Appendix A Updated project description

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Appendix A Updated project description

A.1 Proposal summary table

The key features of the Proposal are summarised in Table 1 below. The component specifications are subject to change. Where required, upper limit quantities and power level estimates are provided to ensure the assessment and any subsequent approval maintains the flexibility required in the detailed design in the Engineering Procurement and Construction (EPC) stage.

Table 1 Modified project summary table

Proposal element	Description
Proposal	Beryl Solar Farm.
Proponent	Banpu Energy Australia
Capacity	Approximately 87MW (AC).
Proposal site area	Approximately 332ha.
Development footprint area	Approximately 153 ha
Local Government	Mid-Western Regional Council
Subdivision	The subject land comprises two allotments with the legal description of Lot 1 DP 1012926 and Lot 20 DP 1173059, Beryl Road, Beryl.
Solar array	Number of panels: ~950,000 Tracking mount height: 2.7m high
Substation	An onsite substation containing one main transformer and associated switchgear.
Transmission lines	A 66kV transmission line to the adjacent existing Beryl Substation (300m).
Access tracks	Internal access tracks to allow for site maintenance (3900m^2)
Operations and maintenance buildings	Various ancillary works and buildings
Security fencing, lighting, and CCTV	Site perimeter fenced with 2.3m security cyclone fence. CCTV installed to the operation and maintenance building and substation for security purposes. No permanent lighting
Construction hours	Recommended standard hours: Monday to Friday 7 am to 6 pm Saturday 8 am to 1 pm No work on Sundays or public holidays
Construction timing	Construction commenced in August 2018 and the site was demobilized by

Proposal element	Description
	mid-June 2019.
Workforce	Skilled workforce, 150 employees at the peak of construction.
Operation period	30 years
Decommissioning	The project includes decommissioning and removal of above ground infrastructure at the end of its operational life.
Capital investment	Estimated $430 million

Table 2 Summary of affected lots

Lot & DP	Area (approx)	Zone	Min lot size	Comment
Lot 1 DP 1012926	10 ha	RU1 Primary Production	100 ha	Vacant with dwelling entitlement (M271/00)
Lot 20 DP 1173059	290 ha	RU1 Primary Production R5 Large Lot Residential	100 ha 12 ha	100 ha 12 ha Existing dwelling

A.2 Proposal layout

The proposal site and development footprint is consistent with the Submissions Report: Beryl Solar Farm (NGH 2017).

A.3 Infrastructure

The Beryl SF comprises a solar plant with an upper capacity of 87MW that supplies electricity to the national electricity grid. First Solar (Australia) Pty Ltd has developed around 153ha of the 332ha proposal site. As-constructed layout is included in Figure B.

Key infrastructure includes:

- PV modules (solar panels).
- Inverter stations with associated transformer.
- Onsite substation containing one main transformer and associated switchgear.
- 66kV transmission line to the adjacent existing Beryl Substation (300m).
- Underground electrical conduits and cabling to connect the inverters to the onsite substation
- Underground and aboveground (mounted to module structure) DC cabling to connect the modules to the inverter stations.
- An access track off Beryl Road.

- Permanent Site office and maintenance building with associated vehicle parking.
- Internal access tracks to allow for site maintenance.
- Perimeter security fencing up to 2.3m high.
- Native vegetation screening, where required to break up views of infrastructure to specific receivers.

A3.1 Solar arrays

The project will install about 950,000 solar panels on solar - tracking mounting frames, up to 2.7m high above ground level. The solar panels are installed in arrays with rows aligned in north south arrangement. The tracker has an estimated tracking range of 120 degrees, or +/- 60 degrees from the horizontal.

Piles were driven or screwed into the ground in order to support the solar array's mounting system and solar modules. During the piling installation, work was undertaken to avoid disturbing the existing ground cover to minimise ground disturbance and limit the potential for erosion. The panel structures have a height of approximately 3m high when tracked to the extent of their range.

A3.2 Distributed Inverters

Each array connected to an inverter station, each about 2.9m high above ground level.

Inverter stations were installed across the site with each inverter station containing the following equipment:

- Inverter
- Transformer to step the AC voltage up to high voltage for transmission to the substation
- HV switchgear
- Communication and ancillary equipment

A3.3 Transmission network connection

A new overhead transmission line was required to transmit energy generated at the solar plant to the electricity grid. The transmission line was constructed over a length of approximately 300m from the new on-site substation north to the existing TransGrid Beryl Substation. The new line was constructed in a similar manner to the existing on-site transmission lines utilising either timber or concrete poles, cross member, insulators and strung conductor (Figure 3-13).
The transmission line is owned by TransGrid. Consultation between First Solar and TransGrid is ongoing with regards to the detailed planning and construction of the transmission line.

A3.4 Underground cabling

All underground cabling was installed at a depth of at least 500mm with the electrical reticulation buried to either 600mm (low voltage) or 800mm (high voltage) depth, depending on the cables voltage and relevant Australian Standard. Cables were installed across the solar farm site and cross the railway easement in two locations.
Prior to excavating the cable trench, the topsoil was stripped and stockpiled for use in the rehabilitation of the trench following the cable installation.
As the majority of the cabling was direct buried, depending on the quality of the excavated material, a sand bed may be placed in the trench to create a cable bed. Once the cables are

installed another layer of sand may be installed above the cable prior to the trench being backfilled with excavated material. Cables were mechanically protected in accordance with AS 3000.

A3.5 Substation

A new smaller substation was located near the existing TransGrid Beryl Substation in the north west of the site. Power generated in the solar plant is transformed in the substation to grid voltage, 66kV. A 66kV transmission line which then connects the substation to the existing TransGrid Beryl Substation.

The final substation features an elevated busbar, switch room, a lightning protection system, circuit breakers, disconnectors, current transformers, voltage transformers, and a 66kV transformer. The substation was constructed on prepared bench of compacted material, approximately 30m x 30m, and surrounded by security fencing with gravel placed around the equipment and fence to restrict vegetation growth and provide a safe working environment in accordance with Australian Standards. The existing Beryl Substation is roughly 2 times bigger than the current substation onsite.
Connection to the existing substation required civil and electrical works, including site excavation and construction of footings for the infrastructure. This infrastructure includes a 66k line bay, primary electrical equipment including control, and protection equipment, communications equipment, and any additional infrastructure required for the connection

A3.6 Ancillary infrastructure

Figure 3-15 Example of an access track formed thorough cropping land Ancillary facilities and construction compound Ancillary facilities located within the site boundary and includes:

- Material laydown areas.
- Temporary construction site offices.
- Temporary car and bus parking areas for construction worker's transportation. Once the plant has been commissioned a small car park will remain for the minimal operational/maintenance staff required and occasional visitors.
- Staff amenities. Once constructed, the solar farm will be monitored and operated remotely and will therefore require a minimum number of maintenance personnel (1-3 full time equivalent staff) to be onsite.
- CCTV installed to the operation and maintenance building and substation for security purposes.

Temporary staff amenities were designed to accommodate the number of workers at the peak of the construction period (estimated at 150 workers) and include:

- Car parking.
- Sanitary modules with septic tank.
- Water tanks
- Changing rooms.
- Lunch rooms
- Dining hall.
- Administrative offices.
- Covered walkways

- Undercover storage area.
- Muster point in case of emergency.
- Generator, if required.
- Electrical, data and water reticulation.

A3.7 Site access and internal tracks

The entrance to the site is from Beryl Road located next to the existing TransGrid Beryl Substation in the same location as the current farmer access way. The existing access way has been upgraded. The intersection with Beryl Road was upgraded to the appropriate standard to accommodate the increased traffic flows that which occured during construction and delivery vehicles. The location and form of the main access road intersection with Beryl Road will provide adequate sightlines (approximately 350m) for vehicles entering and exiting the site. The final intersection design was completed with input from Council, this being a Council administered road.

Internal solar farm access tracks were required to access the modules and inverter stations onsite for maintenance. These are be around 6m wide and constructed of compacted but unsealed gravel. The access road and all internal tracks are maintained throughout the construction and operation of the solar farm. The track crosses the railway line in two locations. When required, water trucks were used to suppress dust on unsealed access tracks during construction.

Stabilising techniques and/or environmentally acceptable dust palliatives were utilised when wetting down of surfaces proved to be ineffective.

A3.8 Security and fencing

The perimeter of the site was fenced with a 2.3m high security fence. It is expected to be cyclone fencing with a strands of barbed wire located within the top 450mm. The fence was designed to ensure adequate access and egress points are provided during both the construction phase and ongoing operational life of the project.

Some sections of the fenced perimeter was targeted for landscaping treatment. This entailed 1-2 rows of native species planted to break up views of the infrastructure from specific receivers. Species selection considered the impact of shading on the array.

A.4 Operation

A4.1 Activities during operation

Operational activities include, although not limited to:

- Routine visual inspections, general maintenance, and cleaning operations of the solar arrays, if required.
- Routine visual inspections, general maintenance, and cleaning operations of the substation.
- Vegetation management (which may include controlled grazing, utilising sheep). Ground cover vegetation is maintained beneath panels to reduce erosion and weed infestation. A monitoring program addresses any bare areas that develop. Management includes the use when necessary of seeding or armouring (i.e. jute mesh) to avoid erosion.
- Site security response (24hr) if a security event occurs.
- Replacement of equipment and infrastructure, as required.

- Pest and vermin control.

A4.2 Water requirements

The BSF has minimal water requirements that have been satisfied by the purchasing of portable water and use of existing dams onsite for dust suppression during construction. Water can be sourced from a council standpipe if the onsite dam water diminishes. During operation, rainwater is collected onsite and water can be purchased.

A4.3 Transport and access

The Beryl SF is bounded by three roads, including Beryl Road to the north, Spring Ridge Road along the southwestern boundary and Perseverance Lane along the southern boundary. Access to Beryl SF is from the sealed Beryl Road, adjacent to the existing Beryl Substation. Spring Ridge Road and Perseverance Lane are unsealed and is not used to access the Beryl SF.

A4.4 Personnel and work hours

Daily operations and maintenance by site staff is undertaken during standard working hours of:

- Monday – Friday 7am to 6pm
- Saturday 8am to 1pm

Outside of emergencies or major asset inspection or maintenance programs, night works or works on Sundays or public holidays will be minimised. During summer months, the solar farm may continue to produce electricity after 6pm and prior to 7am while the days are longer. In the case that the panels installed are on tracker units, the solar farm will potentially operate outside standard working hours during summer months.
There is no permanently lit night lighting installed within the array but lighting may be included in each inverter station for maintenance purposes. There has also been maintenance lighting installed at the substation that is only used in case of emergency, and security lighting at the operation and maintenance building. All lighting was designed to reduce disturbance to neighbouring properties and is utilised only when there are staff on site or during emergency situations.

A4.5 Lighting and CCTV

There is no permanently lit night lighting installed within the array but lighting may be included in each inverter station for maintenance purposes. There is maintenance lighting installed at the substation that is only used in case of emergency, and security lighting at the operation and maintenance building. All lighting has been designed to reduce disturbance to neighbouring properties and is utilised only when there are staff on site or during emergency situations.

