substances to the terrestrial environment	Provide detail of linings and volumes of all ponds and washout pits	Prior to construction	Design Engineer
Storage of materials (of granular or liquid form) within defined, appropriately bunded areas	Release of unsuitable substances to the terrestrial environment	All materials/substances likely to degrade water (e.g. fuel, concrete admixtures etc.) must be stored within a bunded areas(s), suitably sealed and sized (to at least 120% of the volume of the largest container within the bund), designed and constructed to prevent the escape of material into surface or underground water resources (refer EPA's <i>Bunding and Spill Management Guidelines</i>)	Detailed design phase	Design Engineer Superintendent
Site establishment and set up, Water provision and management, Aggregate storage and stockpiles, Temporary storage of chemicals, spoil and equipment, Concrete mixing, Construction traffic movement, Tidy and make good work areas	Contamination of the environment with hazardous substances and/or materials.	<p>Prior to construction commencing, a Materials, Fuels and Site Waste Management Plan will be established which will identify the materials and storage requirements for all chemicals used on site or transported to site.</p> <p>All hazardous chemicals and dangerous goods used or stored at the subject site during construction will be stored in accordance with the Dangerous Substances Act and the EPA Guidelines.</p> <p>Material Safety Data Sheets for all relevant materials used or stored on site, regardless of quantity, for the construction works shall be kept on site by the Contractor.</p> <p>Spill kits will be located on site to be used in the event that there is an incident and appropriate personnel will be trained in the use of this equipment.</p> <p>Storage of materials should not be in areas at risk of inundation.</p> <p>All hazardous chemicals and dangerous goods should be stored away from any drainage channels and stormwater drains.</p> <p>Decanting/pumping of hazardous substances and materials to occur in bunded area, where possible.</p> <p>Spills cleaned up immediately (spill kit).</p> <p>Emergency procedures in the event of a spill should be documented.</p>	TBC	Environmental Manager Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Site establishment and set up, Topsoil stripping and vegetation removal, Aggregate storage and stockpiles, Concrete mixing, Construction traffic movement Tidy and make good work areas	Waste generated during construction impacting upon the environment. Waste generated during construction inappropriately disposed of offsite and impacting the environment.	Prior to construction commencing, a Materials, Fuels and Site Waste Management Plan will be established which will identify the type and amount of waste to be generated during construction and procedures for the storage, reuse, recycling and/or appropriate disposal of waste. Contaminated soil and/or groundwater disposed of appropriately, if required. Management of waste in accordance with all statutory and licensing requirements. Any food waste should be contained and removed from site regularly to prevent attracting pest species. Implement to reduce waste: <ul style="list-style-type: none"> • Re-use of materials and waste concrete wherever possible in accordance with legislative requirements. • Adequate waste separation repositories. • All waste generated during construction separated at source and taken to an appropriately licenced waste disposal facility if not able to be re-used on site. • No burning or waste burial on site. • Management of litter and site debris. 	TBC	Environmental Manager Superintendent

Protection of Sites of Cultural and Natural Heritage Significance

Table 20 Protection of Sites of Cultural and Natural Heritage Significance

Objective	Manage the works to prevent or minimise impacts to sites or artefacts of Indigenous or European heritage.
Legislation / Policy	<i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Aboriginal Heritage Act 1988 (amended 2016)</i> <i>Heritage Places Act 1993</i> <i>The Burra Charter (1979) amended 2013</i>
Permits/Approvals	Authority to disturb an Aboriginal site or object (Section 23 Aboriginal Heritage Act 1988). Permit to disturb European archaeology (Section 27 Heritage Places Act 1993)

Table 21 Protection of Sites of Cultural and Natural Heritage Significance Mitigation and Controls

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Site avoidance	Potential delays to construction where archaeology is identified and approvals to disturb are required.	Prior to layout finalisation, a qualified archaeologist to undertake a survey of the project area. The results of this survey are to be considered as part of the micro-siting process and avoided where possible. If avoidance is not possible, then a permit to disturb must be obtained prior to any on-ground works.	TBC	Environmental Manager Superintendent
Site establishment and set up, Topsoil stripping and vegetation removal, Tidy and make good work areas	Damage to sites or artefacts of indigenous or European heritage or to their setting.	An Archaeological and Cultural Heritage Management Plan will be provided as part of the final CEMP. Sites will be located in accordance with the approved plans. Should any archaeological occurrences be located during the course of the works the contractor and the Principal must follow the site discovery procedures (included at the end of this document). This includes a requirement to report such an occurrence to Heritage SA (Heritage Places Act) or the appropriate Aboriginal organisations and AARD in accordance with the Aboriginal Heritage Act. All work that may negatively impact on the sites integrity is to cease until it has been assessed by	TBC	Environmental Manager Superintendent

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
		<p>an appropriately qualified professional and with representation from the recognised Aboriginal stakeholders (where relevant).</p> <p>Avoid damaging or altering any features relating to ruins or dry-stone walls.</p>		
Construction traffic movement	Damage to sites or artefacts of indigenous or European heritage or to their setting	<p>A Construction Traffic Management Plan will be established prior to construction commencing.</p> <p>When selecting appropriate routes for light and heavy construction vehicles these should consider heritage features located along haul routes.</p> <p>Construction traffic must use agreed haul roads to travel to and from site. Approved areas for parking will be identified which are located away from heritage features.</p>	TBC	Environmental Manager Superintendent

Temporary Concrete Batching Plants (CBP)

Purpose:

Provide additional and specific requirements for plants to ensure that any temporary CBPs are established in a manner that prevents impacts on the environment and community.