A.5 Decommissioning and rehabilitation

During decommissioning, all above ground infrastructure was removed to a depth of 500mm. Key elements of proposal decommissioning would include:

- The solar arrays would be removed, including the foundation posts. Materials would be sorted and packaged for removal from the site for recycling or reuse. Much of the solar array panels would be recyclable.

- All site amenities and equipment would be removed and materials recycled or reused, wherever possible.
- Posts and cabling installed within 500mm of the surface would be removed and recycled, equipment below this depth would be left in situ.
- Fencing would be removed including small concrete footings.

Above ground concrete slabs for the onsite buildings, inverter stations and substation would be left in place where there is no impact to the agricultural viability of the land.

All areas of soil disturbed during decommissioning would be rehabilitated with the aim of meeting the existing (pre-construction) land capability.

Traffic required for decommissioning would be similar in type but of shorter duration than that required for the construction phase.

Appendix B Updated Landscape Management Plan GHD 2022

Beryl Solar Farm

Landscaping Management Plan

FS NSW Project No 1 AT Pty Limited as Trustee for FS NSW Project No 1 Asset Trust

18 January 2022

→ **The Power of Commitment**

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Abbreviations

Abbreviation	Full term
BSF	Beryl Solar Farm
DPIE	Department of Planning, Infrastructure and Environment
GHD	GHD Pty Ltd
LP	Landscaping Plan
MWRC	Mid Western Regional Council
OEH	Office of Environment and Heritage
PCT	Plant Community Type
SSD	State Significant Development

1. Introduction

1.1 Purpose of this report

This report has been prepared to support an application to modify the State Significant Development (SSD) 8183 (Modification Application) for the Beryl Solar Farm. The modification is to extend the timeframe allocated to mitigate visual impacts through establishing and maintaining a mature vegetation buffer around the site.

Geolyse Pty Ltd (Geolyse) prepared a Landscaping Plan (LP) (Geolyse 2018) to address Conditions 10 and 11 of SSD 8183:

Visual Impact Mitigation Measures

10. The Applicant must establish and maintain a mature vegetation buffer around the site at the locations outlined in Appendix 1 Note 1, to the satisfaction of the Secretary. These measures must:

- *a. be planted prior to commencement of operations Note 2;*
- *b. consist of vegetation species that facilitate the best possible outcome in terms of visual screening;*
- *c. be effective at screening views of the solar panels and ancillary infrastructure on site from surrounding residences within 3 years of the commencement of construction Note 3; and*
- *d. be properly maintained and kept free of weeds.*

Landscaping Plan

11. Prior to the commencement of construction, the Applicant must prepare a detailed Landscaping Plan for the planting within the vegetation buffer in consultation with OEH and Council, to the satisfaction of the Secretary. The plan must:

- *e. include a description of measures that would be implemented to ensure that the vegetated buffer achieves the objectives of Schedule 3 condition 10 (b) – (d) of this consent:*
- *f. include a program to monitor and report on the effectiveness of these measures; and*
- *g. include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions.*

As construction commenced in 2018, the date to achieve this requirement was 7 August 2021. While additional actions to improve the effectiveness of screening are being investigated and implemented, this condition has not yet been achieved.

The modification is requesting that condition 10c be updated to state:

*Be effective at screening views of the solar panels and ancillary infrastructure on site from surrounding residences within **6 years** of commencement of construction.*

It is anticipated that, depending on species selected, the site conditions at the time of and following planting and the more intensive monitoring and maintenance proposed in this plan, the landscape plantings may be effective in screening views of the solar farm by August 2024.

This updated LP is based on Geolyse 2018 and describes the methods required to mitigate visual impact through establishing and maintaining a vegetation buffer around the site, captures recommendations from the first two years of monitoring the landscape plantings and includes the proposed modified condition to allow an additional three years to achieve screening of views from surrounding residences.

1.2 Approved project

The Beryl Solar Farm (BSF) was granted development consent on 5 December 2017 (SSD 8183). The approved General Layout is shown in Figure 1.1. The management structure of the BSF is:

– Owner – Banpu Energy
– Operation and maintenance contractor – First Solar Australia Ltd
– Asset manager – Blueshore

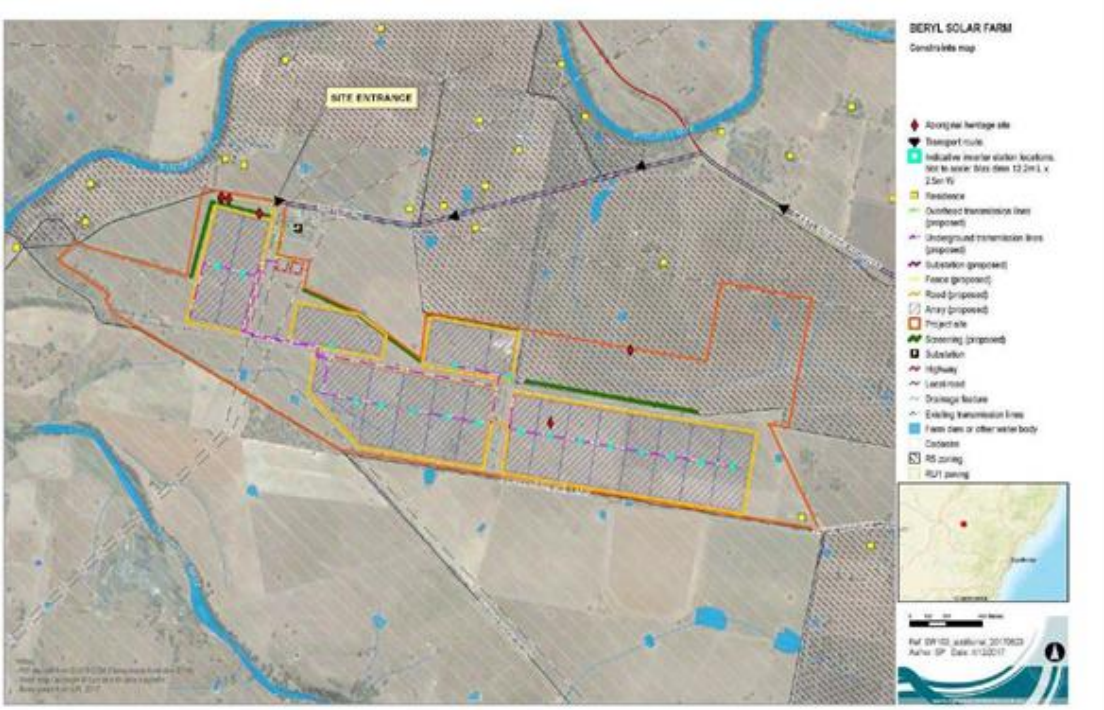

Figure 1.1 Approved layout

Source: Development Consent SSD 8183

1.3 Landscape plan consultation

SSD 8183 Condition 11 states the LP must be prepared in consultation with Department of Planning Infrastructure and the Environment (DPIE) and Mid Western Regional Council (MWRC), and to the satisfaction of the Secretary of the DPIE (or nominee).

Initial consultation was undertaken with DPIE and MWRC as part of preparation of Geolyse 2018.

Consultation undertaken as part of preparation of this updated LP has included:

– MWRC and affected landholders – undertaken by NGH environmental

1.4 Disclaimer

This report has been prepared by GHD for FS NSW Project No 1 AT Pty Limited as Trustee for FS NSW Project No 1 Asset Trust and may only be used and relied on by FS NSW Project No 1 AT Pty Limited as Trustee for FS NSW Project No 1 Asset Trust for the purpose agreed between GHD and FS NSW Project No 1 AT Pty Limited as Trustee for FS NSW Project No 1 Asset Trust as set out in section 1.1 of this report.

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The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) 1.5 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

1.5 Assumptions

GHD Pty Ltd (GHD) have prepared this LP based on Geolyse 2018 to update it with:

– Details of the modification
– Proposed monitoring program
– Recommendations from GHD landscape monitoring reports
– Consultation undertaken as part of the modification

GHD have relied on information provided by Blueshore and NGH environmental in preparing the LP which has not been independently verified.

2. Planting composition

2.1 Species criteria

The composition of species to be planted to establish the vegetative buffer were determined through several criteria including requirements of the SSD 8183 and commitments (Mitigation Measures) made by the Proponent in the *Environmental Impact Statement* (ngh, April 2017) and *Submissions Report* (ngh, July 2017) assessment documentation.

Consent Condition

The vegetative buffer must:

– Consist of vegetation species that will facilitate the best possible outcome in terms of visual screening (Condition 10b)
– Be effective at screening views of the solar panels and ancillary infrastructure on site fromsurrounding residences within six years of the commencement of construction (Condition 10c)

Mitigation Measure

As specified in ngh environmental July 2017:

The aim of the screening is to soften the visual impact of the solar farm. A continuous, dense 'hedge' effect that blocks all views is not considered sympathetic with the existing landscape character. Native species, planted 1-2 rows deep in specific locations are intended to provide a resilient landscape treatment that would be maintained for the life of the project; all dead trees would be replaced.

Further, the *Submission Report* notes:

Where possible, landscape plantings will be comprised of local indigenous species with the objective of increasing the diversity of the existing vegetation.

2.2 Species selection

Table 2.1 provides a list of tree and shrub species that will be used to establish the vegetative screen.

These species are part of the Plant Community Type (PCT 281) Rough-Barked Apple Red Gum YellowBox woodland on alluvial clay to loam soils on valley flats in the NSW South Western Slopes and Brigalow Belt South Bioregions identified in the locality.

The species selected are relatively fast growing and thus likely to provide screening within three years. In using a selection of these species:

– Shrubs will provide screening (the *Acacia* should reach 3 meters within the next three years).
– Vegetative screening will be comprised of species representative of the communities endemic to the locality.
– Screening will comprise species that offer a diversity of growth characteristics (such as density and height at maturity) to avoid a continuous dense 'hedge' effect.

The species list has been revised from the original published in Geolyse 2018 based on a review conducted by GHD ecologists in August 2021. This review compared the species list in Geolyse 2018 with the Landcare Native Species Revegetation Guide for the MWRC area and information on the preferred growing conditions (soil types) for listed species. Species that were not listed in the revegetation guide (which GHD acknowledge is not an exhaustive list) or preferred soil conditions that were not present on site e.g. sandy/rocky soils, were removed from the list. The revised species list is presented in Table 2.1. The original species list is provided in Appendix C.

Table 2.1 Landscape species

Scientific Name	Common Name	MaximumHeight (m)	Minimum Spacing (m)
Overstorey Species			
Eucalyptus floribunda	Rough-barked apple	30	6
Eucalyptus blakelyi	Blakely's Red Gum	20	6
Eucalyptus melliodora	Yellow Box	30	6
Callitris endlicheri	Black Cypress Pine	20	2-3
Callitris glaucophylla	White Cypress Pine	20	2-3
Midstorey Species			
Acacia decora	Western Silver Wattle	4	1
Acacia implexa	Hickory Wattle	12	2-3
Acacia leiocalyx	Black Wattle	6	1-2
Acacia pennivervis var. pennivervis	Mountain Hickory	8	2-3
Bursaria spinosa subsp. spinosa	Blackthorn	10	2-3
Cassinia quinquefaria	Wild Rosemary	3	1-2
Exocarpos cupressiformis	Cherry Ballart	8	2-3
Geijera parviflora	Wilga	10	2-3

Note: Where possible tube stock of local provenance that is genetically adapted to the local environment will be sourced. If a particular species is not available at the time of planting a close approximate species will be chosen in replacement.

3. Planting locations

3.1 Screen planting locations

SSD 8183 specified the location and extent of the landscape plantings. The location of these is identified in the Approved Layout (refer Figure 1.1). Appendix A provides the Solar Farm Layout with the location of these screenings on a scaled drawing for clear identification.

The screen plantings have been planted in four areas and collectively will provide for 3.035 km of vegetative screening.

Table 3.1 Planting locations

Screen Planting Area	Screen Planting Length (m)	Location
1	825	Inside the solar farm security fence, around the north west corner of the solar farm.
2	735	Inside the solar farm security fence, along the northern side of the solar farm
3	505	Inside the solar farm security fence, along the northern side of the solar farm
4	970	Outside the solar farm security fence, along the northern side of the solar farm at the eastern end.

3.2 Spacing density

The screening comprises two rows of plantings with variable densities designed, over time, to break up the view of the BSF infrastructure rather than hide it totally behind a 'hedge' screening. During the planning approvals process it was determined that a 'hedge' effect was not desirable in terms of landscape amenity values and that relatively sparse plantings designed to break up views of infrastructure is the desired outcome.

The rows are a minimum of 2 m between centres and 1.5 m from any fence. A mix of trees and shrubs have been spaced to accommodate for the requisite individual species spacing to permit healthy growth and avoid a planting density that would, over time, establish a hedge effect.

An indicative layout demonstrating this planting layout is provided in Figure 3.1 below.

Figure 3.1 Indicative planting configuration

4. Preparation and planting

The following section outlines methods for preparation and planting of landscape screens. All works should be undertaken by a competent vegetation management contractor with sufficient experience in similar types of works.

4.1 Weed control

Targeted weed control throughout the entire solar farm (including vegetation screens) should occur to reduce the density of weed species and reduce competition for resources for native species. Targeted chemical and manual weed control should occur within the vegetation screens prior to replanting to minimise plant death due to competition or incidental death due to being sprayed. The herbaceous exotic species should be treated using a selective spray for broadleaf weeds to avoid killing native grasses. Follow-up targeted weed control should occur at least every three months to suppress regrowth.

Weeds are to be slashed as required to reduce water and sunlight competition for the new plantings. Tree guards will be installed around all new plantings to protect saplings from herbivory and allow for ease of slashing around plantings. Jute matting (or similar) should be used within tree guards to assist with minimising growth of weeds.

4.2 Bed preparation

In areas with little to no success in the initial rounds of planting, ripping of the soil to a minimum depth of 500 mm can be undertaken. This will allow for greater root penetration and reducing the energy output required for root growth. This will increase the seedling growth rate and will enable greater access to water and nutrients. Care must be taken to not disturb the roots of successful plantings.

Following up the deep rip with mounding will concentrate the topsoil, thus increasing the nutrient and soil water holding capacity. The increase in topsoil depth will also contribute to easier establishment of seedling roots in the aerated soil.

4.3 Planting

Supplementary planting to replace the dead plants is required across BSF. New seedlings should be planted as soon as more favourable growing conditions allow, to reduce the age gap of the plants within the screen.

Plants to be planted are tubestock native species as per the list in section 2.2. Plants selected should be a size that can adapt to the changed growing conditions and will not be overly shadowed by the tree guards.

Planting should occur in spring and autumn to avoid unfavourable conditions such as high temperatures and low rainfall. If hot days occur during planting, plants that have not been planted yet must be left in the shade, to avoid heat absorption through the pot. Plants should be watered with cold water on the root zone only as wet leaves may facilitate scorching. Planting should occur during the early morning or late evening.

The planting would occur preferably before or after sustained rainfall to allow for adequate soil moisture. Manual watering would need to occur where rainfall is not sufficient to meet plant needs. Replanted trees will be watered if rainfall recorded on site measures less than the following over a three week period:

– 25 mm from one rainfall event
– 10 to 15 mm in two rainfall events

Native formulated slow-release fertiliser will be applied to each plant at the time of planting. This will provide nutrients for an average of 9 months. All plants will be watered in at the time of planting with at least 2 litres of water per plant.

Plants will be protected with UV stabilised tree guards to create a microclimate around the immature plant, increasing the growth rate. Protection during their first two seasons of growth will be critical to their long-term success rate. Guards will also protect from climatic extremes, browsing pests and potential spray drift from follow up weed control.

4.4 Fencing

Vegetation screen fencing is to be maintained to reduce plant mortality due to livestock grazing.

5. Monitoring

5.1 Overview

While the vegetative screening must be maintained for the life of the BSF, the scope and frequency of maintenance activities should diminish over time as the landscape planting fulfills its objective of effectively screening views of the solar farm. Appropriate species selection, bed preparation, planting technique and suitable early maintenance during the plantings establishment phase will reduce longer term maintenance requirements.

5.2 Initial six years

The modified development consent proposes that the landscaping be effective at screening views of the solar panels and ancillary infrastructure on site from surrounding residences within six years of the commencement of construction. To ensure optimum survival and facilitate healthy growth, the plantings will be maintained for six years as detailed below.

5.2.1 Scheduled inspections

Regular scheduled inspections will be undertaken to assess watering, plant health/mortality and weeding requirements.

The vegetation management contractor will conduct monthly inspections, reviewing the vegetative screening using the checklist provided in Appendix B. BSF's environmental consultant will review the monthly inspection findings and conduct follow up inspections where required.

The environmental consultant will conduct annual inspections of the vegetative screening including:

– Planting mortality rates
– Tree guard integrity
– Soil moisture levels
– Plant health and growth rates

Photographs will be taken at established photo points during each maintenance inspections to record growth rates and screening effectiveness.

5.2.2 Corrective actions

Following on from maintenance inspections the following corrective actions will be implemented:

– Mortalities greater than 10% or gaps greater than 5 meters will be replaced within the next three years.
– Noxious weeds will be spot sprayed or dependent on the weed and extent of infestation, chipped, pulled or slashed.
– Damaged tree guards will be replaced.
– Supplementary watering will be applied where required.

5.3 Ongoing

Following the intense maintenance undertaken during the next three years, monitoring of the vegetative screen would be undertaken annually and be restricted to weed control, mortality and replacement, and general check on vegetation health.

For the life of the BSF all screen planting mortalities would be replaced.

6. Reporting

SSD 8183 Condition 11(b) states the LP must include a program to report on the effectiveness of the landscaping measures.

6.1 Internal reporting

Each of the maintenance inspections (as detailed in Section 5) will be documented. Documentation will include observations and findings, along with recommendations for any specific maintenance tasks required, including timeframes for when these tasks need to be completed.

These records form a key component of this LP and will be held to ensure (and demonstrate) measures specified in this LP are implemented and that the landscape plantings are effective in meeting their visual mitigation objective.

6.2 External reporting

Annual evaluation reports will be prepared and submitted to DPIE throughout the next two years of monitoring. These evaluation reports will:

– Assess the health and growth of the landscape plantings.
– Assess anticipated compliance against the six year performance objective of breaking up views of the BSF infrastructure.
– Identify the need for (and detail of) any targeted strategy for rectification.

6.3 As-built verification

A Mitigation Measure that forms part of the development consent is to address the ‘as-built’ visual impacts of the BSF. Specifically:

A post construction audit would be undertaken to assess the effectiveness of the screening layout with reference to the final constructed infrastructure and augment the former as required.

Involvement of the most affected landowners (relevant to medium impact view locations). This may include increased onsite planting density in specific locations suggested by the landowners (for example, where the proposed solar farm would be visible from outdoor recreational areas).

Verification of predicted and actual impacts. This would improve the reliability of the measures and provide a trigger to undertake additional mitigation if required.

Pursuant to the above an ‘as-built’ visual impact verification will be undertaken six years after construction commencement (i.e. August 2024). This process will include consultation with the four landowners identified in the Environmental Impact Statement (ngh, 2017) as having ‘medium impact view locations’.

The outcomes of this ‘as-built’ verification will validate the effectiveness of visual mitigation measures achieved through the implementation of this LP.

7. Roles and responsibilities

Roles and responsibilities for implementing the LP and maintaining vegetative screens to achieve screening of views of the BSF are outlined in Table 7.1.

Table 7.1 Roles and responsibilities

Organisation	Role	Responsibility
Banpu Energy	Owner	Implementing the LP. Approving expenditure for replacing mortalities, weed control, watering.
Blueshore	Asset manager	Coordinating various contractors assisting with LP implementation at BSF.
First Solar	Operation and maintenance contractor	Manage the Vegetation management contractor to undertake all the required scope.
Armidale Tree Group	Vegetation management contractor	Conducting monthly maintenance inspections using the checklist in Appendix B. Maintaining the vegetative screens including watering, weed control, replanting, replacing tree guards.
GHD	Environmental consultant	Reviewing findings of monthly maintenance inspections. Conducting annual maintenance inspections of the BSF vegetative screens. Conducting ad hoc maintenance inspections where the monthly inspections identify issues. Reporting on findings of annual inspections.

8. Timeframes

Vegetation screening were planted prior to commencement of operations as required by SSD 8183 Schedule 3 Condition 10a. The proposed modification to SSD 8183 requires that the plantings be effective at screening views of the solar panels and ancillary infrastructure on site from surrounding residences within six years of the commencement of construction (Schedule 3 Condition 10d).

The ability to meet the six year target requires additional plantings to be undertaken as soon conditions are favourable: noting that seasonal conditions and the associated windows of opportunity for planting must be acknowledged.

The screen would be maintained for the operational life of the solar farm.