Location:

Four sites have been nominated for the location of temporary batching plants:

- The wind construction compound – adjacent Substation North;
- The wind construction compound – adjacent Substation South;
- The wind construction compound – located centrally within the project boundary;
- The overhead line construction compound – near to the mid-point of the OTL.

The locations have been selected to avoid vegetation clearance, sensitive receivers (dwellings and water courses) and ensure a minimum separation from drainage lines of 50m. Any change to these locations may require an application to vary the Planning Consent.

Plant details:

- Each plant will be sized to accommodate a complete foundation pour each day, which comprises approximately 500m³ of concrete.
- The plant will occupy an area of approximately 100m by 100m, including the stockpile area for aggregate, sand and cement.
- The plant will be removed from the site upon completion of the construction works. The site of the plant will be remediated to its original condition upon removal.

Each plant will include the following components:

- Trailer mounted concrete mixer
- Cement bins
- Sand and aggregate stockpiles
- Storage container for equipment and tools
- Power from diesel generators or local power if available
- Water for concrete manufacturing (potable) and dust suppression (to be sourced from commercial water sources)

The key activities associated with the temporary CBP include (but are not limited to):

- Site establishment and set up,
- Topsoil stripping and vegetation removal,
- Water provision and management,
- Aggregated storage and stockpiles,
- Temporary storage of chemicals, spoil and equipment,
- Concrete mixing,
- Construction traffic movement,
- Decommissioning and rehabilitation of each site.

Table 22 **Temporary Batching Plant Sites**

Objective	Avoid/minimise impacts on the community and the environment.
Legislation / Policy	<i>Environment Protection Act 1993</i> <i>Environment Protection Regulations 2009</i> <i>"Air & Water Quality Guideline – Concrete batching"</i> (EPA 427/16 March 2016) <i>Environment Protection (Water Quality) Policy 2003</i> <i>Landscape South Australia Act 2019</i> <i>Stormwater Pollution Prevention, Code of Practice for the Building and Construction Industry</i> <i>Local Nuisance and Litter Control Act, 2016</i>
Permits/Approvals	Earthworks drainage authorisation (section 7(6) of Schedule 1 of the Environment Protection Act 1993.) EPA licensing (for concrete batching plant)

Table 23 Site Specific Requirements for Temporary Batching Plants

Key Tasks	Potential impact	Control / Action	Inspection / Criteria/ Target / Evidence	Responsibility
Obtain EPA licence, Prepare Site Specific CEMPs	In breach of law	Plant is not to operate without approval. Preparation of a specific CEMP for Temporary Batching Plants, based on this Draft project wide CEMP.	EPA Licence	Superintendent
Site Establishment	Inappropriate siting leading to water quality impacts	Sites to be established in accordance with concept plans and location/layout plans (Planning, Development and Infrastructure Act Planning Consent approval). Sites are not to be established within 50m of a water course - refer NatureMaps water course layer: http://spatialwebapps.environment.sa.gov.au/naturemaps/?locale=en-us&viewer=naturemaps .	TBC	Superintendent
Prepare Stormwater and Wastewater management plan	Impact to the natural movement of surface and groundwater affecting availability to flora and fauna and local communities and landowners.	Prepare a Water Management Plan in accord with CEMP. Have particular regard to the drainage line identified at the Substation West site. This drainage line may feed the wider regional systems, and must be protected.	TBC	Environmental Manager Superintendent
Site preparation, site set up, on-going management to align with this CEMP	Impact on air, soil and water quality as wind may disperse materials that are not adequately protected	Prepare an Air Quality Management plan in accord with CEMP.	TBC	Environmental Manager Superintendent

Appendix A: Site Discovery Procedure

Heritage Stop Work Procedure

Please contact IHC archaeologists on 0451 364 567 if you need specialist heritage advice in identifying any unexpected finds.

Have you found archaeological materials? Artefacts, skeletal remains or foundations?

STOP WORK

Do not disturb/remove or touch the site, object or skeletal remains. It is an offence to disturb or interfere with Aboriginal heritage or skeletal remains (SA Aboriginal Heritage Act 1988) or to disturb archaeological remains (SA Heritage Places Act 1993)

Make sure the site is secure - identify any immediate threats to heritage e.g. construction activities, vandalism

Do not proceed with any works (or move or touch objects) until advice has been sought from archaeologists.

Notify Site Supervisor Immediately.

- Site supervisor/environmental manager to notify client representative
- Site supervisor/environmental manager to notify project archaeologist

Archaeologist confirms

Aboriginal Heritage

European Heritage

Site Management

Requirements under Aboriginal Heritage Act 1988

Contact SAPOL

Contact relevant Aboriginal group

Contact DPC-AAR

Site management requirements

Requirements under Heritage Places Act

Contact Heritage SA

Site management requirements

Work resumes

Site manager to advice when works can resume

The decision to resume works is made in consultation with the archaeologists, Heritage SA and/or Aboriginal representatives. There may be conditions that need to be followed in order to work to resume.