Table 8.1 Milestone timeframes

Timeframe	Commitment
August 2018	Construction start
May 2019	Original plantings
2019/20 (first year after planting)	Four scheduled inspections by environmental consultant Six (6) monthly evaluation reports submitted to DPIE
2020/21	Three scheduled inspections by environmental consultant Six (6) monthly evaluation reports submitted to DPIE
2021/22	Three scheduled inspections by environmental consultant Monthly scheduled inspections by vegetation management consultant
As soon as seasonal conditions permit, from March 2022 onwards	Undertake additional plantings
2022/23	Annual inspection by environmental consultant Monthly scheduled inspections by vegetation management consultant Annual evaluation reports submitted to DPIE
2023/24	One annual inspection by environmental consultant Monthly scheduled inspections by vegetation management consultant Annual evaluation reports submitted to DPIE
August 2024	'As-built' verification to assess effectiveness of screening of BSF infrastructure
Ongoing for life of farm	Annual inspection by vegetation management contractor or equivalent

9. References

ISO 14001:2015(E) Environmental management systems – requirements with guidance for use

DIPNR (2004) Guidelines for the Preparation of Environmental Management Plans

Geolyse (2018) Beryl Solar Farm Landscaping Plan

Mid Western Regional Council (2014) Development Control Plan 2013

nghenvironmental (2017) Beryl Solar Farm – Submissions Report

nghenvironmental (2017) Beryl Solar Farm – Environmental Impact Statement

ghd.com

The Power of Commitment

Appendix C Statutory compliance

Relevant statute	Modified project compliance
Environment Protection and Biodiversity Conservation Act 1999	Yes
Native Title Act 1993	Yes
Renewable Energy (Electricity) Act 2000	Yes
Environmental Planning & Assessment Act 1979	Yes
Roads Act 1993	Yes
Protection of the Environmental Operations Act 1997	Yes
Biodiversity Conservation Act 2016	Yes
Biosecurity Act 2015	Yes
Mining Act 1992	Yes
Crown Lands Act 2016	Yes
Waste Avoidance and Resource Recovery Act 2001	Yes
National Parks and Wildlife Act 1974	Yes
Fisheries Management Act 1994	Yes
Heritage Act 1977	Yes
Rural Fires Act 1997	Yes
Water Management Act 2000	Yes
Planning Systems SEPP - which repeals and replaces the State and Regional Development SEPP	Yes
Transport and Infrastructure SEPP - which repeals and replaces the Infrastructure SEPP	Yes
Primary Production SEPP - which repeals and replaces the Primary Production and Rural Development SEPP)	Yes
Resilience and Hazards SEPP - which repeals and replaces the Hazardous and Offensive Development SEPP; and - repeals and replaces the Remediation of Land SEPP	Yes
Biodiversity and Conservation SEPP - which repeals and replaces the Koala Habitat Protection SEPP 2020 and 2021	Yes

Appendix D Community engagement

D.1 Community engagement strategy

D.2 Stakeholder letter

COMMUNICATIONS AND ENGAGEMENT STRATEGY

Beryl Solar Farm Modification

August 2021

Project Number: 21-498

NSW • ACT • QLD • VIC
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DOCUMENT VERIFICATION

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Project Number:	21-498
Project File Name:	21-498 Beryl Solar Farm Modification Comm Engage Strategy

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Draft V1.0	26/08/21	B Smith	Brooke Marshall, Sarah Dale	B Marshall
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ACRONYMS AND ABBREVIATIONS

DPIE	Department of Planning, Industry and Environment (NSW)
km	kilometres
LEP	Local Environment Plan
LGA	Local Government Area
MWRC	Mid-Western Regional Council
NSW	New South Wales
SSD	State Significant Development

1. PURPOSE

This Communications and Engagement Strategy supports the planning and delivery of a modification in the consenting and operational arrangements for the Beryl Solar Farm. It builds on the consultation and communications activities delivered in the past to support the planning and delivery of the Solar Farm and it supports the ongoing delivery of local benefits to and strong partnerships with the Beryl community.

2. ENGAGEMENT APPROACH

2.1. Principles

Best practice engagement involves the community and stakeholders in all decision-making stages of a Proposal. The community plays a role from Proposal conception, through the assessment process and on to Proposal development. Effective community consultation has three important functions:

Facilitate deeper understanding of potential issues and decisions required for the Proposal.
Enhance the quality of decisions made for the Proposal.
Allow people to contribute to decisions that affect their lives.

Effective community consultation includes three important community engagement principles:

- Openness – to build trust, understanding and local ownership.
- Inclusiveness - consultation should be diverse and representative, not responding only to the most vocal stakeholders.
- Effective communication – requires tools appropriate to the task to build trust between parties.
- A communication plan – clearly defining the Proposal to:
  - Inform: one-way communication to deliver information about the Proposal.
  - Consult: two-way communication to seek input into the Proposal.
  - Collaborate and involve and seek participation in elements of the Proposal design and implementation.
- Early rather than late communication - to maximise engagement opportunities.
- Accountability – monitoring and evaluation to ensure consultation aims are being achieved.

IAP2 Spectrum of Public Participation

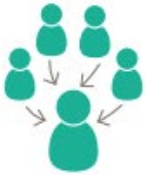
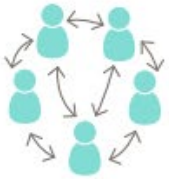
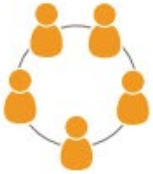
	Inform	Consult	Involve	Collaborate	Empower
					
Public Participation Goal	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
Promise To The Public	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.
Example Techniques	• Fact sheets • Web sites • Open houses	• Public comment • Focus groups • Surveys • Public meetings	• Workshops • Deliberative polling	• Citizen advisory committees • Consensus-building • Participatory decision-making	• Citizen juries • Ballots • Delegated decision

Figure 1-1 IAP2 Engagement Spectrum.

2.2. Objectives

This Engagement Strategy (ES) has been developed for the Beryl Solar Farm modification.

The strategy aims to achieve the objectives outlined below.

Table 2-1: Engagement objectives

Functional objectives	Emotive objectives
Facilitate targeted consultation with the five targeted residents and Mid-Western Regional Council (MWRC).	Build trust by demonstrating an ability to meet previous commitments.
Gain consent from landholders for landscaping works on their properties.	Develop strong ongoing relationships with the Council and targeted landholders.
	Support the renewable energy industry through demonstrating collaboration and commitment to reducing impacts.

2.3. Relevant Guidelines

This CSES has been prepared considering the following guidelines and references:

- *Undertaking Engagement Guidelines for State Significant Projects (2021),* NSW Department of Industry, Planning and Environment.
- *Large-Scale Solar Energy Guideline for State Significant Development 2018,* NSW Department of Industry, Planning and Environment.

3. SITUATIONAL CONTEXT

3.1. Beryl Solar Farm location and components

The Beryl Solar Farm is an 87 MW facility located approximately five kilometres west of Gulgong, NSW. Beryl is a small rural locality, accessed from the Castlereagh Highway in the Mid-Western Regional Local Government Area (LGA).

The Mid-Western Regional LGA is located in eastern NSW approximately 300km from Sydney. Nearby towns in the area include Gulgong (6km), Mudgee (45km), Rylstone (94km) and Kandos (115km). The Castlereagh Highway is an important regional transport corridor near to the site.

The 332-hectare site for the Beryl Solar Farm is situated on Beryl Road and was selected based on its excellent solar resource, proximity to existing electrical infrastructure (avoiding the need to build new transmission lines), and low impact to existing land use and infrastructure.

The site location is in a low population area and the project layout has been designed to minimise impact to the local community – the site displays predominantly clear flat land that is ideally positioned as most of the site is set back from sign posted roads.

The Beryl Solar Farm is located on the edge of a rural residential area, in an area of moderate scenic quality and in proximity (<1km) of some residences. 31 residences were identified within 1 km, including 5 rural residential locations, and 69 residences were counted within 5km, including 2 urban and 6 rural residential locations.

The Beryl Solar Farm consists of 44,175 Piles 8,835 Exosun Trackers and 309,000 PV modules. The project has a 15-year PPA with Sydney Metro and is used to meet operational electricity needs of the Sydney Metro Northwest rail link.

The 309,000 advanced solar modules on the Beryl Solar Farm produce energy to run approximately 28,000 average NSW homes, displacing more than 183,000 metric tons of carbon dioxide emissions per year.

Figure 2-1 Beryl Solar Farm post construction (courtesy of Tranex Solar)

3.2. Solar farm components

The key infrastructure in the farm includes:

- PV 309,000 modules (solar panels).
- Single Axis horizontal tracking (likely) or fixed mounting frames.
- 22-40 inverter stations with associated transformer.
- An onsite substation containing one main transformer and associated switchgear.
- A 66kV transmission line to the adjacent existing Beryl Substation (300m).
- Modifications of existing Beryl Substation, including civil and electrical works.
- Underground electrical conduits and cabling to connect the inverters to the onsite substation
- Underground and aboveground (mounted to module structure) DC cabling to connect the modules to the inverter stations.
- An access track off Beryl Road.
- Permanent Site office and maintenance building with associated vehicle parking.
- Internal access tracks to allow for site maintenance.
- Perimeter security fencing up to 2.3m high.
- Native vegetation screening, in specified locations to break up views of infrastructure for specific residences.

3.3. Relevant project milestones

Community consultation undertaken to inform the assessment and design of the solar farm was completed in 2016 to inform the lodgement of the EIS in April 2017. The consented Beryl Solar Farm, approved on 5 December 2017, commenced construction on 7 August 2018, and was operational as of 27 June 2019.

3.3.1. Relevant development specifications

Within the consent for the project was a requirement for vegetation screening to be established in agreed areas and for that screening to be effective within three years of construction commencement. This requirement demonstrated a commitment to reduce the visual impacts noted as concerns during the EIS consultation.

Schedule 3 Condition 10 requires that:

The applicant must establish and maintain a mature vegetation buffer around the site at the locations outlined in Appendix 1 of the Development Consent, to the satisfaction of the Secretary.

Schedule 3 Condition 10(c) of the Development Consent requires that these measures must:

Be effective at screening views of the solar panels and ancillary infrastructure on site from surrounding residences within 3 years of commencement of construction.

3.3.2. Vegetation screen challenges and modification requirements

In 2020, secretary discretion/concurrence was sought to amend one of the consent conditions relating to cultivation of vegetative screening.

The Beryl Solar Farm EIS included a landscape management strategy that identified proposed landscaping planting locations (Attachment B) and growth timeframes for wattles of a period of 2-3 years. This approach aimed to fulfill the requirement for the landscaping to be effective at screening the solar panels and ancillary infrastructure on site from surrounding residences within 3 years of the commencement of construction.

Drought conditions reduced growth rates and increased mortality rates of the plants and to meet the intention of Schedule 3 Condition 10 (c), more plants were planted to address the higher mortality rate, however the slow growth expected under these conditions makes the 3-year time frame problematic.

An extension of 2 years was requested during which time we commit to undertaking more extensive monitoring, watering and replacement as required to ensure the best result in these unprecedented conditions.

This request was accompanied by targeted consultation (in February 2020) with the landowners in the properties that had a screening requirement identified through the EIS (see properties 17, 18, 19, 20 and lot 59 DP755434). Generally, the landowners of each of the aforementioned residences did not express any concerns with the proposed extension to the timeframe in which landscaping would be established.

This request was declined to allow more time for vegetation establishment and growth. However, based on recent advice from the Department of Planning, Infrastructure and Environment DPIE, Beryl Solar Farm are now seeking a Modification Application to address Condition 10(c), regarding establishment of effective visual screening. DPIE have verbally suggested the following be considered:

- Modification (1A), under the EP&A Act, given the impacts are minor (see below)
- Update the Landscape Management Plan
- Updated community consultation, including with Council and broader community.
- Early engagement with involved landowners (as consent to lodge will be required)

It is noted that DPIE advised that the targeted engagement activities that occurred in February 2020 were inadequate, and a broader communications effort should be applied to meet the wider community interest in the project, in parallel with targeted conversations with the directly affected landholders.

4. CONSULTATION HISTORY

4.1. Historical consultation to inform the Beryl Solar Farm EIS

First Solar undertook consultation, guided by the ARENA document *Establishing the social licence to operate large scale solar facilities in Australia*, from the early planning stages of the project and plan to continue consultation during development and operation of the project, to ensure the local community is informed about the proposal.

A Community Consultation Plan (CCP) was developed for the proposal. The aim of the CCP was to identify methods to inform the community about the Beryl Solar Farm and facilitate engagement with the community throughout all stages of the project. The CCP identified:

- Community stakeholders for the proposal.
- Issues / risks related to the engagement of each stakeholder group.
- A consultation strategy for each stakeholder group.
- A set of activities against the proposal development timeline to facilitate consultation.

The following community consultation was undertaken leading up the lodgement of the EIS on 12 April 2017.

- Direct engagement with nearby neighbours through face-to-face meetings on 7 November 2016.
- Mail out to all residents within 2km of the proposal site, notifying them of the proposal on 8 December 2016.
- Project update, including Open day information and feedback form mailed out to adjacent neighbours, near neighbours (residents of Beryl locality), local businesses, special interest groups and the Gulgong Chamber of Commerce 6th February.
- Power point slide advertising the open day provided to Gulgong Post office for inclusion in their digital notice board 10th February.
- Flyer provided to local business for inclusion on notice board at the pub in the main street 10th February.
- Advertisement in Mudgee Guardian outlining proposal, receipt of SEARs and open day details on the 14thand 21st of February 2017.
- Community Open Day held by First Solar at the CWA Hall on 23rd February 2017 between 2pm and 6pm.
- Direct engagement with nearby neighbours through face-to-face meetings on 23rd February 2017.
- Advertisement in the Gulgong Gossip March edition setting out contact details and website for the project.
- Direct engagement with nearby neighbours through face-to-face meetings on 21st and 22nd March 2017.
- Continued dialogue with local community through numerous telephone discussion throughout the exhibition period.
- Development of a project website to provide information and updates (http://www.firstsolar.com/Resources/Projects/Beryl%20Solar%20Farm)
- Establishment of dedicated email address for feedback (berylsolarfarm@firstsolar.com).

First Solar's consultation register contained more than 150 entries with representation from over 45 residents and engagement continued well beyond the scoping and exhibition period.

Following some concerns referred by constituents, Council had requested that community consultation was maintained on an ongoing basis and throughout each phase of the project with all stakeholders, particularly those community members within close proximity to the proposed site that have raised concerns.

4.2. EIS exhibition

The Beryl Solar Farm EIS was on public exhibition from 26 April 2017 to 25 May 2017. Printed copies of the EIS were available at the following locations during the exhibition period:

- Mid - Western Regional Council, 86 Market Street, Mudgee
- Department of Planning and Environment, 320 Pitt Street, Sydney
- Nature Conservation Council, 14/338 Pitt Street, Sydney

Electronic copies of the EIS were also available online at the Major Projects section of the DPE website. A letter from First Solar was sent to local residents within 2km of the site (dated the 28 of March 17), providing notification of the EIS submission and informed local residents that the EIS would be on exhibition via the DPE website within the coming month. DPE also mailed all the adjoining residents directly to notify them of the EIS submission and exhibition period and placed advertisements in the local and regional papers announcing the exhibition period.

DPE received a total of 40 submissions during the exhibition period. 29 submissions were received from individual members of the public and nine submissions were received from government agencies. No submissions were received from special interest groups.

In summary, the following issues were raised:

- Socioeconomic and community impacts; 30
- Noise; 25
- Visual amenity; 21
- Traffic; 12
- Health and Safety; 4
- Land use and air quality impacts; 6
- Water use and water quality; 5
- Heritage; 8
- Biodiversity; 3
- Proposal and legislative requirements; 18
- Solar farms; 2.

4.3. Visual impact assessment

A visual impact assessment was completed through the EIS that informed the proposal design, including screening locations to reduce the impact on residential properties. The highest predicted impacts were identified for five rural residential viewpoints, one agricultural viewpoint and one remnant viewpoint. These viewpoints would later be labelled as 17, 18, 19, 20 and Lot 59 DP755434 (see Figure 3-1).

All are located in the foreground proximity; within 1km of the proposed solar farm site. In all cases, these locations have expansive views of the proposed infrastructure and, while the landscapes can absorb some change and the contrast is considered acceptable, some further screening would be effective in further 'breaking up' views of the infrastructure.

In all cases, the contrast of the proposed infrastructure is considered acceptable, but mitigation was recommended specifically aiming to address impacts from these locations. The screening locations are shown in Figure 3-2.

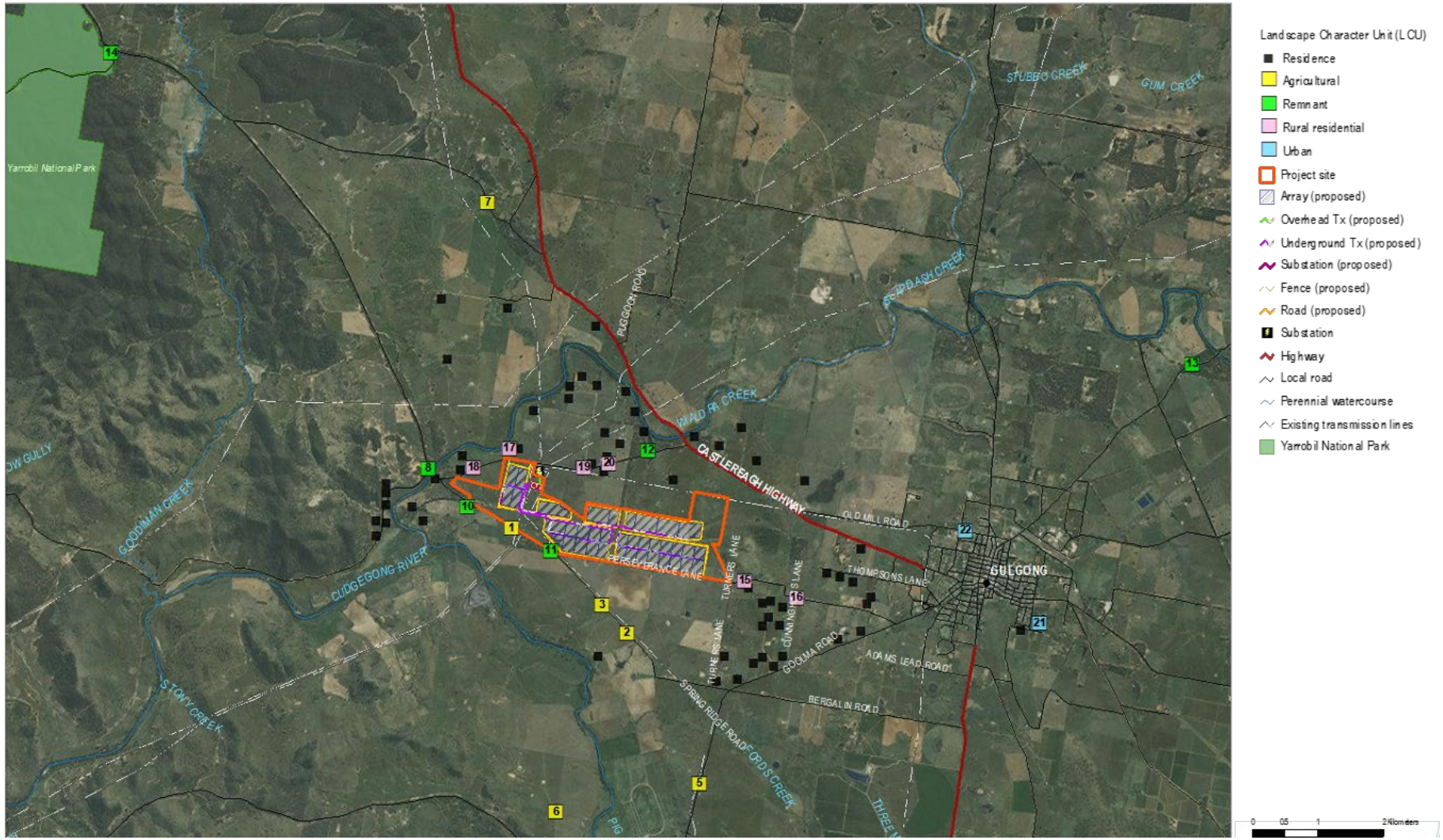


Figure 3-1: Solar Farm layout in relation to nearby residences

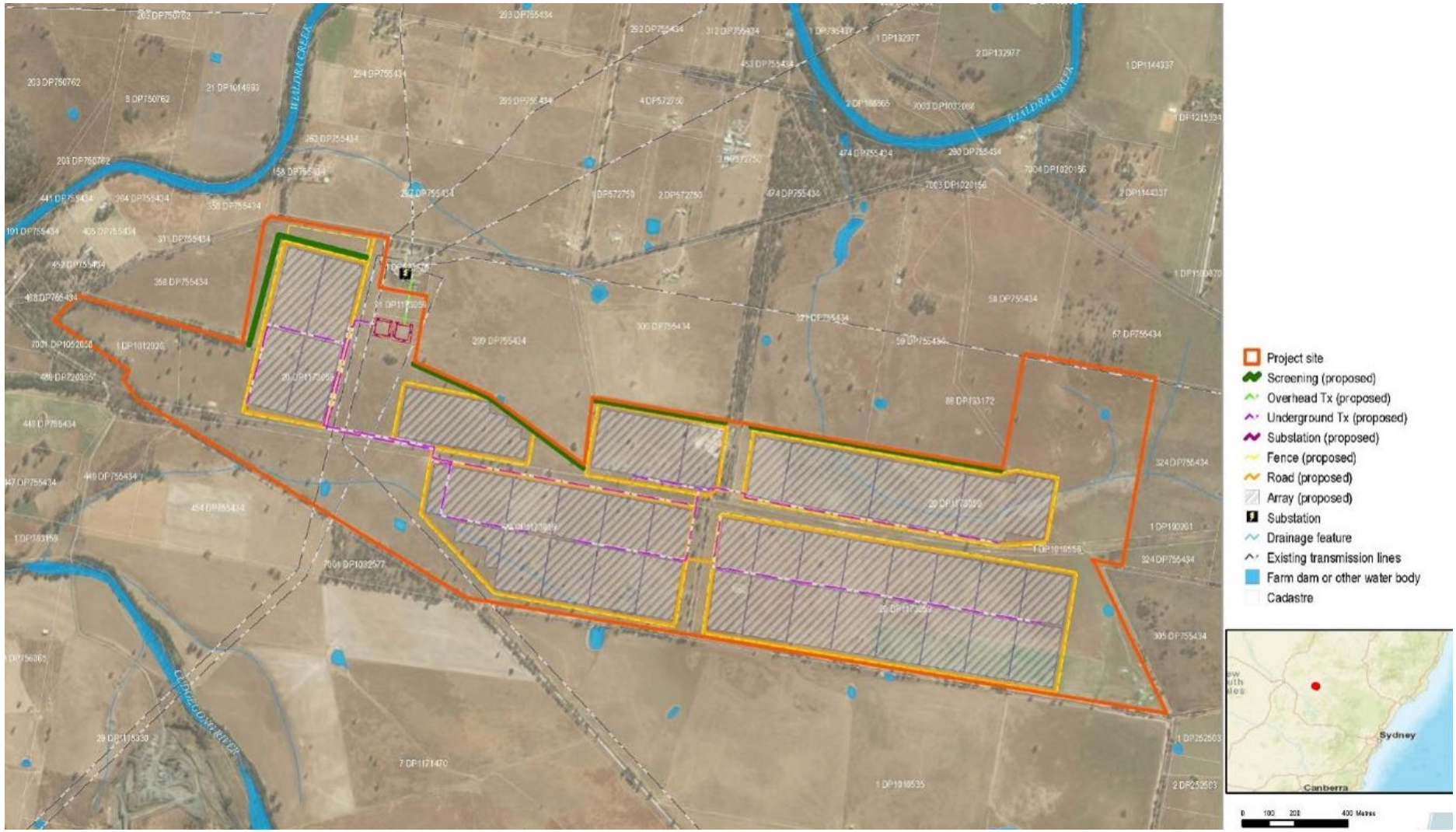


Figure 3-2: Map outlining recommended screening areas in the EIS

4.4. Previous consultation on landscaping delivery extension

In addition to consultation undertaken with DPIE, consultation was undertaken with surrounding landowners. Residences located at viewpoints 17, 18, 19, 20 and Lot 59 DP755434 were identified as having the potential to be affected by the proposed change to Schedule 3 Condition 10 (c).

Generally, the landowners of each of the aforementioned residences did not express any concerns with the proposed extension to the timeframe in which landscaping would be established. One landowner noted that although he understood the reasoning for the request, is disappointed a permanent water source wasn't secured prior to planting.

Most landowners requested that any unsuccessful landscaping that the proponent had paid to have established on their properties be replaced in conjunction with the solar farm landscape planting program, should they also experience higher than anticipated mortality. None of the landowners requested any form of short-term visual impact mitigation while planting is being established (such as shade cloth screens / barriers).

5. STAKEHOLDER BREAKDOWN AND APPROACH

Targeted communications is proposed to inform the relevant stakeholders of the landscaping works and the rationale for this change.

Stakeholders	Interests	Engagement approach
Targeted residents requiring screening for visual impact mitigation	• Update and progress of the landscaping works • Challenges and rationale for changes • Demonstration of ability to deliver the agreed mitigation • Replanting of vegetation on their land (if relevant) • Working through details and consent for the required works	• Direct phone calls, letters (if required) and online meetings
TransGrid and Midwestern Council	• Solar Farm operation status • Changes or activities related to their land • Interests of and engagement with their constituents • Requirements for consent to complete the works	• Direct phone calls, letters and online meetings

6. MESSAGES, COMMUNICATIONS TOOLS AND IMAGERY

6.1. Key messages

The following massages are proposed to be used to explain the situation and outline the required activities.

Table 6-1: Key messages by topic

Topic	Messages
Solar Farm status	The Beryl Solar Farm continues to provide clean energy to the national energy grid and support a transition to reduced reliance on fossil fuels. It is one 16 large-scale solar farms currently operating in NSW. The 309,000 advanced solar modules on the Beryl Solar Farm produce energy to run approximately 28,000 average NSW homes, displacing more than 183,000 metric tons of carbon dioxide emissions.
Vegetation screening background and challenges	The Solar Farm was commissioned in 2019 and at that time plantings were completed to create a vegetation screen aimed at reducing visual impacts for nearby residences. The intention was for these shrubs and trees to provide an effective screen within 3 years. Due to drought conditions in previous years, the vegetation suffered, plants were lost, and the desired screening has not been achieved. So, we are reviewing our species selection, completing new plantings, and doing associated landscaping to ensure the vegetation can mature and remain health over the longer term. We have requested an extension of time from the NSW Government to deliver an adequate and sustainable screen. We will work closely with our neighbours to meet our commitments and to coordinate the required landscaping works.

Topic	Messages
The landscaping works	Location and timing of works to be confirmed.

6.2. Communications tools

Based on the coverage required, the following communications tools need to be developed:

- A 2-page full colour project update for distribution to nearby residents, sharing with stakeholders and placing on an agreed website
- Targeted letters, including formal consent letters.

6.3. Imagery requirements

The following items are required to enable development of the communications tools:

- A high-quality photo of the solar farm in operation
- A photo of a local staff member.
- Photos of the vegetation screening
- A diagram or aerial photo showing where the screening is
- Any relevant diagrams demonstrating access arrangements for the landscape works (if this is significant)
- Photos of the species of trees and plants that will be used in the new plantings.

7. COMMUNICATIONS ACTION PLAN

7.1. Preparation steps:

- Finalise the strategy.
- Draft the communications materials – a Project Update, agreed formal letters.
- Review the stakeholder lists and address any gaps.
- Print any required materials (costs not included in NGH quote).

7.2. Delivery steps

Based on the targeted nature of the works, the engagement activities will focus on those directly involved or impacted, the Council as a strategic partner and community representative body, and TransGrid. The proposed engagement steps are outlined below.

Table 7-1 Communications and engagement actions

Stakeholders	Timing	Consultation activity	Purpose
MWRC and TransGrid	Late September	Project team to contact Council and TransGrid regarding the proposed activities on their land as part of the modification works.	• Provide status update, outline rationale and gain consent for next steps. • Inform Council on engagement with their constituents including approach and coverage. This may include identifying council owned communication channels

Stakeholders	Timing	Consultation activity	Purpose
			to share the project information on.
5 affected landholders	Early 2022	Call and send letters/email to provide an update for the 5 impacted residents (with specific mitigation requirements). This would build on the discussions held in early 2020. This includes seeking consent to proceed with replacing agreed plants on their properties where relevant and capturing any current issues that need to be resolved. This may also include negotiating any additional private land works / compensation that may assist to address prolonged impacts.	• Provide status update, outline rationale and gain consent for next steps. • Maintain a productive relationship • Maintain trust in the operator.

31 January 2021

[Recipient Name]
[Address]
[TOWN STATE postcode]
[Recipient email address]

Dear Insert name

Re: Beryl Solar Farm Landscaping Works

I write to let you know that in the coming months we will commence additional landscaping works to improve the vegetation screening at the Beryl Solar Farm.

Despite previous efforts, the screening has not met our collective expectations. Due to drought conditions in previous years, the vegetation suffered, plants were lost, and despite more recent plantings and maintenance work, the desired level of screening has not been achieved. In addition to previous replanting's and monitoring, a fresh round of planting was completed in December 2020 and January 2021, but this has not achieved the desired outcome.

In response, we have engaged the Armidale Tree Group (ATG), who have strong experience in this area and will be able to undertake more intensive monitoring (monthly) and maintenance of the screen. We are working with ATG to modify the plant species, adjust the spacing and complete new plantings, to ensure the vegetation grows as quickly as possible and remains healthy over the longer term. The approach is outlined in the revised Landscape Management Plan, which is available for viewing at:

www.banpuenergy.com.au/beryl-solar

As required under the project consent arrangements, we have requested an extension of time from the NSW Government to deliver an effective and sustainable screen. The proposed revised effective date is now August 2024 (based on a three-year extension) but our intention is to ensure it is improved as quickly as possible.

We aim to complete the additional planting in March this year and we will monitor this closely over the coming years to ensure the screen is fully effective. We want to make the most of the current good growing conditions, but we also need to avoid periods of high temperatures and heavy rainfall, as this can impact the ongoing health of the plants.

While we have your attention, I also wanted to let you know that the ownership of the Solar Farm has changed from First Solar to Banpu Energy Australia. Banpu Energy is a newly formed Australian subsidiary of Banpu Public Limited – one of Asia's largest energy companies. In Australia, Banpu is investing in a range of renewable energy and sustainability projects including solar farms, waste coal mine gas repurposing, and digital and energy optimization technologies.

Banpu Energy Australia Pty Ltd
ABN 95 637 226 825

Level 20, 1 Market Street,
Sydney NSW 2000, Australia
T. +61 02 9266 2700
E: info@banpuenergy.com.au
www.banpuenergy.com.au

As the new owner of Beryl Solar Farm, Banpu Energy Australia is committed to supporting the local community and we will be meeting the commitments made by First Solar, including rectifying vegetation screening, and continuing the community contributions established for the life of the project.

In fact, we recently sponsored 4 students from Gulgong and Mudgee schools to participate in the Max Potential Youth Development Program 2022 on behalf of the Beryl Solar Farm. Last year, due to the unprecedented bushfire season, we contributed to the local RFS. We will continue to support community initiatives annually.

Environmental and Social Specialists, NGH are supporting Banpu Energy in notifying community members of the landscaping works. NGH will keep me updated on their discussions and Neeti Muralidharan from Blueshore Energy will act as the main project point of contact in the longer term if you have any concerns.

So, if you have any questions regarding our landscaping works and community commitments, please contact me on 02 9157 8919.

Yours sincerely,

Stijn Koppers
Director, Beryl Solar Farm

FS NSW Project No1 AT
ACN 621 215 969
Level 3, 16 Spring Street
SYDNEY NSW 2000
Ph: +61 2 9002 7700
Fax: +61 2 9241 2129

FS NSW Project No 1 AT Pty Ltd
As trustee for FS NSW Project No 1 Asset Trust
Level 3, 16 Spring Street
Sydney NSW 2000

Dear Sir/Madam,

RE: Confirmation from the landowner

We, Allan Griffiths and Danielle Griffiths
(Full name or Company Name)

Of 3 Beryl Rd, Beryl, NSW 2852 Ph: 0408 604 407
(Postal Address & Phone Number)

being the registered joint owners of land described as

Lot 59 DP755434, 3 Beryl Road, Beryl NSW 2852
(Real Property Description and Address of Subject Land)

hereby confirm the planting of visual screening and fencing around the tree corridor, as required under Development Approval SSD 8183, has been completed to our satisfaction

at the site described above, as required for the Beryl Solar Farm project.

Sign and date: 22.05.2019
(Allan Griffiths)

Witness signature: .....

Witness name: Zac Barrass

Sign and date: 22.05.2019
(Danielle Griffiths)

Witness signature: .....

Witness name: Zac Barrass

Appendix E Updated mitigation measures

No changes are required to the mitigation measures. They are restated in full below, extracted from the Submissions Report: Beryl Solar Farm (prepared July 2017 by NGH for First Solar).

Construction (C), Operation, (O), Decommissioning (D)

Safeguards and mitigation measures	C	O	D
• Hollow-bearing trees within the development site would not be cleared between June and January, to avoid the breeding season of hollow-dependant fauna including the Superb Parrot as well as the Large-eared Pit Bat and Corben's Long-eared Bat, which whilst considered unlikely to occur within the site, nevertheless may have some small potential as occurring within the site from time to time. The nominated clearing period above will also help to avoid the core hibernation period for the two bat species. • If clearing outside of this period cannot be achieved, pre-clearing surveys would be undertaken to ensure these species do not occur.	C		
• Preparation of a Flora and Fauna Management Plan (FFMP) that would incorporate protocols for: o Protection of native vegetation to be retained (including EEC) o Best practice removal and disposal of vegetation o Staged removal of hollow-bearing trees and other habitat features such as fallen logs with attendance by an ecologist. Where possible, fallen timber with hollows is to be collected and placed into adjacent suitable habitats outside the development footprint. o The relocation of displaced fauna during clearing o Weed management, particularly noxious weeds o Pathogen management o Unexpected threatened species finds o Rehabilitation/stabilisation of disturbed areas	C		
• Stockpiling materials and equipment and parking vehicles will be avoided within the dripline (extent of foliage cover) of any native tree that originates from outside of the development site. • Prior to the commencement of work, a physical vegetation clearing boundary at the approved clearing limit is to be clearly demarcated and implemented. The delineation of such a boundary may include the use of temporary fencing, flagging tape, parawebbing or similar.	C		D

Safeguards and mitigation measures	C	O	D
• Use non barbed-wire on exterior fencing where possible.		O	
• A groundcover management plan would be developed and implemented to ensure the existing ground cover is maintained beneath the array during operation of the solar farm. The plan would be developed with reference to soil testing. Highly managed grazing may be used to maintain the height of ground cover during operation.		O	
• Where possible, landscape plantings will be comprised of local indigenous species with the objective of increasing the diversity of the existing vegetation. Planting locations would be designed to improve the connectivity between patches in the landscape where consistent with landscaping outcomes.		O	
• Avoid night works as much as possible, and avoid altogether where in close proximity to woodland habitats on adjacent properties.	C		D
• Ensure lights (during nightworks and operation) are directed away from vegetation and adjacent habitats.	C	O	D
• Weed and hygiene protocols will be prepared and implemented.		O	
• Awareness training (fauna collision risks) during site inductions and enforcement of site speed limits.		O	
• Feral species to be monitored and a management plan to be prepared and implemented to reduce feral species abundance.	C	O	
• Implement plan which ensures that fauna movement still possible around perimeter of development site.	C	O	
• A Biodiversity Offset Plan is proposed to be prepared in consultation with OEH to define the final offset area. The Biodiversity Offset Plan will include details regarding the management (and any required monitoring) of the offset area, as required by the BioBanking Assessment Methodology.	C	O	D
• If complete avoidance of the five recorded sites within the proposal area (Beryl Solar Farm IF 1, Beryl Solar Farm IF 2, Beryl Solar Farm IF 3, Beryl Solar Farm IF 4 and Beryl Solar Farm AS 1) is not possible, the artefacts must be salvaged prior to the proposed work commencing and moved to a safe area within the property that will not be subject to any ground	C		

Safeguards and mitigation measures	C	O	D
disturbance.			
• The collection and relocation of the artefacts should be undertaken by an archaeologist with representatives of the registered Aboriginal parties. A new site card/s will need to be completed once the sites are moved to record their new location on the AHIMS database.	C		
• Once the sites Beryl Solar Farm IF 1, Beryl Solar Farm IF 2, Beryl Solar Farm IF 3, Beryl Solar Farm IF 4 and Beryl Solar Farm AS 1 are salvaged, the proposed work can proceed with caution within the development footprint.	C		
• First Solar should prepare an Unexpected Finds Protocol (UFP) to address the potential for finding additional Aboriginal artefacts during the construction of the Solar Farm. The UFP will outline the procedure to deal with construction activity. Preparation of the UFP should be undertaken in consultation with the registered Aboriginal parties	C		
• In the unlikely event that human remains are discovered during the construction, all work must cease in the immediate vicinity. OEH, the local police and the registered Aboriginal parties should be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal.	C		
• Further archaeological assessment would be required if the proposal activity extends beyond the area of the current investigation. This would include consultation with the registered Aboriginal party and may include further field survey.	C	O	D
• First Solar should prepare a Cultural Heritage Management Plan (CHMP) to address the potential for finding additional Aboriginal artefacts during the construction of the Solar Farm and management of known sites and artefacts. The Plan should include the unexpected finds procedure to deal with construction activity. Preparation of the CHMP should be undertaken in consultation with the registered Aboriginal parties.	C		
• If feasible, underground rather than overhead power lines would be considered. • If feasible, co-location of powerlines would be undertaken to minimise the look of additional power poles. If additional poles are required, these would match existing pole design as much as possible.	Design stage		

Safeguards and mitigation measures	C	O	D

• The materials and colour of onsite infrastructure will, where practical, be non-reflective and in keeping with the materials and colouring of existing infrastructure or of a colour that will blend with the landscape. Where practical:
  ○ Buildings will non-reflective and in eucalypt green, beige or muted brown.
  ○ Pole mounts will be non-reflective.
• Security fencing posts and wire would be non-reflective; green or black rather than grey would reduce the industrial character of the fence.			

• Dust would be controlled in response to visual cues. • Parking areas, material stock piles and other construction activities would be located as far as practical from nearby residences or screened (by existing vegetation or constructed screens) for the period of construction. • Areas of soil disturbed by the project would be rehabilitated progressively or immediately post-construction, reducing views of bare soil. • Ground cover would be maintained beneath the panels and within the site boundary, to break up views of the infrastructure from the side and back views. • Night lighting would be minimised to the maximum extent possible (i.e. manually operated safety lighting at main component locations).	C		
A Visual Impact Management Plan would address the 'as built' visual impacts of the proposed solar farm. The plan would include: • Onsite vegetation screening, guided by the proposed screening, provided in Appendix D of the VIA report Appendix F. • Involvement of the most affected landowners (relevant to medium impact view locations). This may include increased onsite planting density in specific locations suggested by the landowners (for example, where the proposed solar farm would be visible from outdoor recreational areas). • Verification of predicted and actual impacts. This would improve the reliability of the measures and provide a trigger to undertake additional mitigation if required. (Guidance regarding these measures is provided in Appendix D of the VIA report Appendix F).		O	

Safeguards and mitigation measures	C	O	D
• Implement noise control measures such as those suggested in Australian Standard 2436-2010 “Guide to Noise Control on Construction, Demolition and Maintenance Sites”, to reduce predicted construction noise levels.	C		
• Preparation of a Construction Noise Management Plan. A draft plan is included in Appendix G.2 of the EIS.	C		
• Additionally, during construction: o Use less noisy plant and equipment, where feasible and reasonable. o Plant and equipment should be properly maintained. o Provide special attention to the use and maintenance of ‘noise control’ or ‘silencing’ kits fitted to machines to ensure they perform as intended. o Strategically position plant on site to reduce the emission of noise to the surrounding neighbourhood and to site personnel. o Avoid any unnecessary noise when carrying out manual operations and when operating plant. o Any equipment not in use for extended periods during construction work should be switched off. • Develop and implement a noise complaint process. Each complaint would be investigated and appropriate noise amelioration measures put in place to mitigate future occurrences, where the noise in question is in excess of allowable limits. Keep people informed of progress. The person selected to liaise with the community should be adequately trained and experienced in such matters.	C		
• The array would be designed to allow sufficient space between panels to establish and maintain ground cover beneath the panels.	Design stage		
• A soil and water management plan (with erosion and sediment control plans) would be prepared, implemented and monitored during the proposal, in accordance with Landcom (2004), to minimise soil (and water) impacts. These plans would include provisions to: o Carry out soil testing prior to any impacts, to inform any soil treatments and provide baseline information for the decommissioning rehabilitation. o Install, monitor and maintain erosion controls.	C		D

Safeguards and mitigation measures	C	O	D
○ Ensure that machinery leaves the site in a clean condition to avoid tracking of sediment onto public roads which may cause risks to other road users through reduced road stability. ○ Manage topsoil: In all excavation activities, separate subsoils and topsoils and ensure that they are replaced in their natural configuration to assist revegetation. Stockpile topsoil appropriately so as to minimise weed infestation, maintain soil organic matter, maintain soil structure and microbial activity. ○ Minimise the area of disturbance from excavation and compaction; rationalise vehicle movements and restrict the location of activities that compact and erode the soils as much as practical. Any compaction caused during construction would be treated such that revegetation would not be impaired. ○ Ensure any discharge of water from the site is managed to ensure ANZECC (2000) water quality criteria are met. • Manage works in consideration of heavy rainfall events; if a heavy rainfall event is predicted, the site should be stabilised and work ceased until the wet period had passed.			
• A spill response plan would be developed as part of the overall risk management plan to prevent contaminants affecting adjacent surrounding environments. The plan would: ○ Manage the storage of any potential contaminants onsite. ○ Mitigate the effects of soil contamination by fuels or other chemicals (including emergency response and EPA notification procedures and remediation. • Ensure that machinery arrives on site in a clean, washed condition, free of fluid leaks.	C	O	D
• A protocol would be developed in relation to discovering buried contaminants within the proposal site (e.g. pesticide containers). It would include stop work, remediation and disposal requirements.	C		D
• Design of footings for electrical componentry and panel mounts will consider flood risk.	Design stage		
• All staff would be appropriately trained through toolbox talks for the minimisation and management of accidental spills.	C	O	D

Safeguards and mitigation measures	C	O	D
• All fuels, chemicals, and liquids would be stored at least 50m from any waterways or drainage lines and would be stored in an impervious bunded area.	C	O	D
• Adequate incident management procedures will be incorporated into the Construction Environmental Management plan, including requirement to notify EPA for incidents that cause material harm to the environment (refer s147-153 Protection of the Environment Operations Act).	C	O	D
• The refuelling of plant and maintenance would be undertaken in impervious bunded areas on hardstand areas only.	C	O	D
• Machinery would be checked regularly to ensure there is no oil, fuel or other liquids leaking from the machinery.	C		D
• A flood risk contingency plan would be prepared prior to construction and is to be implemented during construction, operation and decommission. The plan would: ○ Detail who would be responsible for monitoring the flood threat and how this is to be done. ○ A process for removing any necessary equipment and materials offsite and out of flood risk areas. ○ Consideration of site access in the event that some tracks become flooded ○ Establishment of an evacuation point	C	O	D
• The proponent would consult with the Mid Western Regional Council regarding the proposed upgrading of the site access. The upgrade would be subject to detailed design, and must be designed and constructed to the standards specified by RTA Guidelines.	Design stage		
• A Haulage Plan would be developed with input from the roads authority, including but not limited to: ○ Assessment of road routes to minimise impacts on transport infrastructure. ○ Scheduling of deliveries of major components to minimise safety risks (on other local traffic). ○ Traffic controls (signage and speed restrictions etc.).	C		D
• A Traffic Management Plan would be developed as part of the CEMP and DEMP, in consultation with the Mid Western Regional Council and Roads and Maritime.	C		D

Safeguards and mitigation measures	C	O	D
The plan would include, but not be limited to: ○ Assessment of road condition prior to construction on all local roads that would be utilised. ○ A program for monitoring road condition, to repair damage exacerbated by the construction and decommissioning traffic. ○ The designated routes of construction traffic to the site. ○ Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction. ○ Scheduling of deliveries. ○ Community consultation regarding traffic impacts for nearby residents. ○ Consideration of cumulative impacts. ○ Consideration of impacts to the railway. ○ Traffic controls (speed limits, signage, etc.). ○ Procedure to monitor traffic impacts and adapt controls (where required) to reduce the impacts. • Providing a contact phone number to enable any issues or concerns to be rapidly identified and addressed through appropriate procedures.			
• A Road Dilapidation Report would be prepared and include audits of the road formation and/or pavement condition to be undertaken prior to construction and at the completion of construction, operation and decommissioning phases. The proponent would repair any damage resulting from proposal traffic (except that resulting from normal wear and tear) as required at the proponent's cost and in consultation with Mid Western Regional Council.	C	O	D
• Consultation with proposal site mineral titleholder and Beryl Quarry regarding the proposal and potential impacts	C	O	D
• Consultation with local community, to minimise impact of construction of adjacent agricultural activities and access.	C	O	D
• Consultation would be undertaken with Transgrid regarding connection to the substation and design of electricity transmission infrastructure	C	O	D
• A Rehabilitation Plan would be prepared to ensure the array site is returned to it pre solar farmland capability. The plan would be developed with reference to base line soil testing and with input from an Agronomist to			D

Safeguards and mitigation measures	C	O	D
ensure the site is left stabilised, under a cover crop or other suitable ground cover. The plan would reference: ○ Australian Soil and Land Survey Handbook (CSIRO 2009) ○ Guidelines for Surveying Soil and Land Resources (CSIRO 2008) ○ The land and soil capability assessment scheme: second approximation (OEH 2012)			
• The materials and colour of onsite infrastructure will, where practical, be non-reflective and in keeping with the materials and colouring of the landscape.	C		
• Should an item of historic heritage be identified, the Heritage Division (OEH) would be contacted prior to further work being carried out in the vicinity.	C	O	D
• If any old farm machinery is to be removed, contact the Gulgong Historical Society to enquire about their interest in acquiring any items.	C		
• Maintain the railway embankment formation as much as possible.	C	O	D
• A Waste Management Plan (WMP) would be developed to minimise wastes. It would include but not be limited to: ○ Identification of opportunities to avoid, reuse and recycle, in accordance with the waste hierarchy. ○ Quantification and classification of all waste streams. ○ Provision for recycling management onsite. ○ Provision of toilet facilities for onsite workers and identify that sullage would be disposed of (i.e., pump out to local sewage treatment plant). ○ Tracking of all waste leaving the site. ○ Disposal of waste at facilities permitted to accept the waste. ○ Requirements for hauling waste (such as covered loads).	C	O	D
• Septic system is installed and operated according to the Mid Western Regional Council regulations.	C	O	

Safeguards and mitigation measures	C	O	D
• The Community Consultation Plan will continue to be implemented, including but not limited to implementing protocols to: o Keep the community updated about the progress of the proposal and proposal benefits. o Inform relevant stakeholders of potential impacts (haulage, noise etc.). o Respond to any complaints received.	C		
• Liaise with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials.	C		
• Liaise with local representatives regarding accommodation options for staff, to minimise adverse impacts on local services.	C		D
• Liaise with local tourism industry representatives to manage potential timing conflicts with local events.	C		D
• Development of a complaints procedure to promptly identify and respond to complaints.	C	O	D
• Develop protocols to minimise vehicle and construction equipment emissions for inclusion in the construction and operational environmental management plans. This would include but not limited to Australian standards and the POEO Act.	C	O	D
• Protocols would be developed minimise dust levels generated during construction (eg. water carts or similar in response to visual cues).	C		D
• All design and engineering would be undertaken by qualified and competent person/s with the support of specialists as required.	C		
• Transmission lines would be located as far as practical from residences, farm sheds, and yards to reduce the potential for exposure to EMFs.	C		
• Design of electrical infrastructure would minimise EMFs.	C		
• Develop a Bush Fire Management Plan to include but not be limited to: o Management of activities with a risk of fire ignition. o Management of fuel loads onsite. o Storage and maintenance of firefighting equipment, including siting and provision of	C	O	D

Safeguards and mitigation measures	C	O	D
adequate water supplies for bush fire suppression. This includes access to the onsite dam if required for fire emergency situations. ○ The below requirements of *Planning for Bush Fire Protection 2006* - ▪ Identifying asset protection zones ▪ Providing adequate egress/access to the site ▪ Emergency evacuation measures ○ Operational procedures relating to mitigation and suppression of bush fire relevant to the solar farm.			
• Supplementary onsite planting, on Lot 59 to mitigate views from recreational areas, in consultation with the landowners.	C	O	
• A subdivision certificate will be obtained with respect to the subdivision of the existing house lot from the broader R1 zoned allotment	Design		
• Prior to operation of the solar farm, an Emergency Response Plan (ERP) must be prepared in consultation with the RFS and Fire & Rescue NSW. This plan must include but not be limited to: ○ Specifically addresses foreseeable on site and off site fire events and other emergency incidents. ○ Detail appropriate risk control measures to mitigate potential risks to the health and safety of firefighters and other first responders ○ Outline other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site. ○ A copy of the ERP is to be stored in a location directly adjacent to the sites main entry points ○ Once constructed and prior to operation, the operator is to contact with the relevant local emergency management committee regarding the site.		O	
• The following improvements would be made to Beryl Road: ○ Additional Seal Width on Shoulders - additional seal width (1.0 metre) on the road shoulders to extend the seal width to 1.5 metres on each side. ○ Line-Marking – Council requests line-marking both on the centre link and edge lines to improve toad safety.	C		

Safeguards and mitigation measures	C	O	D
• All impacted landowners also should have the opportunity to participate and provide feedback during the development of a Construction Noise Management Plan for the project to minimise noise impacts.	C		

Appendix F GHD Endorsement Letter

133 Castlereagh Street, Level 15
Sydney, New South Wales

www.ghd.com

Our ref: 12516684

02 June 2022

Cam Tomkins
Asset Manager
RES Australia Pty Ltd
39 Hume Street
Crows Nest NSW 2065

Beryl Solar Farm

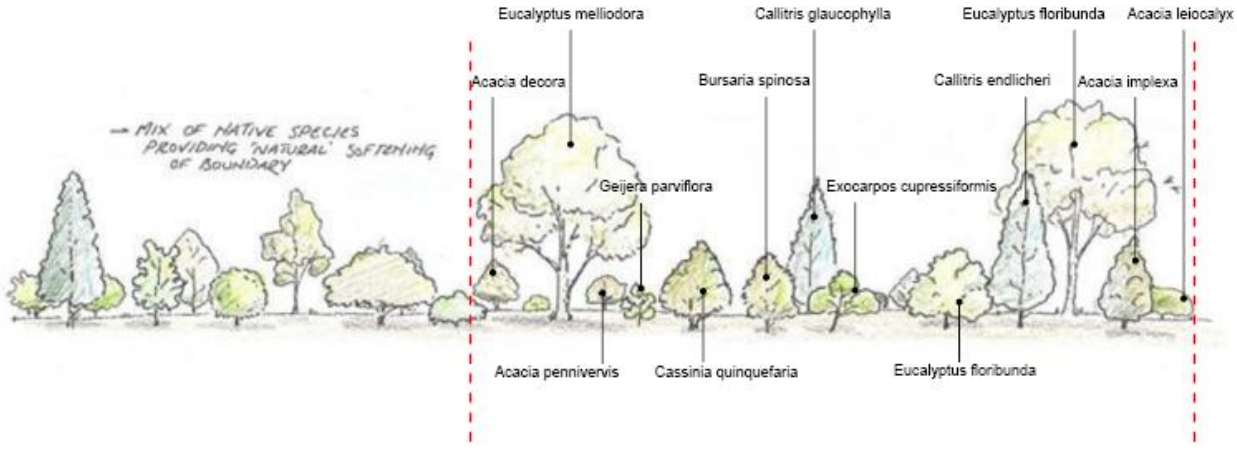
Dear Cam

This letter has been prepared by GHD to provide endorsement of the Beryl Solar Farm (BSF) vegetation screen at key locations around the site (refer to Appendix A in the BSF Landscaping Management Plan, 04 May 2022).

Documents provided to the landscape architecture team for review include the following:

– BSF Landscape Management Plan, 04 May 2022
– Landscape Monitoring Report, 16 December 2021
– Development Consent, Condition 10(c)
– Site photos taken on 19 October 2021

The sketch below (taken from the BSF Landscape Management Plan, 04 May 2022) illustrates the typical transect of vegetation screen planting and approximate layout of species. Further information is provided in the BSF Landscape Management Plan.



The BSF Landscape Management Plan includes a list of landscape species that have proven performance in this environment.

The list of landscape species is broken down into two categories:

– Overstorey species (trees)
– Midstorey species (shrubs and small trees)

The overstorey species are a mixture of *Eucalyptus* and *Callitris* species, which should provide a suitable canopy above the fence height within three years of planting. The midstorey species (*Acacia* and *Geijera* species), are fast growing and should provide effective screening within three years of planting.

Upon review of the documents and site photos, it is evident large areas of planting have failed to establish from the initial planting in May 2019. Due to initial plant failure, there were large patches within the vegetation screens that required replanting. The establishment of the vegetation screens within the next three years can be broken down into two categories:

– Supplementary planting (where patches of initial planting established)
– New planting (where initial planting failed)

Supplementary planting

During the initial planting and establishment phase (May 2019 – August 2021), there is evidence of successful establishment of some species along the vegetation screens. These areas have needed minor supplementary planting to replace failed plant stock only and would benefit from active monitoring and maintenance.

New planting

Where the initial planting in May 2019 failed and significant areas of new plantings have been needed, these areas will require active monitoring and maintenance to ensure successful establishment.

It is our conclusion that given the right growing conditions, intensive monitoring and maintenance, and the absence of any extreme weather events in the area, the areas of supplementary planting will establish and provide effective screening within the next three years, thus complying with the amended condition of approval. For the areas of new planting, we believe three years will provide sufficient screening to the fence height but may need longer to establish as an effective screen to the solar farm, especially from adjacent areas that are elevated.

Regards

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